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From the Editor

When I started putting this issue of the *Baseball Research Journal* together, I did what I usually do: I looked at the articles coming out of peer review and started grouping them by common themes. One that emerged right away was change. But I began to realize that nearly every article this time around fit that theme! One article was about how Forbes Field changed its dimensions hoping to benefit Hank Greenberg, another was about how racial integration changed the action on the field. One was about a rule change in the nineteenth century, another was about a rule change in the twenty-first. How about league expansion in the nineteenth and twentieth centuries? For a pastime so supposedly steeped in tradition and with such an unchanging character, baseball has been through massive changes, and the change has been constant.

I wrote an article the 2021 issue of *The National Pastime* about various rules changes coming to the game under Rob Manfred's watch, some sooner than others. In 2023 we'll see several, including the banning of the extreme infield shift and the introduction of a pitch clock—plus larger bases and a limit on the number of pickoff attempts that can be made. Prognosticators expect that batting averages will rise and that the running game is going to explode. But might there be unforeseen outcomes and unintended consequences? Of course there will, and I'm eager to see how it turns out.

What I'm not eager to see is baseball eventually lose its charm. Some would say it already has, but another thing we know from baseball history is that complaints that the sport is less interesting or worse than it was before are as old as baseball itself. An interesting tension exists between the teams that play the game and the management of the sport itself. The teams have one main job: win ballgames. If their style of play is boring, so what? As long as they get a W at the end of the day. Maintaining the longterm health of the sport isn't on their agenda. The front office does try to put fannies in the seats (and eyeballs on the screen) in order to make money. In their view, if they're getting enough revenue from fan engagement of whatever kind, dollars are their ultimate measure. That leaves the commissioners' office, then, as the only entity tasked with maintaining the long view.

I don't envy them this task. Why do people become baseball fans? How do you ensure the next generation has the same or more chances to become fans as the previous one? Which changes in demographics that we see are going to become generational and which are just typical functions of age groups? How much of the appeal of baseball is sociological, and how much is aesthetics, and can either one be quantified?

The closest analog I can think of for Major League Baseball is Walt Disney World. Disney has this dilemma: it has to evoke a reliable sense of nostalgia for people returning to the park while still keeping up with the times and offering new and exciting experiences. If the Disney theme parks never changed, they'd die out, so they have to change, but they have to change in such a way that they don't damage the nostalgia nor break the unspoken contract with the park-goer that the experience will be magical. It has to feel the same, even though it's different. MLB has this same nostalgia dilemma: you want people to root for their team even though the players are different from year to year, and you want fans to love the game for their whole lives, even though they're different people when they're ten years old as when they're seventy.

The history and hearkening back to America's past is part of the cachet of baseball, but the product on the field is now demonstrably different than it was a hundred years ago. If you go decade by decade maybe baseball in 1940 wasn't that different from 1930, 1980 wasn't that different from 1970, and so on, but baseball in 2019 was so different from 1919 that we had more strikeouts than hits on the season for the first time. There's less running around and more home runs. I can't say that I, personally, mind all the waiting for the home runs. It makes baseball much more like a samurai duel than a boxing match: there's much less action but when the action does happen, it's decisive. I am, however, definitely not the "typical fan."

The danger for MLB is that if they make too many changes, they could lose the fans they have while perhaps not attracting new ones, either. But philosophically speaking, if the new rules are going to make the game "more like it used to be" while at the same time increasing the amount of action and excitement, really, isn't that win-win? How could it go wrong?

Well, I'm sure the papers hitting my desk this time next year will tell me.

Cecilia M. TanNovember 2022

^{1.} Cecilia Tan, "The Rules, They Are A'Changin'," *The National Pastime*, 2021 edition (SABR: Phoenix, AZ).

Ronald Blum, "MLB .244 batting average worst since '68, up after crackdown," Associated Press, October 4, 2019 (accessed November 1, 2022): https://apnews.com/article/mlb-sports-baseball-a8b0a4ab79b718bbed4350195391372b.

LOOKING BACK

Pitching Against Alzheimer's

A Study of Baseball Reminiscence Programs

Lou Hernández, Monte Cely, and Barry Mednick

here is not a person alive in the industrialized world who has not been touched directly or indirectly by the wonders of medical science. Death-sentence diseases of the past, like cancer, now carry longer and longer commutation periods, thanks to advanced early detection and modern surgical techniques. The twentieth century discovery of insulin has been a game-changer after generations of suffering from chronic high glucose blood levels. Vaccines to stop a once-in-a-hundred-year pandemic have been rolled out in record time, saving millions from death or disability. However, there is no cutting-edge technology or panacea drug for most neurological disorders. The number of neurocognitive disorders is unfortunately many, including strokes, brain injury, Parkinson's, and dementia. The Centers for Disease Control and Prevention defines dementia as "not a specific disease but is rather a general term for the impaired ability to remember, think, or make decisions that interferes with doing everyday activities. Alzheimer's disease is the most common type of dementia." These disorders plague more members of our society every year, and place increasing degrees of physical and psychological burdens on their loved ones.

Alzheimer's, as most people know, targets mostly seniors. "Alzheimer's disease is a progressive neurological disease that causes the brain to shrink (atrophy) and brain cells to die," explained a Mayo Clinic overview. "Approximately 5.8 million people in the United States 65 and older live with Alzheimer's Disease. Of those, 80% are 75 years old and older. There is yet no treatment that cures Alzheimer's or that alters the disease process in the brain. Different programs and services can help support people with Alzheimer's disease." In other words, there is no medical cure for Alzheimer's, and the focus for caregivers is on supporting the cognitive function and stimulation, emotional wellbeing, and overall quality of life.

A popular service program is reminiscence, recounting pleasant memories of the past. Reminiscence programs date back six decades. "Dr. Robert Butler, a

psychiatrist with a specialty in geriatric medicine, first spoke of the idea of a 'life review' in the 1960s," illuminated one health blog. "Butler...is credited with the idea that reminiscing could be therapeutic. At the time, psychiatrists did not think it was a good idea for people to always be 'living in the past,' but Butler disagreed and made it clear that reminiscence was a natural process of healthy aging."³

Over the past few decades, reminiscence programs focused on music, singing, cinema, art and crafts have become popular offerings to people living with dementia. "Reminiscence therapy is a popular psychosocial intervention widely used in dementia care," published the Dementia Services Development Centre Wales, Bangor University, Bangor, UK, in 2018. "It involves discussion of past events and experiences, using tangible prompts to evoke memories or stimulate conversation."

"For reasons not fully understood, nearly two-thirds of the people with memory loss are women," cited the main webpage of Kensington Place Redwood City, one of California's leading Assisted Living Facilities. "The most likely explanation is that women tend to live, on average, five years longer than men. This increases the likelihood of developing dementia." That statistic notwithstanding, men are no less spared the feelings of loneliness and depression associated with these chronic disorders. "A new program primarily focused on men with Alzheimer's Disease and other dementias was launched in Scotland in 2009 titled Football Memories," informed the Kensington Place Redwood City ALF. "It focuses on getting groups of men together to reminisce about soccer, but it can easily be extended to include any popular sport."5

More recently, baseball reminiscence programs have been viewed favorably as an effective means to enhance the well-being of those living with these debilitating diseases. Per an investigation by the Society for American Baseball Research (SABR): "The first baseball reminiscence program in the US was the Cardinals Reminiscence League (CRL), modeled on the Scottish programs. Begun in 2011, [CRL] was a joint effort by

the Alzheimer's Association, St. Louis University, the Veteran's Administration, and the St. Louis Cardinals Hall of Fame and Museum."

Beginning in 2015, SABR volunteers in Austin, Texas—led by Jim Kenton and working with Alzheimer's Texas—began offering a program based on the Cardinals Reminiscence League model. For Jim, the volunteer work struck a personal chord. "My father had dementia in his later years," he recounted. "He served in the Navy, and there were times he didn't know who I was, but he had a book with pictures of the ships he served on, and I could always count on that book to get the conversation going [between us]. When I read about the CRL program, it combined two different loves. I've been a baseball geek all my life, and since I retired the opportunity to serve others in memory of my dad, and what he went through, led us to start the program here."⁷

To help more broadly characterize the initiative in Austin, "Talking Baseball" was adopted as its program name (still in use today). The work of Jim and his associates has been enthusiastically received, based on comments like this from an enthusiastic Austin care partner: "You are really on to something. My husband has had Alzheimer's for 11 years that we know of; he and I have been part of a variety of programs to respond to the challenges of dementia. The Baseball Memories group that you have created is at the top of that list. You have a real gift for bridging the divide that can result from this disease."

The baseball-themed gatherings have also become popular with organizations that serve people with other long-term health issues, up to and including long-term institutionalization. "It is amazing to see some of our closed-off veterans initiate conversations and even socialize in group settings who normally do not," said a staff member from the Kerrville, Texas, Veterans Administration Hospital. "It gives our residents a comfortable way to ease into conversation allowing opportunities to share experiences and even have an occasional laugh." The partners and participants at Kerrville refer to their program as "The Baseball Guys."

Similar SABR-led programs not only expanded to multiple sites in Texas, but to Westchester County, New York, and Cos Cob, Connecticut, over the next few years. In 2018, SABR's Los Angeles chapter reached out to Alzheimer's Los Angeles, a local non-profit services organization. That contact evolved into a full-fledged sponsorship for their program, called "BasebALZ."

"SABR has worked closely with Alzheimer's LA to deliver the BasebALZ program, a reminiscence program

that uses baseball as a topic to invoke and discuss memories of participants with Alzheimer's disease or other types of dementia,"10 stated Anne Oh, Manager, Support Groups & Activity Programs for Alzheimer's Los Angeles. "BasebALZ is one of our most popular and effective programs at Alzheimer's LA. The program encourages participants to tap into their own memories, specifically around the topic of baseball. You can see how just talking about baseball lights our participants up. They have so much to share, whether childhood memories of playing, meeting a past baseball player, or simply about being at a game. Simple triggers like holding a baseball or singing, 'Take Me Out to the Ballgame,' which Jon [Leonoudakis] has them do every session, brings back those enjoyable memories."11

"I love the program," expressed one participant in the Los Angeles program to co-host Jeff Hubbard. "It is marvelous." ¹²

"I'm 91-years-old and love the quizzes," 13 chimed a nonagenarian partaker from the same group.

Another happy partnership involved the West Los Angeles VA Home for Heroes. "The program stimulates their [participants'] long-term memory, improves self-esteem, and self-efficacy," shared the partner liaison at the Home for Heroes. "It's top-notch with so many benefits, and attendance has grown steadily in 2021. The last session had 13 attendees; nearly all are in wheel-chairs and walkers with seats." When asked about additional benefits, the liaison mentioned, "Socialization. Baseball Memories attracts people who don't typically engage in most of our programs, as they are very independent individuals. There's a good amount of buzz about the program among our group here." 15

Baseball Memories programs are customized by the local volunteers to appeal to their particular audiences of participants and attending care partners. The program "branding" is intended to have both meaning and local appeal, and is used by local partners to market the program. Examples (some mentioned above) are "BasebALZ," "Talking Baseball," "The Baseball Guys," "The Baseball Hour" (in New York), "The Cardinals Reminiscence League," and currently "Baseball Memories." While agendas and content vary, baseball reminiscence programs generally share these characteristics:

- They are offered bi-weekly or monthly; either in-person or online.
- Length is from one to two hours.
- Singing is popular—usually "Take Me Out to the Ballgame," the National Anthem, and any other

songs that may invoke pleasant memories of the past.

- One or two baseball topics are presented for discussion.
- Other reminiscence topics are woven in (e.g. TV and radio shows, cinema, history).
- Additional indoor or outdoor activities (e.g. a Twist contest, Wiffle ball soft toss or batting practice).

While the programs were initially targeting those living with Alzheimer's, it quickly became apparent to program volunteers that the care partners were equally important customers of these programs. "One in five full-time workers in the United States is a caregiver," according to a Rosalynn Carter Institute for Caregivers survey released in September 2021. "About 45% of family caregivers who are employed full time said they had to go part time at some point and roughly two in ten said they had to quit their jobs altogether." Caregivers are highly involved, and baseball reminiscence program content and activities have evolved to be inclusive of the caregiver as well as their partner.

REASONS FOR THE STUDY

In 2020, the SABR board of directors embraced base-ball reminiscence by formalizing a Baseball Memories Chartered Community. This group now acts as an enabling force to promote the widespread adoption of baseball reminiscence programs. Since this broader effort was initiated in the summer of 2020, new programs were implemented in Cleveland, San Diego, and Las Vegas. SABR members are currently exploring program possibilities in many more locations.

Under the umbrella of SABR's Baseball Memories Chartered Community, a Baseball Memories Research Study was launched to explore the effects of baseball reminiscence programs in an organized, consistent, and professional manner. Key goals and objectives were to "gather both quantitative and qualitative data, producing reports that will aid our outreach and help further promote awareness." Likewise, fundamentally to "get more people involved, through members and volunteers...including family and friends. We wish to reach more potential partner organizations, in order to reach still more participants and their care partners."

As outreach continues, prospective partner organizations may ask for evidence concerning the effectiveness of these programs. This study was intended to gather both quantitative and qualitative data to address that question.

METHODOLOGY

Overview

A "pilot" study of the effectiveness of the various baseball reminiscence programs was established relevant to the number of current participants and care partners. It accumulated quantitative data on respondents' quality of life, as well as both quantitative and qualitative data on their views of the programs, using measurement tools that are minimally intrusive. Introduction letters to its partner organizations (Alzheimer's Associations, VA groups, all others) and potential participants and care partners were standardized. Targeting both Alzheimer's and other dementia sufferers, as well as other participants (those isolated, with long-term disabilities, institutionalized), consent forms and confidentiality agreements were written to adhere to ethical standards. Survey questionnaires and an interviewer's guide were developed to serve as tools to promote consistency and avoid bias in the execution of the Baseball Memories Research Study. The supporting literature review and details about the study design follow.

Literature Review

Two research reports were issued on the original Cardinals Reminiscence League baseball program.¹⁸ Both studies reported positive results in terms of the feasibility of baseball reminiscence offerings, of improvement in participants' engagement and enjoyment, plus willingness of all parties to continue the programs. They also stressed the need for a more controlled study with more participants over a longer time frame.

Researchers at Clemson University planned and executed a quasi-experimental study using Clemson collegiate football as the reminiscence topic. ¹⁹ In addition to affirming the findings from the CRL studies, the Clemson study was able to report quantitative data on improvement in quality-of-life measurements (an overall improvement of 14–18% that was statistically significant). A small improvement in cognition measurements was also reported, although the authors cautioned as to the significance of this finding due to the small sample size and inability to control outside influences. The authors stressed the need for more research, and also the extension of the research beyond Alzheimer's/dementia subjects to include older adults experiencing loneliness or social isolation.

Study Design

Baseball Memories and participating partners can provide the number of programs and participants, plus the longevity, to conduct an assessment of the effectiveness of baseball reminiscence programming. Over time, this

will provide a significant base of programs, participants, care partners, and volunteers for study.

Baseball Memories envisioned focal points for a study of baseball reminiscence to be:

- Gather quality-of-life data from participants and care partners, with an interest in how reminiscence programs affect human perceptions of well-being.
- Gather both quantitative data for measurement of program effectiveness and qualitative data for evaluation and program improvements.
- Gather supporting data from volunteers.
- Use existing, widely-used measurement tools if possible.
- Include participants with varying lengths of exposure to our programs (with expectations to have participants that are brand new to the program, as well as those with longer involvement).
- Include both Alzheimer's and other dementia participants as well as other adult participants (those isolated, with long-term health issues, or institutionalized).
- Be easy to administer and minimally intrusive.
- Be able to re-sample periodically so as to support longitudinal evaluation.

Considering the current number of baseball reminiscence programs in operation, and the fact that some have been suspended or otherwise negatively impacted due to the COVID-19 pandemic, Baseball Memories evaluated how much participation it could reasonably expect near-term. Taking into account the statistical significance of the number of respondents that the investigative group could realistically expect to participate, and its desire to measure both program effectiveness as well as quality-of-life impacts, Baseball Memories chose to break its research effort into two phases:

Phase 1 (also referred to as the "Pilot" study) was an evaluation of the effectiveness of existing baseball reminiscence programs. It gathered both quantitative and qualitative data from current participants, care partners, and volunteers, with a set goal of at least thirty interviews with participants and care partners, as well as a self-administered survey to be completed by volunteers. A one-year time schedule was developed to achieve this, with the "clock" starting April 1, 2020.

Phase 2 (Informed by the results of Phase 1) Baseball Memories envisions a follow-on study(s) with a larger sample size enabled by continued adoption of baseball reminiscence programs. This will provide for further evaluation of the impact on respondents' quality of life over time, and with stronger statistical significance.

To meet its goals, Baseball Memories constructed a survey questionnaire with three sections:

- A. Quantitative quality-of-life questions
- **B.** Quantitative and Qualitative questions about respondents' evaluation of our programs
- **C**. Demographic questions

In addition to the research previously cited, also conducted was a literature review of Quality-of-Life (QOL) measurement tools. The summary paper by Bowling, et.al. was particularly useful in comparing strengths of various quality-of-life measurement instruments.²⁰ While several of these instruments were shown to be highly effective, it was determined that they were too time intensive and too intrusive for the baseball reminiscence audience. Consequently, Baseball Memories developed a set of nine quantitative QOL questions that were deemed more appropriate, less intrusive, and could be easily answered.

For the questions relating to program evaluation, Baseball Memories sought respondents' feedback about their experiences attending the baseball reminiscence offerings. In particular, was the experience enjoyable? Did the program promote a sense of community among the attendees and volunteers? Did the program add to their self-esteem and overall sense of wellbeing? What program components did they like; not like? A set of four quantitative and three qualitative questions was developed to gather this feedback.

Baseball Memories also wanted to gather demographic data and therefore included questions about the respondents' age, sex, length of time attending a baseball reminiscence program, and whether or not they had been diagnosed with Alzheimer's/dementia. The resultant questionnaire used with participants and care partners is included as Appendix A.

Finally, a separate volunteer questionnaire that could be self-administered by our program volunteers became of standard use. This questionnaire asked volunteers about their motivation(s) to participate, their experiences as volunteers, and their feedback and

suggestions about program content and delivery. The Volunteer Questionnaire is included as Appendix B.

RESULTS

Survey data were collected throughout the summer and fall of 2021. SABR program volunteers interviewed participants and their care partners, using the Baseball Memories Survey Questionnaire (Appendix A). Program volunteers self-administered the Baseball Memories Volunteer Questionnaire (Appendix B). All results were submitted to the project statistician for compilation and analyses.

Demographics

A total of 31 participant and care partner responses were received. These responses came exclusively from SABR's well-established programs in Los Angeles (at Alzheimer's LA and the Veteran's Administration Home for Heroes) and Texas (at the Alzheimer's Texas offerings in Austin and Georgetown). The 31 responses consisted of:

Total	31		
Care Partners	1	3	LA-9, Texas -4
VA		5	
Alzheimer's	1	3	LA - 9, Texas $- 4$
			i.e. a care partner responding on behalf of the participant
Participants/Proxies	1	8	Three of which are proxies,

Twenty-five (25) volunteers submitted responses. These responses represented active volunteers based broadly across established and newer programs:

Table

Total	25
Not identified	1
New York	1
Cleveland	3
St. Louis	2
Texas	14
Los Angeles	3
Las Vegas	1

Participants and their care partners were mostly born in the 1940s and 1950s and reflected partner couples. A few of the care partners were younger, generally representing adult children of the participants. Participants and care partners reported, on average, having attended a baseball reminiscence program for 2 + years. A handful of Texas respondents

have been involved for five or more years. Responding participants were all men, while the care partners were almost all women (only one responding care partner was male).

Likewise, volunteers were mostly aged in their sixties or seventies. Volunteers' involvement averaged 3 + years overall, with over one-third of the volunteers reporting having been active for five or more years. Volunteers were mostly men, with only two of the twenty-five volunteer respondents being women.

Quality of Life

The survey questionnaire contained nine "Quality-of-Life" questions. Respondents were asked to gauge their current situation using a four-point scale. Mean scores for the participants and care partners can be seen in Table 1 below.

Very few respondents (3) answered with the same score for all nine questions. Likewise, individual answers varied. The difference between caregivers' and participants' responses was statistically significant. All of these factors indicate that the respondents gave due consideration to answering the questionnaire. Feedback from the interviewers reinforces this: The respondents took the survey seriously and answered honestly.

The care partners' composite assessment of their quality of life (3.20) was higher than the participants living with dementia (2.77). Participants at the VA, who generally were dealing with chronic health issues other than dementia, rated in between (3.04). Overall, the total composite score of 3.01 indicates the respondents as a whole rated their quality of life as "Good."

Table 1. Quality of Life: Poor = 1, Fair = 2, Good = 3, Excellent = 4 ("n" is the number of respondents)

1	Participants	Caregivers	Alzheimer's	VA	Overall
Question	(n=18)	(13)	Only (13)	Only (5)	(n=31)
1. Physical health	2.76	3.25	2.92	2.4	2.97
2. Energy level	2.53	3.33	2.33	3.0	2.86
3. Mood	3.24	2.82	3.08	3.6	3.07
4. Memory	2.59	3.33	2.17	3.6	2.90
5. Your health overa	all 2.76	3.17	2.92	2.4	2.93
6. Relationships wi	th				
family and frien	ds 3.24	3.42	3.17	3.4	3.31
7. Ability to do thin	gs				
for fun	3.00	2.75	2.82	3.4	2.89
8. Ability to do basi	С				
tasks by yoursel	f 2.59	3.67	2.58	2.6	3.03
9. Your life overall	3.12	3.08	3.17	3.0	3.1
Total	2.87	3.20	2.77	3.04	3.01

Program Evaluation

The survey questionnaire contained both quantitative and qualitative questions about respondents' assessment of the Baseball Memories program they were attending. The four quantitative questions asked respondents to rate the value they received from the program, in terms of the frequency they felt they received that value. Respondents were asked to express their true feelings, and not necessarily what they thought the interviewer might want to hear. They were asked to respond using a four-point scale. Mean scores on the quantitative questions are in Table 2 below):



SABR volunteers, participants, and care partners pose at a "Base-bALZ" session in Los Angeles.

Table 2. Program Evaluation:: Never = 1, Sometimes = 2, Often = 3, Always = 4

Question	Participants	Caregivers	Alzheimer's Only	VA Only	Overall
10. Do you enjoy attending?	3.89	3.62	3.83	4.0	3.77
11. Do you enjoy interaction with others?	3.44	3.67	3.33	3.6	3.53
12. Do you feel you are a valued member					
of the group?	3.59	3.69	3.36	4.0	3.63
13. Do you feel your participation helps					
improve your well-being?	3.72	3.77	3.58	4.0	3.74
Overall average	3.66	3.69	3.46	3.9	3.68

Feedback as to respondents' evaluation of the programs was highly positive among all subgroups of attendees. Respondents enjoy the programs and feel strongly that their participation is a plus for their wellbeing.

When asked about specific aspects of the Baseball Memories programs they were attending, respondents said almost unanimously that they liked:

Question 14.

Hearing baseball stories	29
Hearing other stories about the past	29
Sharing your other memories of the past	29
Sharing your baseball memories	28

Hearing and sharing baseball stories and memories, and generally memories of the past, are key elements of all baseball reminiscence programs.

Other aspects of program content tend to be locationspecific or have been impacted by the COVID-19 pandemic that has forced most programs to switch from in-person to online sessions over the last two years. Yet, these approaches can be valuable and should be considered when programs return to inperson sessions:

Question 14.

Music and singing (although eight said "no")	19
Outdoor activities	14
Going to a baseball game as a group	10
Indoor activities	7
Touch and feel of cards, balls, bats, or gloves	6
Baseball food and drink	5

An example of a pandemic effect is the feedback on singing. This is popular in-person but more difficult to do online, thus generating the most negative responses.

Respondents were asked to further comment on program components (Q14) and to share anything else that they felt was noteworthy (Q15). These openended questions generated over ninety comments and suggestions. Some key, often-mentioned topics were:

- The facilitators, volunteers, and guest speakers do a great job.
- High level of satisfaction with the program. It's valuable for both participants and caregivers. Likewise, the program is valuable for both men and women.
- The frequency and length of the programs are about right. If anything, respondents would like to attend even more often.

Some representative quotations are:

"The best part of the program is how you make sure everyone is involved."

"I love the program. It is marvelous. It is perfect just as it is."

"It's healthy for us to have some way to socialize. The program provides that."

The final program evaluation question asked for respondents' preferences for meeting online or in person. The same question was also posed to volunteers:

Question 16.

	In Person	Online	Either
Participants	9	3	5
Caregivers	1	5	7
Volunteers	16	0	9
Total	26	8	21

There was a distinct preference for meeting in person. Participants and volunteers felt there are multiple benefits to interacting "live," such as more personal contact, ability to activate other senses such as handling baseball equipment and memorabilia, the smell of "ballpark food," and doing outside activities.

Care partners did have some preference to meet online. They cited inconvenience in preparation and avoiding longer drives in traffic. Volunteers in Los Angeles stated that their program participation actually increased when their program went online due to pandemic concerns. Some specific feedback was:

"In person is easier to interact with others."

"I like sharing in person."

"In person is better. Socialization is important. I like the hybrid idea of doing both in person and online."



A "Talking Baseball" discussion session in progress in Austin, Texas.

"Online is easier"

"Fridays in L.A. just don't work. Please keep the meetings online."

Impact of Programs on Quality of Life

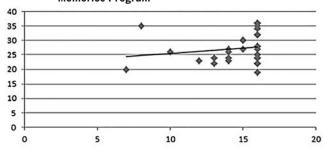
Both quantitative and qualitative data strongly suggest that attending a Baseball Memories program has a positive impact on the quality of life of participants and their care partners. When asked if their participation helps improve their well-being (Q13), 97% of respondents answered either "always" or "often." By comparison, when asked to rate the quality of their life overall (Q9), 83% said it was "good" or "excellent."

Quality of Life Overall (Q9) Versus Participation Improves Your Well-being (Q13)

Q13	Q9	Poor/Fair	Good/Excellent
Always/0ff	en	5	23
Sometimes	s/Never	0	1

When comparing the sum of respondents' QOL scores (y axis, Q1-Q9 – max score 36) as a function of the sum of their Baseball Memories Program Evaluation scores (x axis, Q10-Q13 – max score 16), we see the following relationship:

Figure 1. Quality of Life as a Function of the Baseball Memories Program



This reflects a weak positive correlation, due to the strong overall scores given to the program itself (x axis) and the many impacts on their QOL that are outside the scope of this study. It appears that, regardless of the respondents' self-evaluation of their QOL (y axis), they feel strongly that the Baseball Memories program is a positive experience for them.

Qualitative comments related to the impact of the programs on respondents' Quality of Life reinforce this positive relationship:

"I strongly believe this program makes a difference in the lives of everyone involved. Life is very hard for everyone now and this program helps." "My husband has great baseball memories, and it means the world that he gets to share them."

"The program has changed our lives."

The following two charts reflect Quality of Life (sum of responses to the nine QOL questions) and Program Results (sum of responses to the four Program Evaluation questions) plotted against respondents' time attending a Baseball Memories program (in years):

Figure 2. Quality of Life as a Function of Time in the Program

Respondents' assessment of their Quality of Life declines over time due to advancing age and increasing effects of Alzheimer's or other chronic health issues,

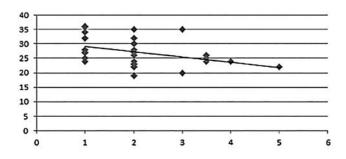
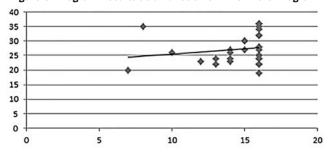


Figure 3. Program Results as a Function of Time in the Program



whereas their views as to the value they get from attending a Baseball Memories program holds steady.

Volunteer Results

The self-administered questionnaire (Appendix B) asked volunteers to provide feedback on their motivation to participate in a baseball reminiscence program and their experiences doing so. A desire to help others and give back to the community were strong factors, especially when combined with a family member or friend having dealt with dementia or other chronic health issues:

Motivation

Number of positive responses (n=25 volunteers responding) Desire to help others 24 Desire to contribute to community 20 Interest in sharing baseball knowledge for the benefit of others 16 Family member or friend with dementia or Alzheimer's 15 Opportunity for engagement with others 11 Family member or friend was lonely, isolated, or institutionalized 3

Volunteers' experiences with the program were consistent with their motivation for getting involved. There was strong agreement among volunteers that they were, indeed, helping others. In a related question, 96% of volunteers (23 of 24 responses) stated they felt the program was valuable to the participants and care partners. In addition to being valuable to that audience, volunteers felt their own experiences were both enjoyable and rewarding. Volunteers strongly felt their efforts were worthwhile, and they would highly recommend volunteering to others.

Experiences

Average results

(strongly disagree=1, disagree=2, agree=3, strongly agree=4)

	•	
l enjoy doing it		3.88
I'm helping others		3.76
I feel it's a rewarding experience		3.80
I get as much out of it as I put into it		3.72
I would recommend volunteering to others		3.72
Overall		3.78

In addition to the quantitative results above, volunteers provided over seventy qualitative responses about the program. Some of the often-mentioned statements are:

- Strong sentiments expressed as to the positive value of the program for all involved.
- Would like to get back to in-person sessions.
- Need to continually focus on content that's of interest to the participants and their care partners; and will get the participants talking.
- Need more women volunteers.

A few verbatim comments from volunteers are:

"I see the energy that participants exhibit during the sessions. I've had both participants and caregivers tell me directly of its value."

"Not a medical program. A time to forget about their problems. People with like issues to talk to."

"It is an incredibly rewarding experience." "So glad I did it."

"To be able to meet in person." "... get the on-site meetings going again instead of online"

"More women volunteers. The women caretakers are more likely to open up to other women about sensitive problems."

CONCLUSIONS AND RECOMMENDATIONS

This study was able to gather both quantitative and qualitative data that demonstrate the value of baseball reminiscence programs. Participants, their care partners, and program volunteers all strongly expressed that the programs were very worthwhile and had a positive impact on all involved. Furthermore, this study was able to quantify these results, reinforcing the qualitative and anecdotal feedback that volunteers have often received.

The study results also demonstrate that baseball is a strong topic for reminiscence that is especially meaningful for the current generation of participants and their care partners. Born mostly in the 1940s and 1950s, they have deep and varied memories of playing, watching, listening to, and reading about baseball during the sport's peak as the national pastime.

The study results identified issues for further consideration by program leaders. Most frequently mentioned were:

- Resuming in-person vs. continuing online programs post-pandemic. Most respondents indicate
 a desire to return to in-person meetings due to
 added benefits of being able to interact in person.
 However, there are some distinct advantages for
 care partners and program accessibility to meeting online.
- Frequency of program offerings. Qualitative feedback suggests that participants and care partners would like more frequent programs. There was no sentiment expressed for less-frequent scheduling.
- Need for more female volunteers. Due to the large percentage of female care partners, more female volunteers would help further improve program quality and inclusiveness.
- Value of singing within online programs. Music and singing are valuable components for reminiscence programs. However, the latency inherent

- with Zoom sessions makes this problematic for online offerings. A solution is needed.
- Set expectations for the proper level of participation for care partners. Some care partners are concerned about participating too much and taking away sharing opportunities from participants.

The data analyses suggest several topics for future study:

- Conduct a controlled, longitudinal study of a new group of participants/care partners. Such a "before and after" study would provide more data as to the correlation of respondents' quality of life with their assessment of the value of baseball reminiscence. Due to the pandemic and staffing turnover at partner organizations, we were not able to do this during the Phase 1 effort.
- Seek a larger sample size from more programs nationwide. This would provide a broader look at more respondents in more varied program offerings, resulting in even more meaningful results. This should be able to be accomplished in a post-pandemic setting as baseball reminiscence programs continue to proliferate.
- Assess the value of more frequent program offerings. Explore if more-frequent attendance results in higher satisfaction and improved quality of life.

As discussed earlier, a future Phase 2 study is contemplated that can address these additional topics and more. A potential sample size of one hundred or more respondents, spread across five-to-ten programs nationwide, should be attainable goals—over the next several years—to trigger consideration for a follow-on study.

In closing, the quantitative and qualitative data from this study have clearly shown that baseball reminiscence programs positively impact the well-being of not only persons with Alzheimer's and their care partners, but also those dealing with chronic health issues, isolation and loneliness. Baseball with its heritage as our national pastime is an excellent broad, diverse topical area that can be used to generate group sharing sessions that impact participants and their care partners in a most positive way. The study results have also highlighted important questions that could be the subject of future studies. Answers to the questions could play an important role in helping shape the future direction of the program as an expansion to a

national level of involvement and impact is planned and implemented.

Finally, the data gathered and presented in this report demonstrate that these programs are worthwhile and rewarding experiences for volunteers. Coupled with the positive results for participants and care partners, a continued increase in the number and availability of baseball reminiscence offerings would be a most beneficial way for baseball fans to serve their communities.

Authors' Note

This report is the result of the work of a project team of Society for American Baseball Research (SABR) volunteers. The study was conceived, approved, planned and executed from April 2021 to

Notes

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January 2022. In addition to the authors, significant contributions were made in project planning and analysis by Joe Shaw, Jeff Hubbard, Linda Cely, Jerald Thomas, Rob Sheinkopf, and Tad Myre. Furthermore, Jeff Hubbard, Jim Kenton, and Jon Leonoudakis all played key roles in coordinating with local partner organizations, participants, and care partners to conduct interviews and gather volunteer data. The authors sincerely thank all of these dedicated individuals for their efforts.

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APPENDIX A: BASEBALL MEMORIES—SURVEY QUESTIONNAIRE

SECTION A. Questions about Your Quality	of Life (Plea	ise rate you	ır current :	situation, as yo	u see it)	
1. Physical health	Poor	Fair	Good	Excellent		
2. Energy level	Poor	Fair	Good	Excellent		
3. Mood	Poor	Fair	Good	Excellent		
4. Memory	Poor	Fair	Good	Excellent		
5. Your health overall	Poor	Fair	Good	Excellent		
6. Relationships with family and friends	Poor	Fair	Good	Excellent		
7. Ability to do things for fun	Poor	Fair	Good	Excellent		
8. Ability to do basic tasks by yourself	Poor	Fair	Good	Excellent		
9. Your life overall	Poor	Fair	Good	Excellent		
SECTION B. Questions about the Baseball	Memories I	Program Yo	u're Attend	ling (Please giv	e us your	thoughts)
10. Do you enjoy attending the program?			Never	Sometimes	Often	Always
11. Do you enjoy interacting with others du	ring the pro	gram?	Never	Sometimes	Often	Always
12. Do you feel that you're a valued member		_	Never	Sometimes	Often	Always
13. Do you feel your participation helps imp	orove your w	ell-being?	Never	Sometimes	Often	Always
14. What do you like about the Baseball Me	emories prog	gram you are	e attending	? (Y for Yes, N f	or No, X if i	not applicable)
Hearing baseball stories						
Sharing your baseball memories						
Hearing other stories about the pa	ıst					
Sharing your other memories of th	e past					
Music & singing						
Indoor activities (board games, da	ncing, etc.)					
Outdoor activities (batting practic	e, soft toss,	etc.)				
Touch and feel of baseball cards,	balls, bats,	or gloves				
Baseball food and drink (popcorn,	peanuts, ho	ot dogs, etc.	.)			
Going to a baseball game as a gro						
Other (tell us more):	•					
15. What else would you like to share with	us about the	e program?				
	uo about tiiv	, biogiami				
16. Do you prefer to meet: In Person	Online	Either Is	OK Wh	ıy?		
OFOTION O. A.L						
SECTION C. Administration Use	D {	atata a o	0			
	Proxy for Pa	пистрапт	Caregiver			
18. Gender of respondent:						
19. Birthday MM/DD/YYYY//_		oulos	2 0 1	0 0		F
20. How long have you participated in a Ba			-		rs 4 yrs	5+ yrs
21. Has the respondent been diagnosed wit				No OAL HOE		
GROUP ID: INTERVIEW #:		Y ROUND: _			NTED\//EV/	, ,
ACKNOWLEDGEMENT OBTAINED INTER	VIEWEK:			DAIL OF I	NIEKVIEW:	/

APPENDIX B: BASEBALL MEMORIES - VOLUNTEER QUESTIONNAIRE

What motivated you to volunteer for a Baseball Memories program? (Check all that apply.)																
□ A family member or friend lived with dementia or Alzheimer's □ A family member or friend was lonely, isolated, or institutionalized □ Desire to help others																
										Desire to contribute ("give back") to my c						
										Interest in sharing my baseball knowledge		rs				
☐ An opportunity for engagement with other	S															
☐ Other (please explain):																
What have been your experiences as a Bas	eball Memories volunt	eer? (Please g	ive us vour	thoughts. Circle voi	ır resnonses.)										
I enjoy doing it	Strongly Disagree	Disagree	Agree	Strongly Agree	п тооролооол	•										
I'm helping others	Strongly Disagree	Disagree	Agree	Strongly Agree												
I feel it's a rewarding experience	Strongly Disagree	Disagree	Agree	Strongly Agree												
I get as much out of it as I put into it	Strongly Disagree	Disagree	Agree	Strongly Agree												
I would recommend volunteering to others	Strongly Disagree	Disagree	Agree	Strongly Agreei												
Do you personally feel that this Baseball Mer	nories program is valua	ble to the part	icipants and	I their caregivers?	Yes No	Why?										
If you could make one change to improve the	Program, what would i	t be?														
What else would you like to share about your	experiences volunteerir	ig for this prog	ram?													
Do you prefer to meet: In person Online	Either is OK Why?															
Information chart Voy																
Information about You What is your gender?																
What is your gender?	nyour 40a E0a CC) ₀ 70 ₀ 90														
What is your age in years? Less than 40 / i How long have you volunteered for a Basebal	•			Aure Sture												
now long have you volunteered for a basebal	ii weiiiones program:	0—1 yı Z	yıs əyis	4 yrs 5+ yrs												
ADMINISTRATION USE																
GROUP ID: SURVEY ROUND:																
Scan and email completed Questionnaire to	— SABR statistician at∙xx	χχχχχχ@χχχχχ														
Please put the words "SABR volunteer survey																

LOOKING BACK

Emeritus Members of the Career .300 Hitters Club (1920–2022)

Herm Krabbenhoft

The objective of the research described in this article is to identify those players who merit recognition as ".300 hitters" even though they did *not* end up with lifetime .300 batting averages. They are among the former members of the prestigious Career .300 Hitters Club—the *Emeritus Members*.

"At some point in the 1880s," says John Thorn, MLB's official historian, ".300 came to be seen as a good barometer of batting skill, as no National League club had batted .300 between 1877 and 1892. The .300 mark survived as a benchmark for good hitters even after the 1894 campaign when NL hitters averaged .309." Nowadays, traditional batting average is not viewed as a strong measure of offensive skill by baseball analysts, but remains a meaningful benchmark for the players themselves.²

The high regard players have for batting .300 has been demonstrated throughout major-league history by players prematurely ending their seasons to preserve their .300 batting averages. During the past 103 major-league seasons, 129 players chose to not play in their team's final game of the season—or exited the game early—to avoid jeopardizing the coveted .300 mark.3 Among these are 16 Hall of Famers, including Hank Aaron, Ken Griffey Jr., Vladimir Guerrero, Reggie Jackson, Derek Jeter, and David Ortiz. The most recent player to join the "Did Not Play .300 Hitters Fraternity" was Jose Altuve of the 2022 Astros, who, after exiting Houston's penultimate game early and before sitting out their final game, said, "Obviously it means a lot. I'm just happy because it's a big number. Hitting .300 means you're getting on base and helping your team and, in the end, that's what you play for."4

Since batting .300 for a *single season* has remained a significant accomplishment for more than 140 years, achieving a .300 batting average over the course of a *career* is even more prestigious. Considering the players who played in any seasons during the period from 1920 (the first year of the "live ball" era) through 2022, there are 117 members (with at least 1500 hits) in the Career .300 Hitters Club, including four who were active in 2022—Miguel Cabrera (.308), Altuve (.307),

Mike Trout (.303), and Robinson Cano (.301). Standing outside the clubhouse with lifetime batting averages less than .300 and at least 1500 hits are 445 players, including 18 who played in the 2022 season. Among the outsiders is Mickey Mantle, who expressed the following: "My biggest regret was letting my lifetime [batting] average drop below .300. I always felt I was a .300 hitter, and if I could change one thing, that would be it."5 As a former member of the Club, The Mick's relevant batting stats are excellent. The owner of nine full-season .300s, he was a Club member for nearly eight continuous years, from August 20, 1960 (when he collected his 1500th hit), through July 27, 1968, when his 0-for-4 in the first game of the July 28 double header irretrievably reduced his career batting average to a sub-.300. So, it's not at all surprising that Mantle also said, "But, god-damn, to think you're a .300 hitter and you end up at .237 in your last season, then find yourself looking at a .298 average—it made me want to cry."6 But it seems appropriate to ask, "Does Mantle deserve Emeritus Member status in the Career .300 Hitters Club?" as well as, "Which other former members of the Career .300 Hitters Club should be recognized as Emeritus Members?"

To answer these questions, one first needs to establish the criteria for Emeritus Member status. This, of course, is subjective. There are three fundamental attributes that each Club member has:

- (1) A career .300 batting average
- (2) Multiple .300 seasons
- (3) Sustained .300 average over many seasons (and enough .300 + seasons with high enough average to offset the sub-.300 seasons)

Tables 1A and 1B (page 20) provide the pertinent information for Club members with career batting averages from .303 to .300. Examination of Tables 1A and 1B reveals the following median values for this select group of Club members:

- (a) 2100 career hits
- (b) 6 season-ending batting averages of at least .300 with at least 1500 hits
- (c) 8 full-season .300 batting averages

Thus, it seems reasonable to set the criteria for Emeritus Member status to these median values. Also important to attain Emeritus Member status, the former Club member should have a lifetime batting average close to .300—such as .299 or .298.

RESEARCH PROCEDURE

Using the Baseball-Reference "Stathead" search engine, I first generated season-by-season lists of players who had a batting average of at least .300 with at least 400 at bats. Next, using the Baseball-Reference "Advanced Stats" tool, I checked the "Cumulative Batting" table for each player on the list to ascertain the seasons when the player had a career batting average of at least .300 with at least 1500 hits. In addition, for players with at least 1500 hits and career batting averages between .295 and .299, I used Retrosheet's Daily files to ascertain if the player had an interim career batting average

Table 1A. Current Members of the Career .300 Hitters Club with .303 and .302 Career Batting Averages

Player	First	1500	Join	Last	H/AB	BA	YRs	.300
Chipper Jones	1993	2003	2003	2012	2726/8984	.30343	10	10
Will Clark	1986	1995	1995	2000	2176/7173	.30336	6	10
Charlie Jamieson	1915	1927	1927	1932	1990/6560	.30335	6	6
Moises Alou	1990	2003	2003	2008	2134/7037	.30325	6	6
Mark Grace	1988	1996	1996	2003	2445/8065	.30316	8	9
Jake Daubert	1910	1919	1919	1924	2326/7673	.30314	6	9
Al Oliver	1968	1978	1979	1985	2743/9049	.30313	7	10
Mike Trout	2011	2022	2022	2022	1543/5094	.30291	1	5
Pete Rose	1963	1970	1970	1986	4256/14,053	.30285	17	15
Buddy Myer	1925	1935	1935	1941	2131/7038	.30278	6	8
Harvey Kuenn	1952	1960	1960	1966	2092/6913	.30262	7	8
Hal Trosky	1933	1946	1946	1946	1561/5161	.30246	1	4
George Grantham	1922	1933	1933	1934	1508/4989	.30226	2	8
Ben Chapman	1930	1938	1938	1946	1958/6478	.30225	9	8
Sean Casey	1997	2008	2008	2008	1531/5066	.30221	1	10
Tommy Holmes	1942	1951	1951	1952	1507/4992	.30188	2	5
Buster Posey	2009	2021	2021	2021	1500/4970	.30181	1	6

NOTES: (1) To be included in this table, the player must have played at least one or more seasons during the period from 1920 through 2022. The players are listed rank-order according to their career batting averages, from highest to lowest. (2) The four columns following the player's name give the year that the player's mane give the year that the player's mane give the year the player collected his 1500th hit ("1500"), the year the player first joined the Career .300 Hitters Club ("Join"), and the year of the player's last major-league season ("Last"). (3) The "H/AB" column gives the player's career Hits and At Bats. (4) The "BA" column gives the player's career batting average. (5) The "YRs" column gives the number of years the player finished the season with a career batting average of at least .300 and at least 1500 hits. (6) The ".300" column gives the number of full-season .300s the player had in his major league career.

Table 1B. Current Members of the Career .300 Hitters Club with .301 and .300 Career Batting Averages

Player	First	1500	Join	Last	H/AB	BA	YRs	.300
Joe Cronin	1926	1937	1937	1945	2285/7579	.30149	9	8
Willie Mays	1948	1961	1961	1973	3293/10,924	.30145	13	10
Stan Hack	1932	1942	1942	1947	2193/7278	.30132	6	6
Frank Thomas	1990	1999	1999	2008	2468/8199	.30101	10	9
Robinson Cano	2005	2013	2013	2022	2639/8773	.30081	10	8
Roberto Alomar	1988	1996	1996	2004	2724/9073	.30023	9	9
Wally Berger	1930	1939	1939	1940	1550/5163	.30021	2	4
Pedro Guerrero	1978	1991	1991	1992	1618/5392	.30007	2	6
Michael Young	2000	2009	2009	2013	2375/7918	.29995	5	7
Enos Slaughter	1938	1950	1950	1959	2383/7946	.29990	10	8
Billy Goodman	1947	1958	1958	1962	1691/5644	.29961	5	5

NOTES: (1) See Table 1A.

of at least .300 at some point in the season. Tables 2–7 collect the pertinent information.

RESULTS

Adhering to criteria specified above, I determined that there are two players who deserve the honor of being Emeritus Members of the Career .300 Hitters Club. A convenient way to present the results is to provide lists of all the former members of the Club according to their career batting averages and highlight the Emeritus Members. Let's begin with those who finished with a career batting average of .299—just one point shy of the threshold for active membership in the Club.

A. Former Club Members with .299 Career Batting Averages

There have been nine players who played during the 1920–2022 period and achieved a career batting average of .299 with at least 1500 hits. Table 2 presents pertinent information for these players, each of whom is a former Club member. Only one of these players attained Emeritus Member status.

Minnie Miñoso is the only .299 former Club member with at least 2100 hits, at least 6 season-ending .300s with at least 1500 hits, and at least 8 full-season .300 batting averages. Thus he deserves Emeritus Member status in the Career .300 Hitters Club. His story is especially interesting—it has two beginnings. After playing in the Negro National League during the 1946–48 seasons, he made his American League debut with Cleveland on April 19, 1949. After playing the bulk of the 1949 campaign and all of the 1950 season with San Diego (Cleveland's AAA farm club), Miñoso returned

to the big leagues in 1951 and remained there through mid-July, 1964. He played for four teams and fashioned eight .300s—ChiSox (6), Cleveland (2), Cardinals (0), Washington (0). He first joined the Club with the 1960 White Sox, with whom he batted .311. He was with the 1963 Senators (with whom he batted .229) when he first exited the Club. Then, on April 8, 1964, Miñoso was signed as a free agent by the White Sox, with whom he played 30 games (27 as a pinch hitter), compiling a .226 batting average, which reduced his lifetime AL/NL batting average to .29868. That appeared to be the end of his big league career. However, in an effort to achieve the feat of having played in the major leagues for four decades, Miñoso came back—with the Chicago White Sox—for 3 games in September 1976, in which he went 1-for-8, which further lowered his lifetime AL/NL batting average to .29846. His major league career was, apparently, complete. But, then in October 1980, Miñoso extended his career to five decades by playing in two games for the White Sox, going hitless in two at bats. That appeared, again, to be the end giving him a final AL/NL career batting average of .29837. Miñoso passed away March 1, 2015.

Then, five years and nine months later, on December 16, 2020, MLB issued this press release: "Commissioner of Baseball Robert D. Manfred, Jr. announced today that Major League Baseball is correcting a longtime oversight in the game's history by officially elevating the Negro Leagues to 'Major League' status." This blockbuster decree had a profound effect on Miñoso's career batting performance—it gave him a new staring point. During his three years in the Negro National League (1946–48) he had compiled a

Table 2. Former Members of the Career .300 Hitters Club with .299 Career Batting Averages

Player	First	1500	Join	Exit	Last	H/AB	BA	YRs	.300
Carl Furillo	1946	1956	1956	1960	1960	1910/6378	.29947	4	5
Minnie Miñoso	1946	1958	1958	1976	1980	2113/7059	.29933	7	10
Dustin Pedroia	2006	2016	2016	2019	2019	1805/6031	.29929	3	5
Rico Carty	1963	1978	1978	1979	1979	1677/5606	.29914	1	4
Matt Holliday	2004	2012	2012	2018	2018	2096/7009	.29904	5	7
Kenny Lofton	1991	2000	2000	2007	2007	2428/8120	.29901	2	8
Frank McCormick	1934	1946	1946	1948	1948	1711/5723	.29897	1	5
Sam West	1927	1937	1937	1942	1942	1838/6148	.29896	5	8
Dante Bichette	1988	1999	1999	2001	2001	1906/6381	.29870	1	6

NOTES: (1) The players are listed from highest to lowest career batting average. A player's name shown in boldface and bracketed with asterisks indicates that he is an Emeritus Member of the Career .300 Hitters Club. (2) The five columns following the player's name give the year that the player's major-league career began ("First"), the year the player collected his 1500th hit ("1500"), the year the player first joined the Career .300 Hitters Club ("Exit"), and the year of the player's last major-league season ("Last"). (3) The "H/AB" column gives the player's career Hits and At Bats. (4) The "BA" column gives the player's career batting average of at least .300 and at least 1500 hits. (6) The ".300" column gives the number of years the player finished the season with a career batting average of at least .300 and at least 1500 hits. (6) The ".300" column gives the number of full-season .300s the player had in his major league career. (7) Minnie Miñoso did not play in the majors during the 1950, 1965—75 and 1977—79 periods. He did play in the Negro National League in 1947 and 1948. (8) Rico Carry did not play in the majors during the 1968 and 1971 seasons.

composite batting average of .313 (150-for-480); he had assembled .356 and .344 batting averages in 1947 and 1948, respectively. Including his NNL stats means that Miñoso actually joined the Career .300 Hitters Club in 1958 and remained a member through the 1964 season—his (revised) career batting average to that point being .29962. Thus, it was not until his venture to be a four-decade player that he was expelled from the Club. Miñoso's final final-career batting average (assuming no further changes to his official major league record) is .29933. He truly is an Emeritus Member of the esteemed Career .300 Hitters Club.

B. Former Club Members with .298 Career Batting Averages

Table 3 presents the pertinent information for former Club members with lifetime .298 batting averages. Only one player assembled the stats commensurate with Emeritus Member status.

Mickey Mantle, as shown in Table 3, rightfully deserves the honor of being an Emeritus Member in the esteemed Career .300 Hitters Club. As was the case for several other former Club members, The Mick played for "one more season" (1968) which turned out to be his expulsion season from the Club. At the conclusion of the 1967 season (in which he had batted a career low .245), Mantle's lifetime batting average stood at .302. And, with his Yankees team having finished last in 1966 and next-to-last in 1967, it might have been a good time for Mantle to hang up his spikes. However, going into the 1968 season, Mantle had slugged 518 home runs in his career—only three homers fewer than the 521 that Ted Williams had collected and 16 shy of the 534 round trippers amassed by Jimmie Foxx. So, with the carrot of surpassing both Williams and Foxx, Mantle played that "one more season." Unfortunately, while he did hit 18 homers, giving him a career total of 536 (which, at the time, ranked third all-time, behind Babe Ruth's 714 and Willie Mays's 587), he batted just .237, which lowered his career batting average to .298, which, as he would later say, "That was definitely the biggest regret of my career. I had always taken great pride in hitting .300, and I wanted to finish with a .300 average."8

Another .299 former Club member just missed the threshold for Emeritus Member status—Julio Franco. He had seven full-season .300s, one less than the necessary eight. A few other former Club members also came close to meeting the requirements for Emeritus Member status; each missed because his lifetime batting average was .297 or lower. Tables 4-7 provide the pertinent information for them.



Minnie Miñoso



Mickey Mantle

Table 3. Former Members of the Career .300 Hitters Club with .298 Career Batting Averages

Player	First	1500	Join	Exit	Last	H/AB	BA	YRs	.300
Cecil Cooper	1971	1983	1983	1987	1987	2192/7349	.29827	4	7
Jim Rice	1974	1983	1983	1989	1989	2452/8225	.29812	6	7
Mickey Mantle	1951	1960	1960	1968	1968	2415/8102	.29807	8	9
Barry Bonds	1986	1996	2004	2006	2007	2935/9847	.29806	2	11
Julio Franco	1982	1991	1991	2006	2007	2586/8677	.29803	11	7
Dom DiMaggio	1940	1951	1951	1952	1953	1680/5640	.29787	0	4
Ted Kluszewski	1947	1958	1958	1961	1961	1766/5929	.29786	3	7
Joe Judge	1915	1926	1929	1932	1934	2352/7898	.29780	2	9
Pete Fox	1933	1944	1944	1945	1945	1678/5636	.29773	1	3
Jo-Jo Moore	1930	1941	1941	1941	1941	1615/5427	.29759	0	4

NOTES: (1) Julio Franco did not play at all in the majors in the 1995, 1998, and 2000 seasons; he played in only one game (1 at bat) in the 1999 season. (2) Dom DiMaggio did not play in the majors during the 1942–45 seasons.

C. Former Club Members with .297 Career Batting Averages

Table 4 lists the eleven former members of the Career .300 Hitters Club who each ended up with a lifetime .297 batting average. Only one of them came close to Emeritus Member status.

Al Kaline had a perspective antithetical to Mantle's regarding surrendering a lifetime .300 batting average. In a pre-1967 season newspaper article Kaline was quoted as saying, "I hope I can help the team by hitting .300. This is tough to do. It's getting tougher." Going into the 1967 campaign, Kaline had failed to hit .300 in each of the previous three seasons, causing his career batting average to drop from .309 to .304. As the 1967 season unfolded, Kaline did achieve his pre-season hope by hitting .308. It turned out to be his last fullseason .300 campaign. After four more sub-.300 seasons, Kaline found his career average at .300 (actually .30045). In a pre-1972 season interview, when asked if he thought he could "hold it there," Kaline responded—"Some great hitters in the game finished up not hitting .300. I'd like to stay up there and I think I can."10 Then, after having produced a .313 batting average in 1972 (87 hits in 278 at bats), which nudged his career average up to .301, Kaline said this going into the 1973 season: "The only personal goal I really have is to stick around long enough to get 3000 hits. Staying above .300 for a career isn't really that important because too many good players in the past haven't." In 1973, Kaline compiled a dismal .255 batting average, which dropped his career average to .299 (.29933). Going into the 1974 campaign, Kaline still needed 139 hits to reach the 3000 hits plateau. By season's end, while he had picked up the hits needed to join the 3000 career hits club, his average was an unimpressive .262, which afforded him a career .297 batting average.

D. Former Club Members with .296 Career Batting Averages

As shown in Table 5, seven former members of the Career .300 Hitters Club finished their major-league careers with .296 batting averages. Two of those former members came close to Emeritus Member status— Ivan Rodriguez and Albert Pujols. Here's what Pujols opined in May, 2019, a little over a year before he surrendered his lifetime .300 (July 25, 2020): "Definitely!" Pujols exclaimed when asked if .300 meant something to him. "It's very special to be able to hit .300 in this game, even in the course of a year. It's not easy. To hit .300 in this game, it's pretty special. If someone doesn't care about it, they're crazy. It's something they should focus on all the time."12 It is noted that, thanks to having solid .300s in each of his first ten seasons (2001-10), Pujols had compiled a robust .331 career average at that point. He did not reach .300 in any of his twelve subsequent campaigns (2011-22). In six of

Table 4. Former Members of the Career .300 Hitters Club with .297 Career Batting Averages

Player	First	1500	Join	Exit	Last	H/AB	BA	YRs	.300
Joe Torre	1960	1971	1971	1975	1977	2342/7874	.29743	4	4
Gabby Hartnett	1922	1936	1937	1938	1941	1912/6432	.29726	1	5
Al Kaline	1953	1962	1962	1973	1974	3007/10,116	.29725	11	8
Joey Votto	2007	2017	2017	2022	2022	2093/7044	.29713	5	8
Buddy Lewis	1935	1947	1947	1949	1949	1563/5261	.29709	1	3
Placido Polanco	1998	2009	2009	2012	2013	2142/7214	.29692	3	4
Bernie Williams	1991	2001	2001	2005	2006	2336/7869	.29686	4	8
Jeff Bagwell	1991	2000	2000	2004	2005	2314/7797	.29678	4	6
George Kelly	1915	1929	1930	1930	1932	1778/5993	.29668	0	6
Orlando Cepeda	1958	1967	1967	1971	1974	2351/7927	.29658	2	9
Shannon Stewart	1995	2007	2007	2007	2008	1653/5574	.29656	0	5

NOTES: (1) Buddy Lewis did not play at all in the majors in the 1948 season.

Table 5. Former Members of the Career .300 Hitters Club with .296 Career Batting Averages

Player	First	1500	Join	Exit	Last	H/AB	BA	YRs	.300
Ivan Rodriguez	1991	2001	2001	2010	2011	2844/9592	.296497	8	10
Ken Griffey Sr.	1973	1984	1984	1987	1991	2143/7229	.296445	3	7
Ryan Braun	2007	2016	2016	2018	2020	1963/6622	.296436	2	6
Albert Pujols	2001	2008	2008	2020	2022	3384/11,421	.29630	12	10
David Wright	2004	2013	2013	2014	2018	1777/5998	.29627	1	7
Keith Hernandez	1974	1985	1985	1989	1990	2182/7370	.29607	4	6
Doc Cramer	1929	1939	1939	1942	1948	2705/9140	.29595	3	8

those seasons he fashioned sub-.250 batting averages; his composite batting average was nothing-to-bragabout at .261.

E. Former Members with .295 Career Batting Averages

Eight former Club members had lifetime .295 batting averages; see Table 6. Alex Rodriguez had a .299 career batting average after the 2013 season. He was then suspended for the entire 2014 campaign. Had he been suspended for life he would have qualified for Emeritus Member status. He then batted .250 in 2015 and a Mendoza-line .200 in 2016, which precipitated his release (and retirement) on August 13. His career batting average had deteriorated to .295 by then.

F. Former Members with Career .294 Batting Averages or Lower As shown in Table 7, fifteen former members of the Career .300 Hitters Club ended up with batting averages of .294 or lower. Of these, only Frank Robinson came close to attaining Emeritus Member status.

CONCLUDING REMARKS

Only two former members of the prestigious Career .300 Hitters Club earned recognition as Emeritus Members—Minnie Miñoso (.299) and Mickey Mantle (.298)—based on the criteria established in accordance with the batting statistics of several current members of the Club (Tables 1A and 1B). Six other former members missed out on Emeritus status as a consequence of their lifetime batting averages being less than .298.

The bottom line is this: Even though a .300 batting average is a somewhat arbitrary threshold (a round number) and in spite of batting average having been proven to be not the best measure of a hitter's contributions to his team's offense, a .300 batting average is nonetheless an achievement that does carry historical significance and is still highly regarded today. Miñoso and Mantle truly are Emeritus Members of the venerable Career .300 Hitters Club. ■

Table 6. Former Members of the Career .300 Hitters Club with .295 Career Batting Averages

Player	First	1500	Join	Exit	Last	H/AB	BA	YRs	.300
Duke Snider	1947	1957	1957	1963	1964	2116/7161	.29549	6	5
Bob Watson	1966	1979	1979	1981	1984	1826/6185	.29523	1	6
Victor Martinez	2002	2014	2014	2017	2018	2153/7297	.29505	3	8
John Olerud	1989	2000	2000	2003	2005	2239/7592	.29492	2	4
Barry Larkin	1986	1997	1997	2001	2004	2340/7937	.29482	2	7
Alex Rodriguez	1994	2003	2003	2013	2016	3115/10,566	.29481	10	9
Mark Loretta	1995	2007	2007	2007	2009	1713/5812	.29474	0	3
Juan Pierre	2000	2008	2008	2010	2013	2217/7525	.29462	2	4

NOTES: (1) Alex Rodriguez did not play at all in the 2014 season because he was suspended by Major League Baseball. (2) Victor Martinez did not play at all in the 2012 season.

Table 7. Former Members of the Career .300 Hitters Club with a Career Batting Averages of .294 or Lower.

Player	First	1500	Join	Exit	Last	H/AB	BA	YRs	.300
Steve Garvey	1969	1980	1980	1985	1987	2599/8835	.29417	4	6
Frank Robinson	1956	1964	1964	1973	1976	2943/10,006	.29412	9	9
Gee Walker	1931	1941	1941	1943	1945	1991/6771	.29405	2	4
Tim Raines	1979	1990	1990	1991	2002	2605/8872	.29362	1	5
Lance Berkman	1999	2009	2009	2009	2013	1905/6491	.29348	0	5
Garret Anderson	1994	2003	2003	2005	2010	2529/8640	.29271	0	6
Gary Sheffield	1988	2000	2003	2007	2009	2689/9217	.29174	0	8
Bobby Abreu	1996	2006	2006	2009	2014	2470/8480	.29127	3	6
Wally Moses	1935	1944	1944	1946	1951	2138/7356	.29065	2	6
Dave Parker	1973	1984	1984	1987	1991	2712/9358	.28981	3	6
Nellie Fox	1947	1957	1959	1959	1965	2663/9232	.28845	0	6
Jason Kendall	1996	2005	2005	2007	2010	2195/7627	.28779	2	5
Vada Pinson	1958	1966	1966	1968	1975	2757/9645	.28585	1	4
Ted Simmons	1968	1979	1979	1979	1988	2472/8680	.28479	0	7
Ken Griffey Jr.	1989	1998	1998	1999	2010	2781/9801	.28375	1	8

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LOOKING BACK

The "First Ever All-Star Game" in 1910

October 11–15, 1910: All-Stars vs. AL Champs Athletics All-Stars Win Series—Four Games to One

Bob Muldoon

In 2018, a country auction in Maine handling the estate of major leaguer Harry Lord put a photograph up for bid they touted as the "First Ever All-Star Game." The 1910 photo pictured an American League team of Ty Cobb, Walter Johnson, Tris Speaker, Big Ed Walsh, and ten others including Lord, the former Red Sox captain just traded to Chicago—all in their respective uniforms. The manager, in a bowler hat, was the Washington Nationals' Jimmy McAleer. The photo sold for \$6,063.

But was this really the first All-Star team—or just hype and hoopla to raise bidding?

The first *official* All-Star Game, American versus National League, was in 1933.² But an earlier unofficial all-star game was the Addie Joss Benefit Game on July 24, 1911, when an American League All-Star team beat the Cleveland Naps, 5–3, and raised \$12,914 for the widow and children of Nap's pitcher Joss, who had died months before of tubercular meningitis at age 31.

Baseball Almanac calls the 1911 Joss Benefit Game the "first 'All-Star' game in Major League history."³ The National Baseball Hall of Fame in Cooperstown tags it "the first game of its kind."⁴ SABR simply notes: "The game demonstrated the public appetite for an all-star game—an appetite that would not be sated for another 22 years."⁵

But the photograph taken in October 1910 documents an event ten months earlier, when an American League All-Star team played the American League Champion Philadelphia Athletics in a five-game series intended to keep the A's sharp before the World Series, a week away.

And, so, if an All-Star Game must be, like the Joss game, nine-innings, with at least *one* team having a mix of either American League or National League stars—this game happened earlier.^{6,7} Also, if the starting point must be 1901, when the American League joined the National as a major league, then we must include the barnstorming games in which a team of American League All-Stars played a team of National League All-Stars, for example October 17, 1902, in Iowa, and October 19 and 20 in Omaha.⁸

Although the marketing claims of the auction house turn out to be exaggerated, the existence of the series was unique in other aspects and notably included nine future Hall of Famers. A scheduling quirk created the opportunity for these games. To capitalize on Columbus Day, the National League in 1910 finished a week later than the American League. In fact, the Athletics finished on October 6, while the National champion Chicago Cubs played on until October 15. The A's would have 11 idle days before the World Series began on October 17. To keep his team sharp, manager Connie Mack, "The Tall Tactician," scheduled a series against the All-Stars.

The series came about during a "casual conversation" between Mack and McAleer earlier in the season.9 "Mack pointed out it would be a hardship for his team to be idle a week and then hope to be on edge for the big games with the Cubs." ¹⁰ Furthermore, Mack emphasized, "Games against minor league teams would be useless for what we needed were contests with powerful opponents." ¹¹

McAleer agreed to assemble and manage a team (dubbed "All-Stars" or "McAleer's All-Stars"). In addition to the four Hall of Famers and Lord—the "brainy" Bates College third baseman who would be named White Sox captain days later¹²—the team included southpaw Doc White (Chi); catchers Gabby Street (Wash) and Billy Sullivan (Chi); infielders Jake Stahl (Bos), George McBride, Kid Elberfeld and Bill Cunningham (all Wash); outfielders Germany Schaefer and Clyde "Deerfoot" Milan (Wash).¹³ Lord, himself, as Red Sox captain in 1909, had batted fourth in the league in average at .315, with 36 stolen bases. In 1911, as White Sox captain, he would do even better: .321 with 43 steals.

"This is the greatest team ever got together," McAleer crowed.¹⁴ "Every Player Is a Star," trumpeted a headline.¹⁵ And if all that was not enough, "We have the only two catchers that caught a ball from on (top of) the Washington Monument...Street and myself," Sullivan added immodestly.¹⁶

"If Connie Mack's men can show any decisive superiority over this outfit, they will beat the Cubs to a moral certainty," a columnist noted.¹⁷ But he had his doubts: "If there is any advantage in a season of harmonious teamwork, the Athletics have that, the sole particular in which they seem to have anything on the foe."¹⁸

But no one considered a downside to the All-Star Series. What if the Athletics got drubbed or injured? Would their World Series chances then suffer against the Cubs, winners of 104 games, under playing manager Frank Chance? No one was asking those questions.

A few American League stars were missing. A City Series in New York between the Highlanders (AL) and Giants (NL), and one in Ohio between Cleveland (AL) and Cincinnati (NL), had syphoned off Nap Lajoie, Addie Joss, and young Shoeless Joe Jackson. Notwith-standing these omissions, the Stars comprised "one of the most powerful aggregates ever assembled on one club." Four games were slated for Shibe Park in Philadelphia, and one in American League Park in Washington. In short, five games on consecutive days with admissions split 50/50 between both teams.

Days before, a baseball controversy erupted. Before the season, the Chalmers Automobile Company had announced it would award cars to batting champions in both leagues. Skipping the final two games against the Chicago White Sox with a comfortable cushion, Cobb finished at .385. But as Cobb sat, Lajoie went 8-for-8 on the last day in a St. Louis double-header—blurring their final averages to statistical confusion: .384944 (Cobb) to .384084 (Lajoie).²¹

Word spread quickly that Browns manager Jack O'Connor had positioned his third baseman on the outfield grass, allowing Lajoie to bunt six times, and thwart the unpopular Cobb's quest for the title. O'Connor defended the tactic crudely: "Now, really, you never heard of any infielder playing in for that big frog-eater (French Canadian), did you?"²² Third baseman John Corriden, accused of "assisting materially in fattening Lajoie's average,"²³ insisted he played back in mortal fear of "a broken nose or lost teeth,"²⁴ adding dramatically, "I want to remain in baseball for some years. I was not going to get killed playing in for Lajoie."²⁵

Meanwhile, Cobb had other car problems, missing the All-Star Series opener on Tuesday, October 11. "Ty Cobb was automobiling from Detroit to Philadelphia but he met up with an accident to his machine near Kingston, New York, which prevented him from reaching Philadelphia in time to get to the ballpark." ²⁶

Without Cobb, the All-Stars still pounded 15 hits to win, 8–3, before 5000 fans. Everyone in the lineup, except Germany Schaefer, Cobb's replacement, had a

hit. Mack split the pitching evenly among his three aces Chief Bender (23–5 in 1910), Eddie Plank (16–10), and "Colby Jack" Coombs (31–9). The All-Stars countered with Walter Johnson (25–17, 313 strikeouts) who had eight strikeouts and allowed seven hits. The fleet-footed Lord rapped a single off Coombs and scored in a three-run seventh that sealed the win.²⁷

But even in defeat, scribes lauded Mack's philosophy behind the series: "If our champions put in the rest of the week slamming with pitchers like Walter Johnson and Big Ed Walsh, their batting eyes ought to get all the tuning up that the average batting eye can stand at one dose, and those Cubs pitchers are apt to think they have strayed into the cyclone belt when they butt into us in the big cream next week." ²⁸

For Philadelphia, Home Run Baker (.283), Stuffy McInnis (.301) and 37-year-old Harry Davis (.248) each banged out two hits. That evening, B.F. Keith's Theatre hosted both teams at a special "Baseball Night." ²⁹

Next day, newly arrived Cobb and Big Ed Walsh (18–20, 258 strikeouts) led the All-Stars to a 5–1 win before only 2800 fans. "Ty Cobb was the bright and shining star today, gathering three hits, two of which were doubles. He ran the bases like a whirlwind, giving one of the greatest exhibitions we ever saw." Again, Mack divided the pitching among his aces—Bender allowing no runs, Plank three and Coombs two. "Bender was near his best form... with a couple days rest he should be in championship form." 31

The Athletics' run came on a ninth inning triple by Collins (.324), who scored on a grounder. Baker added 2 more hits. But the loss came at a cost. Outfielder Rube Oldring sprained his knee on a Speaker liner lost in the sun. Oldring, top 10 in the league in batting average (.308), hits (168), doubles (27), triples (14), and homers (4), was lost for the World Series. The savants and cracker barrel philosophers chimed in: "Again it was shown today that an all star team of brains will defeat any average team, regardless of the length of time the stars have been playing together." ³²

After the game, Cobb challenged Collins and "Deerfoot" Milan to a race around the bases to crown the league's fastest man. "Cobb declared he would make his opponents look like a canceled postage stamp." It is no surprise that Cobb, who liked to win, did not extend the challenge to Lord, once the leader of Boston's "Speed Boys," timed months before in 3.2 seconds from home to first, to win a skills competition on "Doc" Powers Day. 34

Before 3500 fans at Shibe Park, the Stars won their third straight, 6–2, behind Doc White (15–13), who pitched a shutout through eight innings. Mack split the



This 1910 photo of McAleer's American League All-Stars shows each player in his team's uniform. Since Ty Cobb appears the photo must have been taken after his late arrival.

Back Row

Walsh, Milan, White, manager McAleer, Speaker, Sullivan, Johnson, Stahl

Front Row

Cobb, Schaefer, Cunningham, Lord, McBride, Elberfeld

pitching this time with Bender, Coombs, and Harry Krause (6-6) now replacing Plank. Lord, "the best third sacker of Ban Johnson's (American League) organization,"³⁵ contributed a single, a sacrifice, and a double play in the field. With Philadelphia losing three straight, an injury to Oldring, and with Plank now fading, Mack might well have doubted himself as the team boarded the train to Washington for game four.³⁶

Off the field, heated rhetoric surrounded the batting title fiasco. One headline blared: "Lajoie Shooed in, Ty Cobb is Yellow."³⁷ The story claimed Cobb "quit cold" after he thought he had the automobile won. After driving a ball to Chicago outfielder Bobby Messenger, Lord's former Bates College teammate, who slipped and fell in mud, Cobb had checked with the official scorers.³⁸ "When he found out that he had been given a hit, he smiled and started to pack his grip."³⁹ A scribe declared: "Ty Cobb has a yellow streak as broad as his back."⁴⁰

Game four, before a crowd of 8000 in Washington, was a showcase for Johnson, who led the All-Stars to a 4–1 win. Cobb, catching Johnson in warm-ups, unfurled his usual bravado: "You see how good the Athletics look, don't you? Well, when we get out there we will look just about 50 percent better; they haven't a chance in the world of beating us."⁴¹ He was right.

A fourth straight Philadelphia loss was concerning: "...[T]he showing of the Athletics was such to make the followers of the American League champions have grave fears as to the outcome of the world series...all in all the Athletics did not resemble a championship team in any way, shape or form."⁴² Meanwhile, the

Cubs, with 104 wins, were taking three of four from the Cardinals.

In Philadelphia, the anxiety was mounting. Had "The Tall Tactician" outsmarted himself with this maneuver? Was the All-Star series backfiring and demoralizing the AL Champs? Pundits thought so: "Mack's players seem to be awe-stricken at the strength of their opponents."

A photo of the All-Star team appeared next day with the caption: "THE ESTIMATED VALUE OF THIS TEAM IS \$286,000."⁴⁴ This newspaper image turned out to be the Harry Lord Auction Photo that sold for \$6,063 in 2018. A headline declared that the Series was now exploding in Mack's face: "Poor Showing of Mack's Team Strengthens Cub's Chances in World Series—Public Sentiment Appears to be with Cubs."⁴⁵

In Washington, the game's subplot had been how Johnson would fare behind a talented team. In his four seasons, the "Senators" had finished last or next to it every time. "People...have been wont to wonder how the city's favorite slinger, Johnson, would finish a season if backed by a (strong) team..."46 Winning his second game in the All-Star Series, "Johnson was invincible until the ninth, when he let down and doubles by Collins and Baker netted a run."47 Mack rested his aces and split the pitching chores with Cy Morgan (18–12) and spitballer Jimmy Dygert (4–4).

The Athletics, at last, almost mercifully, won the finale in Philadelphia on Saturday, 3–0, with Bender, Plank, and Coombs combining for a three-hitter. "Big" Ed Walsh scattered five hits in defeat, but Mainer Harry Lord skipped the last game to appear in an

exhibition between his White Sox and minor leaguers in Portland.⁴⁸ He had just been named captain of Chicago for the 1911 season.⁴⁹

And so, on a high note, Philadelphia had Sunday off before the World Series started Monday. The Cubs, who beat St. Louis that Saturday, boarded a special 7:30 train for Philadelphia, leaving Union Station "as the second section of the Pennsylvania limited" along with most wives and "the scribes who are lucky or unlucky enough to draw the assignment."⁵⁰

Let history show that Philadelphia won the 1910 World Series four games to one, but without Oldring and Plank, before crowds averaging 25,000, with Coombs winning three and Collins and outfielder Danny Murphy leading the attack.⁵¹ At a special presentation before the second game, Cobb and Lajoie each were awarded Chalmers automobiles, ending the bitter batting controversy.⁵²

Despite the four humbling losses (combined score 23–7) to the greatest collection of baseball talent ever assembled, Mack so liked the benefits of the All-Star Series that he used it again the following season. And the Athletics then won the 1911 World Series, this time against the New York Giants, four games to two.

Harry Lord left Chicago in 1914 in a salary dispute, managed in the Federal League for a Buffalo team known as "Harry Lord's Fighting Federal League Team," returned to Maine, played in the Eastern League, coached Bates College in 1918 during World War I, ran a coal and grocery business in Portland, served in the legislature, and died in 1948, at age 66. After his grandson died in 2018, his widow put some dusty memorabilia up for auction—including a long-forgotten photo of the "First Ever All-Star Game" in 1910.⁵³ ■

Dedication

This piece is dedicated to my late brother Michael Muldoon, a 35-year sports writer for the *Lawrence* (MA) *Eagle-Tribune*, who always teased me about my love of old baseball—especially Rube Waddell and Ossee Schreckengost and the animal crackers in bed.

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- 6. On June 30, 1910, a six-inning game and skills competition was held at 6 Shibe Park for Doc Powers, who had died on April 26, 1909. The game was described as "horse play" between an "All-American" team and Philadelphia. See Robert D. Warrington, "A Ballpark Opens and A Ballplayer Dies: The Converging Fates of Shibe Park and Doc Powers," Baseball Research Journal, Fall 2014: https://sabr.org/journal/article/a-ballpark-opens-and-a-ballplayer-dies-the-converging-fates-of-shibe-park-and-doc-powers.
- 7. John Thorn points to the 3 fashion Race Course Contests of 1858 when "picked nines" from New York played against stars from Brooklyn as the first All-Star game. But this fails our definition because the players were not from the American or National League. Thorn also cites a 1903 game in the Class D Hudson River League: https://ourgame.mlblogs.com/baseballs-first-all-star-game-4fcda47ecab2.
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- 9. "All-Star Team to Keep Athletics on Edge for Bubs," *Pensacola* (Florida) *News Journal*, October 8, 1910: 2.
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- J. Ed Grillo, "A's Are Outclassed By McAleer's All-Star Team," Washington Star, October 15, 1910: 8.
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- 19. "All-Star Team to Keep Athletics on Edge."
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- 22. "What's being said about Larry's Hit," Washington Herald, October 14, 1910: 8.
- 23. "Corriden Not To Blame," Kansas City Times, October 15, 1910: 12.
- 24. "Says Corriden," Philadelphia Inquirer, October 12, 1910: 10.
- 25. "Says Corriden."
- 26. "All-Stars 8, Athletics 3, 26" Boston Globe, October 12, 1910: 6.
- 27. In 1905, Lord played third base at Bates College, in Maine, while Coombs pitched for rival Colby. But the two never faced each other, as Lord dropped off the Bates team in June to play for a team in Portland (for pay), just days before the Colby game. History was deprived of seeing the two future major league stars battle in college. But Lord won the battle on this day!
- Jim Nasium, "Pick of A.L. Teams Clean Up Mackies," *Philadelphia Inquirer*, 0ct 12, 1910: 10.
- 29. "Champions Guests at Keiths," Philadelphia Inquirer, October 12, 1910: 10.
- 30. Doc White, "Athletics Fall Before Walsh," *Chicago Tribune*, October 13, 1910: 19.
- 31. White, "Athletics Fall Before Walsh."
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- 33. White, "Athletics Fall Before Walsh."
- 34. "Benefit Contest Draws Thousands," Washington Herald, July 1, 1910: 8 Note: "Doc" Powers Day included several skills competitions, and a six-inning exhibition game that could perhaps stake a small claim as an early All-Star game, but was only 6 innings and described as "horseplay."
- "Cobb Is Most Valuable Player in Baseball," Vancouver Daily World, October 15, 1910: 15.
- 36. Plank missed the Series with a sore arm. Jan Finkel, "Eddie Plank," SABR BioProject, https://sabr.org/bioproj/person/eddie-plank/.
- 37. "Lajoie Shooed in, Ty Cobb is Yellow," Washington Star, October 12, 1910-12
- 38. Messenger attended Bates College with Harry Lord in 1904–05, and the small college had two future major leaguers in the same football backfield. Both men were speedsters in the majors, with Lord winning a speed competition in 3.2 seconds from home to first (bunting), and Messenger winning a 100-yard dash in 11 seconds at Comiskey Park in 1911. Bates' 1904 record was 5–3–1, including an 11–0 loss to Harvard, and a 0–0 tie with Holy Cross with future Red Sox player (and Lord teammate) Bill Carrigan. Bob Muldoon, "Meet Headstrong Harry Bates," October 20, 2020, Bates College News, Bates.edu: https://www.bates.edu/news/2020/10/20/meet-headstrongharry-lord-bates-lord-of-the-baseball-diamond.
- 39. "Lajoie Shooed in, Ty Cobb is Yellow," *Washington Star*, October 12, 1910: 12.

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- 41. "Ty Cobb Wins Auto Prize," Washington Herald, October 15, 1910: 11.
- 42. J. Ed Grillo, "A's Are Outclassed By McAleer's All-Star Team," Washington Star, October 15, 1910: 8.
- 43. Grillo, "A's Are Outclassed."
- 44. "The Estimated Value of this team is \$286,000," Washington Star, October 15, 1910: 8.
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- Joe. S. Jackson, "Sporting Facts and Fancies," Washington Post, October 12, 1910: 8.
- 47. J. Ed Grillo, "A's Are Outclassed By McAleer's All-Star Team," Washington Star, October 15, 1910: 8.
- "Many Will Go To See The Stars," *Lewiston* (Maine) *Sun-Journal*, October 18, 1910: 10 Note: The White Sox player Bobby Messenger, of Maine and Bates, also was slated to appear.
- "Harry Lord Captain," Lewiston (Maine) Sun-Journal, October 18, 1910: 7.
- 50. "Ty Cobb Wins Auto Prize," Washington Herald, October 15, 1910: 11.
- 51. Johnny Evers of the Cubs missed the World Series with a broken ankle.
- 52. Next season the Chalmers Automobile went to the league MVPs.

 John O'Connor was released as Manager of the St. Louis Browns on
 October 16, 1910, and never appeared in the Major Leagues again.
- 53. Email, October 13, 2022, from Lord's granddaughter, Deb McCleery.

LOOKING BACK

The Klein Chocolate Company Baseball Team's Remarkable 1919 Season

Russ Walsh

hocolatier William Klein Sr. of Elizabethtown, Pennsylvania, had a problem. The year was 1918. Soldiers were returning from the war in Europe. Klein was looking to expand to a national market for his "Lunch Bar," a three-cent candy bar that was in direct competition with the chocolate bars produced by Milton Hershey at his factory just ten miles away. The Klein Lunch Bar would be familiar to returning soldiers, because Klein, like Hershey, had landed a contract with the armed services to include his Lunch Bars in rations distributed to soldiers overseas. Klein wanted to build on this familiarity and make the Lunch Bar a staple of the American home.

Like many companies of the day, Klein advertised in newspapers, but display ads were expensive and did not provide the kind of exposure that could make a product a household name. Klein—in concert with his brother and partner in the business, Frederick—decided to attract copious amounts of attention by fielding a highly competitive independent professional baseball team. They would attract the very best players by offering both a steady job in the chocolate factory and a chance to play baseball in the summer.² In a time when even the top levels of professional baseball provided skimpy salaries and no employment beyond the summer months, the offer would prove attractive to many top-level ball players.

The scheme worked. In 1919 the Kleins fielded one of the finest independent professional baseball teams in the country.³ The team would win more than 80 percent of its games and compile a 7–4 record against major league competition. The exploits of the team were chronicled in newspapers across the country and every time the Klein Chocolate Company team was mentioned in the press, the brothers garnered plenty of publicity for their candy bars.

CANDY BARS AND BASEBALL

William and Frederick Klein were born in Lancaster, Pennsylvania, to German immigrant parents. The boys helped to support the family by selling newspapers and, during holidays, German chocolate eggs made in the family's kitchen. Local caramel company owner Milton Hershey, a man with a lifelong fascination for the milk chocolate he had tasted at the 1893 World's Colombian Exposition in Chicago, hired the Klein boys as apprentices. Hershey brought the boys with him when he moved his company from Lancaster to Derry Township, in Dauphin County, Pennsylvania. There he built his famous chocolate factory, and there Frederick and William became his trusted assistants.⁴

While working for Hershey, William, a huge base-ball fan, convinced his boss to sponsor a company baseball team to provide the chocolate factory workers some pleasurable recreation after long hours in the factory. William managed the team. Frederick played in the infield.⁵

By 1912, William and Frederick were ready to strike out on their own. They started the Klein Chocolate Company in a small shop on Market Street in nearby Elizabethtown. After about one year, with the support of investors, the Kleins had begun construction of a larger manufacturing facility.⁶ Also, of course, they established a company baseball team that competed against other local teams.⁷

By 1918, though, William Klein decided he needed not just any baseball team, but one that could win against the very best competition.⁸ He noted that major league teams passed right through Elizabethtown when they travelled on the Pennsylvania Railroad's main line between Philadelphia and Pittsburgh. If he could field a winning team, perhaps he could convince the major league teams to stop in Elizabethtown to play exhibitions against them, and the ensuing coverage in the press would provide a promotional boon to his fledgling company.

Klein wrote to every major league team inviting them to stop in Elizabethtown to play an exhibition game on their way through town. He promised to put the team up for the night, buy their dinners, and share the ticket profits with the visiting teams. At a time when many major league teams were barely breaking even financially, a chance to earn a little more money was appealing, and several teams agreed.

RECRUITING A POWERHOUSE TEAM

Klein then needed to assemble a competitive team. His first step was to hire former major league pitcher John Brackenridge, who lived in nearby Harrisburg, as manager. ¹⁰ Klein told Brackenridge to recruit the best ballplayers he could find for the team. While Brackenridge combed the area, Klein set out to construct a first-class ball field on the Poplar Street grounds adjacent to his factory. ¹¹ The way the ballpark was laid out, a batter could take aim at the factory smokestacks looming in the distance. There was a large, modern grandstand, but no outfield fence. Conoy Creek, a tributary of the Susquehanna River, formed a natural outfield barrier.

Among the first players Brackenridge signed were pitcher Hank "Big Bill" Ritter, slugging first baseman Tony Walsh, catcher Irvin "Bugs" Trout, pitcher/ outfielder George Hunter, and outfielders Charles Babbington and Earl Potteiger. 12 Ritter had pitched parts of four seasons in the major leagues with the Philadelphia Phillies and New York Giants and had attended both Juniata and Albright Colleges in the central Pennsylvania area. Walsh. a veteran of both the minor leagues and several local semi-pro teams, was noted for his extra-base power. Trout was an experienced backstop who had played several years with Toronto in the International League. George Hunter was a 10-year veteran of the New York State League (NYSL) and Southern Association, who had played one season with the Brooklyn Superbas (Dodgers) in the major leagues. Babbington was another veteran of the NYSL. Potteiger, from nearby Pottstown, had spent several years in the New England League.

Pitcher Walter Harned, infielders Addie Berger, Russ Wrightstone, and Glenn Killinger, and outfielders "Babe" Brown and Henry "Hinkey" Haines were soon added to the squad. 13 Harned was a veteran of six seasons in the NYSL and would prove to be a key member of the Kleins pitching staff. Wrightstone was a local hitting legend who had played for other industrial teams in the area. Killinger was a student and star athlete at Penn State. Brown had been a minor leaguer 1902–04. 14 Hinkey Haines was a 19-year-old collegian from Lebanon Valley College, who had interrupted his schooling to serve in the Army during the war. Other players with similar profiles would join the team from time to time as the season went on.

DOMINATING LOCAL TEAMS

The Klein Chocolate Company team played their first game against the local Ephrata team on May 25, 1919, at Ephrata. The starting lineup was Hunter in left field, Killinger at short, Wrightstone at third base, Walsh at first base, Haines in right field, Berger at second base, Brown in center field, and Trout catching. Ritter and Harned shared pitching duties. The Kleins won, 15–8. Killinger, Walsh, and Brown each had three hits.¹⁵

On Friday, May 30, the Klein Chocolate Company opened its new ballpark in Elizabethtown. The opponent was the Motive Power team, a company team from Harrisburg sponsored by the Pennsylvania Railroad. Games were played in the morning and afternoon. At the afternoon game, to celebrate the new field a flag was raised and music was provided by the local Palmyra town band. 16 In these two games the Klein team gave notice that they would be a force to be reckoned with. Motive Power, recognized as one of the better teams in the area, fell by scores of 15-3 and 13-0. Killinger hit two home runs and Walsh hit one. Wrightstone, who formerly had played for Motive Power, had five hits in the doubleheader. William Klein presented Killinger and Walsh with boxes of Klein Almond Bars as rewards for their home runs. Thus began a tradition of rewarding home runs with boxes of Klein Chocolate, always dutifully reported upon in the newspapers. 17

The Klein Chocolate team breezed to five more wins against local competition and then left on June 19 for a four-day road trip to see the Philadelphia A's host the Detroit Tigers and to play games of their own in Newark, New Jersey, Philadelphia, and Lancaster. The team returned home undefeated. They took down the Newark Charms Candy team, a reported professional powerhouse, 3-2.18 Their most impressive win yet was a defeat of the highly regarded Strawbridge and Clothier team in Philadelphia, 5-1, behind Ritter's pitching and Walsh's long three-run home run in the ninth inning. "The Strawbridge and Clothier team thought we were a bunch of rubes from upstate," reported manager Brackenridge, "but when they saw we played big-league ball you never did see such a change in a mob of fans."19 The Kleins finished the road trip with a win over the Eighth Ward team in Lancaster.20

The Klein team lost their first game of the season on June 26, falling to the Parkesburg Iron Works team, 6–5, in 16 innings.²¹ Several more easy victories over local teams followed and then on July 5, William Klein made a big announcement that received coverage in all the local papers: The Philadelphia Athletics had been engaged to play an exhibition on July 23, which would be played at Harrisburg's Island Park to accommodate the anticipated large crowd.²²

CONNIE MACK'S PHILADELPHIA A'S COME TO TOWN

Before the big game, some changes occurred to the Klein roster. First baseman Tony Walsh signed with a team in Larksville and left. Shortstop Killinger returned to Penn State. "Babe" Brown also left to play for other local teams. In response to these defections, Brackenridge signed former St. Louis Browns player Dick Kauffman, a native of nearby Lewistown, to replace Walsh. Veteran catcher/third baseman Frank Brannon, a Wilkes-Barre resident, jumped from the Shreveport team in the Texas League to replace Killinger. Bill Kay, a 41-year-old former Washington National and longtime minor leaguer, replaced Brown in the outfield. Brackenridge also signed a new pitcher from the Reading team of the Allison-Hill League, Clyde Mellinger, who had starred for the local Shippensburg College team for four years. Also new to the lineup was 39-yearold infielder Bill Cranston. Cranston, who had had a 12-year career in the minors, would become a key member of the team.

A crowd estimated at between 4,000 and 6,000 crammed every corner of the Harrisburg Athletic Club field on Island Park at 3:45 on July 23 to see Connie Mack's Philadelphia Athletics square off against the Klein Chocolate team.²³ Mack brought a team of mostly starting players with him. Stars Amos Strunk and Tillie Walker were in the outfield. Fred Thomas was at third base. Bench players like Dick Burrus and Terry Turner filled out the lineup. Regular starting catcher Cy Perkins was playing shortstop, while coach Paddy Livingston did the catching. On the mound for

catcher Cy Perkins was playing shortstop, while coach Paddy Livingston did the catching. On the mound for Park field for the mound for the mound for the mound for Park field for the mound for

Before starting the Klein Chocolate Company, the Klein brothers worked for Hershey, including the Hershey baseball team. William Klein in street clothes at left. Frederick is in uniform, third from left.

the A's was Tom Rogers, who was a semi-regular part of the starting rotation.

Walter Harned pitched for Klein Chocolate. The A's pushed across single runs in the second and seventh to lead, 2–0, going into the eighth. In the eighth inning, the Kleins got to Rogers for four runs on five consecutive hits, including a George Hunter double. Harned shut the A's down in the ninth and the victory went to Klein Chocolate, 4–2. Harned allowed only four hits to the major leaguers, while the Klein hitters managed eight hits off Rogers. Newspapers from as far away as Pittsburgh and New York City carried reports of the surprising Klein victory.²⁴ William Klein got publicity for his candy and Connie Mack and his A's got roasted.²⁵

THE RAJAH VISITS WITH HIS ST. LOUIS CARDINALS

August saw the Klein Chocolate team continue their domination of local clubs and defeat a travelling contingent, the Baltimore Dry Docks team, 5–4, before a large, enthusiastic crowd at Island Park in Harrisburg. On August 11, the team split a Sunday doubleheader against Ephrata, falling, 2–0, and winning, 3–2, to run their season record to 34–6. Parametric region was abuzz with the news that the St. Louis Cardinals—with stars Rogers Hornsby and Jack Smith, as well as local boy Clifton Heathcote—would be coming to town to play the Klein team. The game was scheduled for Tuesday, August 12.

An estimated crowd of 5,000 crammed the Island Park field for the game against the Cardinals.²⁹ Manager

Branch Rickey sent out a team of mostly regular players, including Hornsby, Smith, and Heathcote, to face the Klein team, although he did start pitcher Frank Woodward in left field. Oscar Tuero was the Cardinals hurler. Mellinger started the game for the Klein team, but he did not last long. After an error by Wrightstone at third base, the Cardinals cracked out two doubles and a single, scoring three runs, and Mellinger was replaced by Harned. The Cards plated two more runs before Harned could put out the fire. Down five runs before they even came to bat, the Klein team responded by steadily eating away at the Cardinals lead, while Harned tamed the St. Louis bats. The "Chocolate Boys" scored two runs in the fourth, two in the sixth, and two more in the seventh to win the game, 6–5. They were helped along by six Cardinals errors. Wrightstone led the Klein team with three hits, while Kauffman drove in two runs.³⁰

THE ATLANTIC CITY BACHARACH GIANTS BEAT THE KLEINS

On August 18, the Klein team was back at Island Park to play a barnstorming independent Negro team, the Bacharach Giants from Atlantic City. The Bacharach Giants featured some of the finest players in the country including pitcher Dick "Cannonball" Redding, speedster Spot Poles, slugging first baseman Ben Taylor, and shortstop/manager John Henry "Pop" Lloyd. The Kleins could manage only four hits off Redding, and fell to the visitors from Atlantic City, 2-1.31 The Bacharach Giants proved to be the toughest of opponents for the Kleins. Two weeks after this defeat, Klein Chocolate visited the Bacharach Giants in Atlantic City for a weekend series and dropped two games by the scores of 1–0 and 3–2.32 Veteran star Frank Wickware pitched the Giants to victory in the second game. It appeared that the fine Klein Chocolate team had met its match and then some against the Bacharach Giants.

THE CINCINNATI REDS AND LOCAL HERO JAKE DAUBERT PAY A VISIT

On August 29, a throng estimated at 8,000 crammed the stands and rimmed the outfield at Island Park to see the Klein Chocolate team take on the National Leagueleading Cincinnati Reds. The field was so packed with spectators that special ground rules needed to be instituted for the fans lining the outfield.33 Cincinnati manager Pat Moran fielded a team studded with stars, including local favorite Jake Daubert from Shamokin, Pennsylvania, Sherry Magee in left and future Hall of Famer Edd Roush in center, as well as starting third baseman Heinie Groh and right fielder Greasy Neale. Lefty Rube Bressler did the pitching. Walter Harned was on the mound for the Kleins. The Reds reached Harned for single runs in the first, third, fifth, and ninth, in part due to two errors by shortstop Frank Brannon. The Kleins were held off the board by Bressler until the ninth when they scored three runs, thanks in part to doubles by Wrightstone and Brannon, to make the game close. George Hunter had three hits for the Klein team. The final was St. Louis 4, Klein Chocolate 3.34

Mired in a team hitting slump, the Kleins lost their fourth straight game at home to a Bethlehem Steel team led by former and future Philadelphia Phillies left-hander, Stan Baumgartner, 1–0.³⁵ The team's hitting form returned with a string of wins against weaker local competition, however. The *Lancaster News Journal* noted that third baseman Russ Wrightstone was emerging as "the best slugger in this neck of the woods." ³⁶

On September 8, the Klein team held a rematch with Connie Mack's Athletics at Island Field. Before traveling to Harrisburg for the game, the Kleins won a morning game at home against the semi-pro Middletown, Pennsylvania, team.³⁷ Walter Harned was again chosen to pitch against the A's for the "Lunch Bars." Harned scattered nine hits and two runs in earning the easy 8–2 victory. Wrightstone contributed an insidethe-park home run. The *Lancaster News Journal* called the game, "too one-sided to be very interesting." ³⁸

After the Athletics game, the Lunch Bars went on another run of victories against semi-pro teams in the region including Williamsport, Bloomsburg, Ephrata, and Nanticoke. A return match with the strong Parkesburg Iron Works nine ended in controversy. With the game being played in a steady rain in the late innings, manager Brackenridge appealed to have the game called off with his team ahead, 3–1. The Parkesburg manager refused, so Brackenridge grabbed the ball, threw it over the fence and pulled his team off the field. Two Parkesburg runners, on base at the time, came around to score. Each team then filed a final score with the newspapers, the Klein team declaring victory and the Parkesburg team calling it a draw. The *Lancaster News-Journal* carried both line scores.³⁹

THE BROOKLYN ROBINS AND WASHINGTON NATIONALS FALL TO THE KLEINS

During the week of September 22, the Klein team would play four games against major-league competition and win three of them. First up were the Brooklyn "Robins," as the team was often called in those days in deference to their revered manager Wilbert Robinson. The Robins were traveling to Philadelphia by train after defeating the National League champion Reds in Cincinnati, 3–1, on Sunday, September 21. On Monday, September 22, they stepped off the train in Elizabethtown and walked across the street to the Poplar Grounds ballpark to meet the Klein aggregation. They got back on the train a few hours later, having been handed a 2-1 defeat at the hands of the Lunch Bars. Recently signed York, Pennsylvania, native Norman Plitt pitched for the Brackenridge nine. Plitt had pitched briefly for the Brooklyn team in 1918, and he was out to show them what they were missing, as he gave up seven hits and just one seventh inning run, to a team that included future Hall of Famer Zack Wheat, and stars including Hi Myers, Ed Konetchy, and Ivy Olson. "Bugs" Trout had two hits and drove in the winning run for the Kleins.⁴⁰

On September 24, the Klein bunch traveled to nearby Carlisle, Pennsylvania, to play the Washington

Nationals at Dickinson College. The Nats were on their way to Boston after dropping four games to the Indians in Washington. The crowd of 3,000 that turned out included a contingent of soldiers from the Carlisle Barracks and wounded troops from World War 1 who were recovering at the base's military hospital.⁴¹ Free Klein Almond Bars were given away to all who attended. The Kleins prevailed against Clark Griffith's team, 4-3, behind the pitching of Walter Harned, who scattered nine hits. Washington's future Hall-of-Fame outfielder Sam Rice had two hits, third baseman Joe Leonard had three, while their star first baseman, Joe Judge, was held hitless. Wrightstone had two hits for the Klein team, including a triple, and made a spectacular diving stop of a smash at third to save a run.⁴² Wrightstone's play had attracted the attention of major league scouts and rumors appeared in the papers suggesting he would be with a major league club in the spring.43

THE BABE AND THE RED SOX DEFEATED

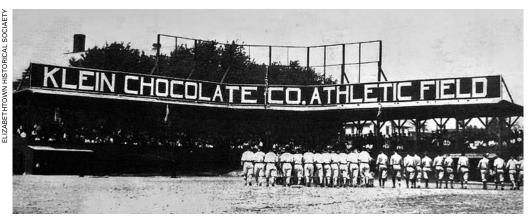
One day later, on September 25, the Klein Chocolate team returned to Island Park in Harrisburg to play the Boston Red Sox and their budding superstar pitcher/outfielder, Babe Ruth. Boston manager Ed Barrow played a number of youngsters in his lineup, but Ruth started in left field, along with regulars Stuffy McInnis at first, Red Shannon at second, and Everett Scott at shortstop. "Big Bill" Ritter got the starting assignment for the Kleins and shut the big leaguers out on five hits. Klein Chocolate won the game, 4–0. Wrightstone had the big hit, a two-run triple in the eighth inning. Ruth struck out twice and flied out deep to right on a ball that was flagged down by Bill Kay. Ruth also pitched the final two innings and was charged with three earned runs.⁴⁴

The Red Sox stuck around for a rematch the next day. The second game was played at Rossmere Field in Lancaster about 30 miles from Harrisburg. Future Hall of Famer Herb Pennock pitched for the Sox and newly signed right hander Art Decatur, who joined the Klein team after his season ended at Nashville in the Southern Association, took the ball for Brackenridge. Boston prevailed in this one as they scratched out three single runs in the first, fourth, and fifth innings. The only Klein run came in the eighth and was driven in by Wrightstone. The Klein team managed seven hits off Pennock, Wrightstone leading the way with three. Ruth contributed an RBI single to the Red Sox cause, but his big name and growing reputation as the greatest of all baseball players earned the Klein brothers plenty of publicity for their chocolate bars.

THE BIG TRAIN IS DERAILED

After the second Boston game, manager Brackenridge announced that a return match against the Washington Nationals had been scheduled for Island Park, and that star pitcher Walter Johnson would take the mound.47 The game, played on September 29, was designated as a special "Soldiers Day" celebration, designed "to welcome home thousands of American soldiers returning from the trenches of Europe."48 Game day started with a parade and speeches by local politicians, including Pennsylvania Governor William Sproul. The events culminated with the raising of a massive flag at Island Field.⁴⁹ A throng estimated at 10,000 people showed up for the game. The crowd was so large that it rimmed the outfield, causing easy fly balls to go for ground rule doubles when they disappeared into the sea of onlookers.

Unfortunately, the game itself was anti-climactic. The *Harrisburg Telegraph* accused the Nationals of playing "uninspired" baseball.⁵⁰ The Nationals brought only nine players with them and no bats. They used the Klein team equipment. Johnson pitched only the first three innings and then switched positions with center fielder Sam Rice, who took over the pitching. The Kleins prevailed, 4–3, in twelve innings, behind



Klein constructed a grandstand and playing field on the Poplar Street grounds adjacent to the chocolate factory, with the field oriented so the smokestacks were visible beyond the outfield. the pitching of Norman Plitt. The winning run scored, fittingly in this sloppily played game, on a Rice wild pitch. The *Harrisburg Telegraph* reporter said the run "looked like another Washington gift."⁵¹

THE SEASON WINDS DOWN

As the infamous 1919 World Series between the Cincinnati Reds and the Chicago "Black Sox" got under way, the Klein Chocolate team was preparing for a busy final three games of the season, all against majorleague competition. They had two games with the New York Giants sandwiched around a game against a barnstorming group of American League All-Stars.

The Giants had finished second in the National League. The first game was scheduled for Rossmere Field in Lancaster on October 4. The lineup that manager John McGraw sent out against the Klein team included 17-game winner Rube Benton, future Hall of Famers Frankie Frisch and Ross Youngs, and other regulars like George Burns and Larry Doyle. Benton pitched a two-hit shutout and the Kleins went down to a 7–0 defeat.⁵²

The next day the Klein Chocolate team traveled to Marietta, Pennsylvania, to face off against the American League "All-Stars." A crowd of 2,500 showed up to see such major leaguers as Del Pratt of the New York Yankees and Amos Strunk, Whitey Witt, Cy Perkins, and George Burns of the Athletics. Dave Keefe of the A's pitched for the All-Stars. He was opposed by Art Decatur. The Klein team prevailed, 2–0, as Decatur shut down the All-Stars on six hits.⁵³

The rematch with the Giants was held at Island Park on October 6. This time the Giants pitcher was 25-game winner Jesse Barnes. Bill Ritter pitched for the Kleins. The game was a tight pitchers' duel for the first eight innings as the Giants built a slim 3–2 lead. The Giants finally got to Ritter for five runs in the ninth to make the final score 8–2. The *Lancaster News-Journal* described the crowd as "mediocre." ⁵⁴

A CELEBRATION AND UNCERTAIN FUTURE

On the evening of October 7, the Klein brothers hosted a banquet for the players at the Greenwalt House in Elizabethtown. Invited guests included friends of the players who had supported the team throughout the historic season and members of the press who had publicized the team's exploits. An "excellent chicken dinner" was followed by the cutting of a large cake in the shape of the Elizabethtown baseball grounds. 55 The occasion, while festive, was bittersweet. While Frederick Klein, in his remarks, promised another great team for next year, no one could be certain what



Klein team uniforms at the Elizabethtown Historical Society.

the future held.⁵⁶ Many of the players left for home immediately after the banquet, while a few stayed to work in the Klein Chocolate factory.⁵⁷

The final statistics for the 1919 Klein Chocolate team were indeed impressive. The *Lebanon Evening Report* called it "the most successful [season] ever experienced by a semi-professional organization." The team's final record was 69–14–2 with one forfeit on that rainy day in Parkesburg when manager Brackenridge pulled the team off the field. Leading hitters on the team were Bill Kay with a .358 batting average, Russ Wrightstone at .338, and Frank Brannon at .325. Wrightstone led the team in extra-base hits. While several pitchers contributed to the success of the team, none was more important or more consistently excellent than Walter Harned.

Most remarkably, the team played 11 games against major league teams, going 7–4, beating the Athletics and Nationals each twice and scoring victories over the Red Sox, Brooklyns, and Cardinals. Only the major league New York Giants and the Negro independent team the Atlantic City Bacharach Giants were superior to the Klein Chocolate team over multiple matchups.

The team certainly achieved the goal that William Klein had aimed for when he decided to go all in for baseball. As the *Lancaster New Era* put it, the team

"put Lancaster County on the baseball map...and incidentally, made the Klein Chocolate known from coast to coast." ⁵⁹

FROM KLEIN CHOCOLATE TO THE MAJOR LEAGUES

Any hopes that the Klein team could repeat its success the following season were quickly dashed as major league teams and other semi-professional teams came bidding for Klein team talent. In January, Klein third baseman Russ Wrightstone signed with the Philadelphia Phillies. The 27-year-old Wrightstone would have a productive eight-year major-league career with the Phillies and New York Giants. The Klein team was his training ground. Wrightstone, who compiled a lifetime .297 batting average in the major leagues, never spent a day in minor league baseball prior to his major-league debut.

While no other Klein players went directly to the major leagues, several signed major league contracts and a few did eventually make it to the bigs. Art Decatur signed with Louisville in the American Association and by 1922 he was with Brooklyn. Earl Potteiger became the manager of the Lebanon team in the semi-pro Bethlehem Steel League, and he signed Norman Plitt to pitch for him. Plitt played for several local teams before eventually surfacing in the major leagues with the Brooklyn Dodgers in 1927. Injuries from an auto accident that year cut short his major league career.⁶⁰

Potteiger eventually made his name as the head coach of the champion New York (Football) Giants in the National Football League. While there he coached former Klein player Hinkey Haines, who was signed by the New York Yankees, played on the Yankees 1923 World Series championship team, and then switched to football, winning a title as a key member of the backfield with the 1927 New York (Football) Giants.

Pitcher "Big Bill" Ritter re-signed with his former team, the New York Giants, but never returned to the big leagues, eventually pitching for the local Motive Power team. Catcher Irvin "Bugs" Trout was signed by the St. Louis Cardinals and was farmed out to Houston in the Texas League. Shortstop Frank Brannon went to Tulsa to play in the Western League. Dick Kauffman signed with Atlanta in the Southern Association. As a forty-one-year-old outfielder, Bill Kay caught on with Greenville in the South Atlantic League. George Hunter signed to play with a different local team, the Lancaster-Baltimore squad. Charlie Babbington played several years in the International and New York-Pennsylvania Leagues.

THE KLEIN CHOCOLATE TEAM AFTER 1919

Only two players from the 1919 Klein squad returned for the 1920 season. Bill Cranston stayed with the team, before quitting in a dispute with management in June. He later became the manager of the local Mount Union team. Walter Harned pitched for a time with the Klein team in 1920 and then for several other semi-pro teams in the area, before landing a few years later with the Harrisburg Senators of the New York-Pennsylvania League.

The Klein brothers rehired manager Brackenridge for the 1920 season and announced their intention to field a superior team once again, but it was not to be. Brackenridge again combed the region for the best players he could find, and high salaries were offered, but the magic was gone: the talent pool was dry. After two months of uninspired play, which saw the team losing more games than they won, William Klein pulled the plug in late June. When informing the players that the team was being disbanded, Klein handed each player his final check and a box of Klein chocolate, possibly, as the *Lancaster News-Journal* speculated, "to remind them of better times." 61

From 1921 through 1932 the Klein Chocolate Company fielded modest teams, with modest ambitions, at a much more modest cost than in the 1919 heyday. A highlight of this period of Klein baseball history came in May 1932 when the Klein team hosted a game against the House of David team featuring the great Grover Cleveland Alexander, then 45 years old and far past his prime, but still a major attraction for baseball fans.⁶²

Although the team never reached such lofty heights as it had in 1919, William Klein's gamble paid off. His 1919 Klein Chocolate baseball team attracted nationwide attention for the excellence of their play and for their ability to defeat major-league competition. That attention put the Klein Chocolate brand in the headlines of newspapers throughout the country. The exploits of the team helped Klein Chocolate become a major competitor in the candy field. The company flourished for many years until the Kleins finally sold the company and the factory to M&M Mars in 1970. The factory employs 300 people to this day.⁶³

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ENVIRONMENTAL CHANGE

Greenberg Gardens Revisited

A Story about Forbes Field, Hank Greenberg, and Ralph Kiner

Ron Backer

In 1947, the Pittsburgh Pirates installed an inner fence in a portion of Forbes Field, reducing the distance down the left field line of the ballpark by 30 feet. The purpose of the fence was to assist the team's newest acquisition, Hank Greenberg, in his ability to hit home runs. The area between the new fence and the outer wall became known as Greenberg Gardens.¹

Forbes Field is long gone, having been demolished in 1971. Greenberg Gardens is even longer gone, having been removed before the beginning of the 1954 season. But the memory of Greenberg Gardens lingers, for being an unusual attempt to adjust the dimensions of a baseball playing field to benefit a single batter. The following is the story of Greenberg Gardens, the ballpark, Forbes Field, the intended beneficiary of Greenberg Gardens, Hank Greenberg, and its unintended beneficiary, Ralph Kiner.

FORBES FIELD

The Pittsburgh Pirates played their first game at the newly built Forbes Field on June 30, 1909. The ballpark was erected in the Oakland section of the City of Pittsburgh, on the edge of Schenley Park; 30,338 fans attended the game, only to see the Cubs beat the Pirates, 3–2.²

Built of concrete and steel rather than the traditional wood, the cost of the new ballpark was about one million dollars.^{3,4} The park received very good reviews upon its opening. The *Pittsburgh Gazette Times* wrote, "Forbes Field is the marvel of the world." Ring Lardner, writing in the *Chicago Tribune*, extolled the virtues of the setting of Forbes Field in Schenley Park, calling it a "beautiful new field." The *1910 Reach Baseball Guide* said, "For architectural beauty, imposing size, solid construction and public comfort and convenience, it has not its superior in the world."

Despite these accolades, several changes were made in the configuration of the playing dimensions of Forbes Field over the years, many of which affected the left-field home-run distance. In May 1911, less than two years after Forbes Field opened, home plate was moved about 26 feet back toward the grandstand and the field

was shifted slightly towards right field, enlarging the playing surface and increasing the distance down the left field line to 360 feet from its original distance of about 306 feet.⁸ In 1925, a new scoreboard was erected in left field, near the foul line but in fair territory, causing many long balls hit in that direction to become doubles rather than home runs.⁹ In 1930, home plate was moved five feet further from left field (and the foul lines shifted slightly), increasing the distance down the left field line to 365 feet.¹⁰

Given these many changes in the left-field dimensions, the addition of Greenberg Gardens in 1947 was not that unusual. However, Greenberg Gardens turned out to be very controversial. Part of the issue was aesthetics; the other was its effect on home runs hit in the ballpark.

HANK GREENBERG

Henry Benjamin ("Hank") Greenberg was born in New York City on January 1, 1911, to David and Sarah Greenberg, both Jewish immigrants from Romania. Hank excelled at multiple sports in high school, including basketball and baseball. After high school, he received interest from several major league teams. In 1929, Greenberg signed with the Detroit Tigers and was brought up to the big leagues in 1933. By May, he had become the regular first baseman of the Tigers. The following year, 1934, was his breakout season—he hit 26 home runs and had 139 RBIs. However, he is most famous for not playing that year on Yom Kippur, the holiest day of the year in the Jewish religion. 12

In 1935, Greenberg led the American League in home runs, and was voted the Most Valuable Player. In his most famous season, 1938, Greenberg almost broke Babe Ruth's season home run record of 60, finishing with 58 home runs. Greenberg had good seasons in 1939 and 1940 (winning the Most Valuable Player award again in 1940), but thereafter he was off to war, missing most of four seasons during World War II, and not returning to his team until July 1, 1945. Despite the long layoff, Greenberg hit a grand slam in the top of the ninth inning on the last day of

the season to send the Tigers to the World Series.

At the start of the 1946 season, Greenberg was 35 years old and his physical condition was deteriorating. During the season, his lower back—which had bothered him in his military days— continued to nag him. His batting average, which had been consistently over .300, dropped significantly, even though in the end, he led the American League in both home runs and RBIs. Nevertheless, Detroit was interested in dumping Greenberg's high salary and when an erroneous off-season report in *The Sporting News* led Walter O. Briggs, the owner of the Tigers, to believe that Greenberg wanted to play for the Yankees, he grew determined to get rid of the slugger. ¹³ On January 18, 1947, the Tigers sold Greenberg's contract to the Pirates. ¹⁴

The deal was a big risk for Pittsburgh, as they were out the money paid to Detroit for Greenberg's contract even if Greenberg did not actually come to Pittsburgh to play. At the time, Greenberg was seriously contemplating retirement—in fact, he told the Pirates in February that he was retiring.¹⁵ However, the Pirates were not dissuaded. New owner John Galbreath spent three days trying to convince Greenberg to change his mind. He even enlisted the help of another new Pirates owner, Bing Crosby.¹⁶ They addressed Greenberg's two main objections: money and the long left-field dimension of Forbes Field. Galbreath offered to pay Greenberg \$100,000 per year, making him the highest paid player in the game, and told Greenberg that the Pirates were already contemplating moving the bullpens to left field. The change would reduce the distance down the line to about the same as it was at Briggs Stadium in Detroit, which had been Greenberg's home field for years. With the promises and cajoling, Greenberg finally agreed to become a Pittsburgh Pirate.¹⁷

In the end, Hank Greenberg played only one season in Pittsburgh, hitting only 25 home runs, despite the installation of the shorter fence. Lingering injuries caused him to miss several games that year. Greenberg retired at the end of the season.¹⁸

RALPH KINER

The person who benefitted the most from Hank Greenberg's one year in Pittsburgh was Ralph Kiner. Kiner led the National League in home runs for the six full seasons while playing in Forbes Field with Greenberg Gardens. With his home-run title in 1946, Kiner led the National League in home runs for seven consecutive seasons, a record that still stands today. ¹⁹ More importantly, Greenberg immediately took Kiner under his wing and helped him with his hitting and attitude toward the game.

Ralph McPherran Kiner was born on October 27, 1922, in Santa Rita, New Mexico. After his father's death when Ralph was only four, the family moved to California where, with the help of a neighbor, he learned the game of baseball. As he grew up, he played baseball in local sandlot games and in high school. He also played for the Junior Yankees, an amateur team sponsored by the New York Yankees. At the time, there was an unwritten agreement among major league baseball clubs that players with major-leaguesponsored junior teams would be signed by the parent organizations when they became old enough to play professionally.²⁰ However, once Kiner graduated from high school, the Pirates made a strong bid for his services, convincing him that he had a better chance of making it to the majors faster with the Pirates than with the Yankees. Kiner signed with the Pirates in 1940.

Kiner's baseball career started in the minor leagues in 1941, but after two seasons, his playing career was interrupted by his service in the Navy Air Corps. Returning to the game for the 1946 season, Kiner expected to be sent to the minors, but after a good spring training, he was promoted to the big club where he had a very good rookie season. He led the National League in home runs with 23, equaling the Pirates club record set in 1939 by Johnny Rizzo.²¹ He also had 81 RBIs.

When Hank Greenberg arrived the following year, he started working with Kiner on his hitting in spring training. They often worked after the official practice sessions had ended, and then before games once the regular season commenced. He moved Kiner closer to the plate, taught him how to study pitchers, and convinced him not to try to hit to the opposite field. Despite Greenberg's efforts, Kiner's season started slowly and manager Billy Herman wanted to send Kiner to the minors. Greenberg, however, intervened, convincing management to keep Kiner in the big leagues. Greenberg's faith in his protégée was rewarded, as Kiner hit 51 home runs that year, with a batting average of .313.²²

Branch Rickey became the general manager of the Pirates on November 6, 1950.²³ Even though Kiner was still swatting home runs and drawing fans to the ballpark (although attendance decreased with the poor record of the Pirates), Rickey was not happy with Kiner's high salary. Rickey wanted to trade Kiner and start anew with younger players. However, Rickey could not do this on his own authority. He needed the consent of John Galbreath, the president and an owner of the Pirates. Rickey began a multi-year smear campaign

against Kiner with Galbreath. He also leaked false facts about Kiner to the press, hoping to diminish Kiner's standing with the fans.²⁴

On June 4, 1953, Branch Rickey got his wish, trading Kiner to the Chicago Cubs in a ten-player deal. Along with Ralph Kiner, the Pirates traded Joe Garagiola, Howie Pollet, and George Metkovich. The Pirates received Toby Atwell, Bob Schultz, Preston Ward, George Freese, Bob Addis, and Gene Hermanski, none of whom became anything special for the Pirates. Perhaps most important to Rickey, the Pirates also received a cash payment of \$150,000. Since the Cubs were playing the Pirates that afternoon at Forbes Field, Kiner simply switched uniforms and played for the visitors in the game.

THE FENCE GOES UP

Turning back to 1947, just before the start of the base-ball season and the arrival of Hank Greenberg in Pittsburgh, the Pirates announced major upgrades to Forbes Field. These included new bathrooms, dressing rooms, and dugouts, the reduction of the area behind home plate to the backstop fence, additional box seats, and the installation of Greenberg Gardens.²⁵

The Gardens was created by installing a fence that ran almost parallel to the left-field brick wall and scoreboard of the ballpark for about 200 feet, and then tapered at a sharp angle back to the outer wall, meeting that wall near the light standard closest to center field. This reduced the home-run distance down the left field line of Forbes Field by 30 feet and by slightly greater distances the farther away the fence was from the foul line. Previously, when a ball hit the scoreboard, it was in play and usually resulted in a double. Now a ball hit off the scoreboard—25.42 feet high on its sides and 27 feet in the middle—became an automatic home run.²⁷

The Gardens' fence was eight feet tall, with a threefoot high wooden base and five feet of fencing. Both bullpens were moved into the Gardens, with the Pirates' on the left, the visitors' on the right, and a wooden wall between them.

The Gardens was an aesthetic nightmare for one of the most beautiful ballparks in the major leagues. Because the original outer wall remained in place, the Gardens always looked like a temporary structure, never truly fitting in with the rest of the stadium. The fence cut out a chunk of the vast interior of Forbes Field, one of its significant attributes, with the outfield no longer seeming to be a never-ending expanse of green. The temporary fence distracted from the high and leafy trees of Schenley Park which surrounded left



Ralph Kiner and Hank Greenberg pose together during their mutual time with Pittsburgh.

and center fields, and detracted from the red brick outer walls with their beginnings of hanging ivy.

Forbes Field was well known for the lack of advertising on its walls.²⁸ But once Greenberg Gardens was constructed, a portion of the ivy in the middle of the visitors' bullpen was removed and large white letters and numbers were placed on the wall there, announcing the Pirates' next home game. A photograph of the era shows that on at least one occasion a banner was placed over the wall, advertising an upcoming promotion at Forbes Field. It is true that these were not third-party advertisements, as could be seen on the walls and scoreboards of numerous other major league ballparks of the era. These could properly be characterized more as announcements than advertising. Nevertheless, these announcements marred the character and beauty of the ballpark.

The debut of Greenberg Gardens on Opening Day at Forbes Field, April 18, 1947, was spectacular. The Pirates beat the Reds in a slugfest, 12–11. There were six home runs hit that day, five of which landed in the Gardens. Surprisingly, neither Hank Greenberg nor Ralph Kiner hit any, even though the Pirates hit five of the six. This unexpected outburst of homers, though, meant that Greenberg Gardens was mired in controversy right from the start. Harry Keck, the sports

editor of the *Pittsburgh Sun-Telegraph*, wrote, "The cheap home runs made a farce out of what might have been a pretty good ball game."²⁹

The controversy over Greenberg Gardens continued throughout the season (and, in fact, throughout its existence). On May 7, 1947, *The Sporting News* published an editorial decrying ball clubs which build fences in the outfield to benefit certain home-run hitters. The paper said, "The outstanding offense was the building of the so-called Greenberg Gardens in Forbes Field in Pittsburgh. ... *The Sporting News* believes that in such matters as the construction of Greenberg Gardens, the issue of fair play is involved."³⁰

During the 1947 season, as Ralph Kiner took greater advantage of the Gardens than Hank Greenberg, some fans and writers started calling the area "Kiner's Korner." Once Hank Greenberg left, the new name became increasingly popular, but most people and writers continued to refer to the area as Greenberg Gardens, even after the Gardens' demise.

Billy Meyer became the manager of the Pirates after the 1947 season. In December of that year, he visited Forbes Field for the first time in his career and got his first look at Greenberg Gardens. Meyer also looked at some of the statistics for the Gardens. He then intimated to the press that there could be changes made to the Gardens, including possibly tearing them out completely.31 Instead, the following year, the portion of the Gardens fence from the left field foul pole to a point near the visitors' bullpen was raised to 16 feet, although it then quickly tapered down to eight feet, and then continued at eight feet for the rest of its length.32 This change may have had some success in reducing the number of Gardens home runs at Forbes Field. In 1947, 116 home runs were hit into the Gardens-in 1948, only 74.

After 1948, as disclosed in newspaper articles of the day, there were numerous discussions of demolishing Greenberg Gardens. However, the structure seemed to be impervious to criticism or the wrecking ball. The Gardens remained in place through seven baseball seasons and was finally removed before the start of the 1954 season.

WAS GREENBERG GARDENS A SUCCESS?

Greenberg Gardens was installed in Forbes Field with the initial intent of providing Hank Greenberg with the opportunity to hit more home runs in Pittsburgh. It remained in place after Greenberg left the team because Ralph Kiner was hitting lots of home runs into the Gardens, thereby drawing fans to the ballpark. Unfortunately for the Pirates, the visiting team also had the advantage of hitting at Forbes Field with a shortened fence. According to a 1954 article in *The Sporting News*, over its seven-year existence, visiting teams hit 285 homers into the Gardens while the Pirates hit only 265 such home runs.³³ Given the Pirates' woes as a team during the Gardens years, finishing in last place three times and finishing in the second division in every year except one, a 20-home-run deficit may not seem all that bad. Nevertheless, over the long term, Greenberg Gardens was a negative with regard to the Pirates' fortunes on the field.

As to Hank Greenberg, the Gardens also cannot be considered a success. In his one year with the Pirates, 1947, Greenberg hit only 25 home runs. Of that total, 18 were hit at Forbes Field, of which nine landed in the Gardens. It is true that nine home runs were more than a third of Hank Greenberg's home-run production that year, contributing to his landing in eighth place on the list of National League home run leaders for 1947. And without Greenberg Gardens, Greenberg's home-run production in 1947 might have been truly abysmal. However, in addition to leading the American League in home runs in 1935, 1938, and 1940, Greenberg led the American League in home runs in his last season with Detroit, just before coming to Pittsburgh, hitting 44 home runs in 1946. A 25-home-run season in Pittsburgh must be considered a major disappointment for Hank Greenberg.

As to Ralph Kiner, however, Greenberg Gardens made his career. Of the 369 home runs that Kiner hit throughout his major league career, 71 landed in Greenberg Gardens.³⁴ That is about 20% of his homerun production. Without Greenberg Gardens, Kiner's total career home runs would have been less than 300. Also, without the Gardens, instead of leading the National League in home runs for seven consecutive seasons, one of Kiner's major claims to fame, Kiner would have led the League in only three of those seasons, 1946, 1949, and 1950. In 1948, he would have fallen to sixth place in the list of league leaders.³⁵ Based on these statistics, it is clear that without Greenberg Gardens, Ralph Kiner would never have made it to the Hall of Fame.

Greenberg Gardens was therefore an incredible boon to Ralph Kiner's playing career. Some people back then, and even to this day, contend that Ralph Kiner had an unfair advantage over other players because of the shortening of the left field home run distance at Forbes Field during his years with the Pirates.³⁶ The facts are different.

Table 1A contains a chart of the dimensions of the left field foul lines of all the major league ballparks as of Opening Day, 1950.37 As can be seen, about half of the major league ballparks that year had left-field foul lines that were shorter than Forbes Field's, a few substantially shorter.

Table 1A. Left Field Line Dimensions of All Ballparks, Opening Day, 1950

Team	Ballpark	League	Distance	Height (ft)
WSH	Griffith Stadium	AL	386	10
CHI	Wrigley Field	NL	355	12
CHI	Comiskey Park	AL	352	12
STL	Sportsman's Park	NL	351	11.5
	Sportsman's Park	AL	351	11.5
BR0	Ebbets Field	NL	343	9.87
DET	Briggs Stadium	AL	340	15
BOS	Braves Field	NL	337	25
PIT	Forbes Field	NL	335	16
PHI	Shibe Park	NL	334	12
	Shibe Park	AL	334	12
CIN	Crosley Field	NL	328	18
CLE	Municipal Stadium	AL	321	5.25
BOS	Fenway Park	AL	315	37.17
NYY	Yankee Stadium	AL	301	3.92
NYG	Polo Grounds	NL	280	16.81

In fact, as shown in Table 1B, there were also some significantly shorter right-field foul lines in 1950, which would have helped home-run-hitting left-handed batters. In addition, the two replacement stadiums for Forbes Field had or have short left field lines. (See Table 1C.) The left field foul pole at Three Rivers Stadium was 335 feet from home plate for most of its existence, the same distance from home plate to Greenberg Gardens. At PNC Park, the distance down the left field line is 325 feet, ten feet shorter than the distance to Greenberg Gardens. Another relevant factor is the Major League Baseball rule which sets forth the minimum distances in the construction of baseball stadiums.³⁸ It provides that for any baseball park built or remodeled after June 1, 1958, the distance from home plate to the foul poles must be at least 325 feet. Greenberg Gardens met that standard.

Table 1B. Right Field Line Dimensions of Selected Ballparks, Opening Day, 1950

Team	Ballpark	League	Distance	Height (ft)
BOS	Fenway Park	AL	302	5.37
NYY	Yankee Stadium	AL	296	3.75
PIT	Forbes Field	NL	300	24
NYG	Polo Grounds	NL	258	10.64

Table 1C. Left Field Line Dimensions of Pittsburgh Ballparks

Ballbark	Distance	Height
Three Rivers Stadium (1970–74)	340	10
Three Rivers Stadium (1975–2000)	335	10
PNC Park (2001-present)	325	8

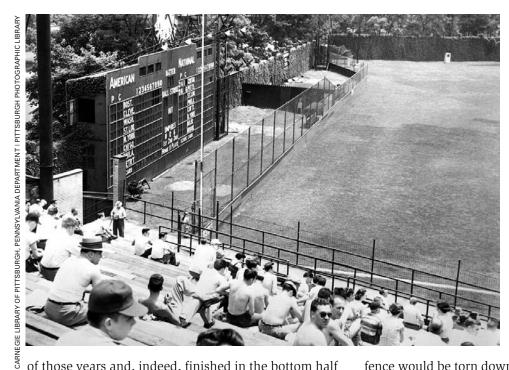
Thus, Ralph Kiner did not receive an unfair homerun-hitting advantage when Greenberg Gardens was installed at Forbes Field. It was a fair field of play that gave him the opportunity to become the greatest home-run hitter of his era. Kiner earned his selection to the Hall of Fame on his merits.

Of course, baseball is a business, even back in the 1940s and 50s, and the bottom line is what counts. Table 2 contains a chart of the total yearly attendance in major league baseball and the Pirates' attendance at Forbes Field, from 1945 to 1954 and 1960.39 As expected, baseball attendance grew sharply at the end of World War II, as many important stars returned to the game from the military and the economy was strong. Between 1945 and 1946, attendance in the major leagues increased by more than 7.6 million fans or by approximately 71 %. The Pirates' attendance also increased between 1945 and 1946 but much more modestly.

Table 2. Baseball Attendance

Year	MLB	Forbes Field	Pirates Finish
1945	10,841,123	604,694	4
1946	18,523,289	749,962	7
1947	19,874,539	1,283,531	7
1948	20,920,842	1,517,021	4
1949	20,215,365	1,449,435	6
1950	17,462,977	1,166,257	8
1951	16,126,676	980,590	7
1952	14,068,654	686,673	8
1953	14,383,797	572,757	8
1954	15,935,883	475,494	8
_	_	_	_
1960	19,911,489	1,705,828	1

However, the next year, 1947, with Greenberg Gardens in place, the Pirates' attendance increased by more than 533,000 fans, or by approximately 71%. It continued to increase the following year, by another 233,000 fans (another 18%), while major league baseball's total attendance increases were much more moderate in those years. In 1947, for the first time in Pirates' history, more than 1,000,000 fans attended the team's games, a milestone that continued for the next three seasons, even though the Pirates were never close to winning the National League pennant in any



Greenberg Gardens after the height of part of the fence was increased.

of those years and, indeed, finished in the bottom half of the league in three of those four years. It was not until the World Championship year of 1960 that the Pirates were able to break their attendance record set in 1948. Of course, it is difficult to determine all the reasons for fluctuations in a baseball team's annual attendance, but the addition of Hank Greenberg in 1947, and the home run hitting of Ralph Kiner in 1947 and subsequent seasons were significant factors.

Indeed, the title of a 1949 story in the *Pittsburgh Post-Gazette* said it all: "Second-Division Pirates Draw Fans Because of Ralph Kiner." According to the article, Pirates fans "had nothing but scorn for the impotent Pirates (who were 25.5 games out of first place), but they kept paying their way into Forbes Field to gaze, with the dewy-eyed reverence of Babylonian idol worshipers, upon big, amiable, good-looking Ralph McPherran Kiner." In August 1950, the General Manager of the Pirates, Roy Hamey, said, in much simpler language, "Ralph is our gate. No player in the game is so important to his team."

Thus, the Pirates' bottom line increased substantially through most of the Gardens years. Greenberg Gardens must therefore be considered a major financial success, even though it was not necessarily an athletic or aesthetic success.

THE FENCE COMES DOWN

Branch Rickey announced the trade of Ralph Kiner to the Chicago Cubs at a press conference around noon on Thursday, June 4, 1953. At a second press conference later that day, Rickey announced that the Gardens fence would be torn down before the Pirates' game the following night with Cincinnati. Rickey said, "I don't believe in building artificial barriers to suit any individual." At that second press conference, someone whispered, "The guy wrecked the ball club at noon, now he's wrecking the park." At first, Warren Giles, the president of the National League, approved the removal of the Gardens. 44

On the morning of June 5, 1953, the grounds crew at Forbes Field started to tear down the Gardens fence. A little after noon, however, Giles informed Branch Rickey that the fence could not be torn down during the season. It seemed that the National League had an internal rule to the effect that the dimensions of a ballpark could not be changed during a season without the approval of at least six of the eight owners. Three clubs voted against the change.⁴⁵ The grounds crew then had to immediately reverse course and reinstall the portions of the fence that it had removed.⁴⁶

Two of the teams who voted against the removal of Greenberg Gardens were the Brooklyn Dodgers and the New York Giants. Dodgers vice-president Buzzy Bavasi said, "We voted no on principle. It would be a bad precedent. According to what Rickey wants, a club could change its park to suit every trade it might make." The name of the third team in opposition was not disclosed, but most people assumed it was the Chicago Cubs, who probably believed that since Ralph Kiner was going to play for them for the remainder of the year, they should let him take advantage of the Gardens as a visiting player. If that was the Cubs' strategy, it did not work. Kiner played six games at

Forbes Field as a Chicago Cub in 1953, with Greenberg Gardens in place, without hitting any home runs. (Nor did Kiner hit any home runs at Forbes Field the following year for the Cubs, with Greenberg Gardens gone.)

Greenberg Gardens was finally removed in February 1954.⁴⁹ The bullpens were shifted back to their prior locations, with the Pirates' pen down the right field line and the visitors' down the left field line. Al Abrams, the sports editor for the *Pittsburgh Post-Gazette*, commenting on opening day at the ballpark that year, wrote, "'Greenberg Gardens,' the worst eyesore in Pittsburgh baseball history, was missing yesterday at Forbes Field for the first time since 1947." Abrams further wrote that the capsule comment of the customers was: "Now, it looks like the beautiful park it used to be."⁵⁰

The removal of Greenberg Gardens after the 1953 season closed the book on its seven-year existence, allowing some statistical calculations to be made. During the existence of Greenberg Gardens, 1,041 home runs were hit at Forbes Field, of which 550 landed in the Gardens. That means that about 53% of all home runs hit at Forbes Field during that period were hit into Greenberg Gardens. Stated differently, there were more than twice as many home runs hit at Forbes Field from 1947 through 1953 with Greenberg Gardens in place than there would have been if Greenberg Gardens had not been built.

Of the 550 total home runs hit into the Gardens, Ralph Kiner hit 71 of them, or about 13%. Of the 265 homers the Pirates hit into the Gardens, Kiner hit about 27% of them. The most home runs Kiner hit in a season into the Gardens was 15 in 1948. Not counting his shortened season with the Pirates in 1953, the fewest home runs Kiner hit into the Gardens in a season was 7 in 1950, one of the years that Kiner would have led the National League in home runs even without the Gardens.

The most total home runs hit into the Gardens in a single season was 116 in 1947, the only season before a portion of the fence was raised from 8 feet to 16 feet. The smallest number of home runs hit into the Gardens in a single season was 58 in 1952. Wally Westlake, an outfielder and third baseman for the Pirates from 1947 to mid-season 1951, hit the second-most Pirate home runs into the Gardens. Out of his career total of 127 home runs, Westlake hit 37 into the Gardens.

The visiting team with the most home runs into the Gardens was the Brooklyn Dodgers, with 66; the fewest was by the St. Louis Cardinals, with 24. The visiting players with the most home runs into the Gardens were Jackie Robinson and Gil Hodges of the Brooklyn

Dodgers, each with 13, and Bobby Thomson of the New York Giants, with 12.

AFTER THE GARDENS

Both Hank Greenberg and Ralph Kiner found success in baseball after their playing days. In 1948, Greenberg became the farm director for the Cleveland Indians, then in November 1949, the general manager. He put together the roster of the 1954 team, which set the American League record for most wins in a season (111), although they would lose the World Series in four straight to the New York Giants. In his eight years as Cleveland's general manager, the team finished in first or second place six times. In 1956, Greenberg became the first Jewish ballplayer inducted into the National Baseball Hall of Fame. The Tigers retired his uniform number (#5) in 1983. Hank Greenberg died on September 4, 1986.

Ralph Kiner remained with the Chicago Cubs for the remainder of the 1953 season and the entire 1954 season. He hit 35 home runs in 1953, but after that, his home-run production fell sharply. He was traded to Cleveland for the 1955 season, where he partnered once again with his buddy, Hank Greenberg. However, back problems caused Kiner to miss many games that season and he retired at the end of the year.

Kiner's second baseball career was at least as successful as his first. In 1962, he joined the broadcast team of the expansion New York Mets. He said at the time that he was chosen "because I had a lot of experience with losing." Kiner continued as a Mets broadcaster through 2013. He is still one of the longest tenured broadcasters with a single team in MLB history. In homage to Greenberg Gardens, Kiner's post-game television show on WOR (Channel 9, New York) was called *Kiner's Korner* and aired for over 30 years. Kiner was elected to the Hall of Fame in 1975; the Pirates retired his uniform number (#4) in 1987. Ralph Kiner died on February 6, 2014.

Forbes Field also had success after Greenberg Gardens was removed. Although it took a few years, the Pirates' fortunes started to turn around in the late 1950s. In 1960, the Pirates won the World Series, beating the New York Yankees, four games to three. The two big blows for the Pirates in the deciding game were a three-run homer by catcher Hal Smith in the bottom of the eighth inning and the game-winning home run by Bill Mazeroski in the bottom of the ninth inning. Both were hit over the left field wall, with room to spare. On the greatest day in Forbes Field history, there was no need for Greenberg Gardens!

Notes

- It was sometimes referred to as "Greenberg Garden" or "Greenberg's Gardens," but "Greenberg Gardens" is the most common appellation. Unless otherwise noted, the statistics in this article come from or were compiled from periodic charts published in the *Pittsburgh Post-Gazette*, under the title "Garden Homers," reviews of game descriptions in the local Pittsburgh newspapers, Baseball Reference, and Retrosheet. Other sources may have slightly different statistics for home runs into Greenberg Gardens.
- 2. David Finoli and Tom Aikens, *Images of America Forbes Field*, Charleston, S.C., Arcadia Publishing, 2013, 16.
- Robert Trumpbour, "Forbes Field and the Progressive Era," in David Cicotello and Angelo J. Louisa, Forbes Field: Essays and Memories of the Pirates' Historic Ballpark, 1909–1971, Jefferson, NC: McFarland & Company, Inc., 2007, 26–27.
- Sam Bernstein, "Barney Dreyfuss and the Legacy of Forbes Field, in Cicotello, 17.
- "More Than 30,000 Persons Witness the Opening Game on Forbes Field," Pittsburgh Gazette Times, July 1, 1909, 8.
- R.W. Lardner, "Nearly 36,000 See Cubs Bag Victory," Chicago Tribune, July 1, 1909, 10.
- 7. Quoted in Finoli, 16.
- Ronald M. Selter, "Inside the Park: Dimensions and Configurations of Forbes Field," in Cicotello, 124–31; Philip J. Lowry, Green Cathedrals (Fifth Edition), "Forbes Field," Phoenix, AZ, Society for American Baseball Research, Inc., 2019. Lowry states that the original left field distance was 315 feet
- 9. "Pirates From 24 States Prepare to Depart for Camp," *Pittsburgh Post-Gazette*, February 8, 1925, 25.
- 10. Selter, in Cicotello, 131-34.
- 11. He played one game with the Tigers in 1930.
- Scott Ferkovich, "Hank Greenberg," SABR Biography Project, https://sabr.org/bioproj/person/hank-greenberg.
- 13. The January 1, 1947, issue of *The Sporting News* included an error-riddled "scoop" that Greenberg wanted to play for the Yankees, including a photo of Greenberg holding a Yankees uniform, taken years earlier at a War Bond charity game, but passed off as current. "Briggs made no attempt to investigate—he had found the opportune moment to dump Hank and his inflated salary." John Rosengran, *Hank Greenberg: The Hero of Heroes*, New York, NY: New American Library, 2013, 298.
- 14. Estimates of the price paid by the Pirates to the Tigers for Greenberg were between \$40,000 and \$85,000, according to Vince Johnson, "Greenberg's Price Tag Is Reported 'Around \$50,000'," Pittsburgh Post-Gazette, January 20, 1947, 14. Retrosheet states that the price was \$75,000.
- 15. Rosengran, 302.
- Harvey J. Boyle, "'Der Bingle's' Crooning Helped Persuade Hank," Pittsburgh Post-Gazette, February 26, 1947, 16.
- 17. Rosengran, 303-04.
- 18. Rosengran, 310. According to Greenberg's autobiography, the deal with the Pirates was always intended to be for just one year. However, at the end of the 1947 season, the Pirates asked him to come back for one more year. He declined, citing physical problems and his lack of interest in playing for a losing club. (Hank Greenberg, Ira Berkow, Hank Greenberg: The Story of My Life, New York, NY: Times Books, 1989, 176, 187.)
- In three of those years, Kiner tied for the lead—in 1947 and '48 with Johnny Mize of the New York Giants and in 1952 with Hank Sauer of the Chicago Cubs.
- Robert P Broadwater, Ralph Kiner A Baseball Biography, Jefferson, NC: McFarland & Company, Inc., 2016, 16.
- 21. Warren Corbett, "Ralph Kiner," SABR Biography Project, https://sabr.org/bioproj/person/ralph-kiner.
- 22. Rosengran, 306-07, Broadwater, 64-65.
- John J. Burbridge, Jr., "Ralph Kiner & Branch Rickey: Not a Happy Marriage," *The National Pastime*, 2018, 66.

- Broadwater, 88, 100; Les Biederman, "\$80,000.00 '53 Pay For Kiner— 5 Grand More If Sold, Traded," and "Kiner 'Hurt' by B.R.'s Rap His Pay Demand Ridiculous," both *The Sporting News*, March 25, 1953, 18.
- 25. Les Biederman, "Forbes Field Remodeling and Face-Lifting Cost \$500,000," *Pittsburgh Press*, March 30, 1947, 30.
- 26. Biederman, "Forbes Field Remodeling."
- 27. Cicotello, 226.
- 28. On June 28, 1943, a 32-foot wooden Marine was erected to the right of the scoreboard at Forbes Field. Next to it was a promotional banner which said, "Buy War Bonds And Stamps." It remained there through the end of the season. According to Cicotello, 226, this was the only advertising ever permitted on the outfield walls of Forbes Field. Other sources indicate that there was a war bonds banner installed during World War I. See, e.g., "The Ballparks: Forbes Field, Pittsburgh, Pennsylvania," https://thisgreatgame.com/ballparks-forbes-field.
- Harry Keck, "Sports: Those Homers Too Much of a Good Thing," Pittsburgh Sun-Telegraph, April 19, 1947, 11.
- 30. "Stop Tinkering With Ball Parks," *The Sporting News*, May 7, 1947, 12. Other examples include the White Sox, in 1934, moving home plate at Comiskey Park out 14 feet toward the center field wall to aid its recent acquisition, Al Simmons, in hitting more home runs ("Sox Open '34 Season With Detroit," *Chicago Tribune*, April 17, 1934, 21, 23); the Washington Senators, in 1950, installing 854 new seats in left field and left-center field of Briggs Stadium, reducing the home run distances in those areas by 19 feet, to aid the right-handed home-run hitters in its lineup, such as Eddie Yost, Al Kozar, Al Evans, and Sam Mele ("Griff's Shorter Left Field Will Stay If Nats Benefit," *The Sporting News*, March 8, 1950, 14); and the Pirates, in 1975, moving the symmetrical wall of Three Rivers Stadium five feet closer to home plate, to aid its crop of home-run hitters including Willie Stargell, Al Oliver, and Dave Parker. (Bob Smizik, "Those New Fences... Home Runs or Heartaches," *Pittsburgh Press*, April 6, 1975, 30, 33.)
- Les Biederman, "Meyer, Rebuilder of Pittsburgh Team, Planning Changes in Ball Park Next," *The Sporting News*, December 24, 1947, 6.
- 32. According to Les Biederman, "Homers To Come Higher at Greenberg Gardens," The Sporting News, March 31, 1948, 6, the fence was raised to 16 feet. Other sources indicate that the height of the fence was raised to 14 feet. "Pirates Heighten Bull Pen Fence," Pittsburgh Press, April 15, 1948, 36; Andy Dugo, "Tigers Here For Games," Pittsburgh Sun-Telegraph, April 16, 1948, 28. In an April 1950 article about calculating home run distances at the Gardens, the Pittsburgh Press measured the height of the fence and found it to be 16 feet. Bob Drum, "Reporter Gets 'Strung Up' Seeking Accurate Answer," Pittsburgh Press, April 2, 1950, 53. After the fence was torn down, The Sporting News wrote that the fence "was 16 feet in direct left and sloped to eight feet in left center." "Greenberg Gardens Razed—Homers: Foes 285, Bucs 265," The Sporting News, March 10, 1954, 29.
- "Greenberg Gardens Razed—Homers: Foes 285, Bucs 265," *The Sporting News*, March 10, 1954, 29.
- "Gardens Gone But Memory Lingers On," Pittsburgh Post-Gazette, April 13, 1954, 39.
- 35. This conclusion was reached after deleting the Gardens home runs of Kiner and those of his competitors in each season and then re-ordering the list.
- 36. For example, Dick Young, the New York sports writer, wrote at the time of Kiner's selection into the Hall of Fame, on his 15th and final year on the ballot and only by one vote, "From the original Greenberg Garden grew the canard that Kiner was a cheapie home run hitter." Dick Young, "Young Ideas," New York Daily News, January 24, 1975, 41. Branch Rickey said of the Gardens, after he had it torn down, "The Gardens is only a cheap home run and who wants to see cheap home runs?" "Gardens Gone But Memory Lingers On," Pittsburgh Post-Gazette, April 13, 1954, 39.
- Oscar Ruhl, "Kiner's Korner No Setup," The Sporting News, March 1, 1950, 14; Philip J. Lowry, Green Cathedrals: The Ultimate Celebration of All Major League and Negro League Ballparks (Fifth Ed.), Phoenix, AZ,

- The Society for American Baseball Research, 2019. Of course, the height of the fences or walls and the angle of the outfield fences from the foul lines toward center field are important factors in determining the likelihood of home runs in a particular stadium. However, based on the data available and the inconsistent locations of the measurements of ballpark distances, the length of the foul lines is a simple but effective way of comparing ballparks, and it is always an apples-to-apples comparison.
- 38. Rule 2.01, Note (a) and (b). The Commissioner has waived this Rule on several occasions. For example, the distance down the right field line of PNC Park is only 320 feet, but that is offset somewhat by the 21-foot-high Roberto Clemente fence in the area. "Close Call Sports," June 19, 2012, https://www.closecallsports.com/2012/06/rule-104-note-minimum-fielddimensions.html.
- Baseball Reference, https://www.baseball-reference.com/leagues/ MLB/misc.shtml.
- 40. October 2, 1949, 22.
- 41. Al Stump, "What's Ahead For Kiner?" 9 Baseball Digest, No. 8, August, 1950, 20.
- 42. "Greenberg Gardens to Be Torn Down," *Pittsburgh Post-Gazette*, June 5, 1953, 1, 20.

- 43. Chester L. Smith, "The Village Smithy," Pittsburgh Press, June 5, 1953, 37.
- Lester J. Biederman, "Rickey's Reputation At Stake in Kiner Deal," Pittsburgh Press, June 5, 1937, 37.
- Giles later called the vote selfish, unsound, and a means of seeking easy homers. "Giles Warns Baseball on Ballyhoo," *Pittsburgh Post-Gazette*, August 11, 1953, 14.
- 46. Charles J. Doyle, "Greenberg Gardens Must Stay," *Pittsburgh Sun-Telegraph*, June 5, 1953, 1.
- 47. "Giants and Dodgers (Plus 1) Prefer Gardens," *Pittsburgh Press*, June 7, 1953, 63.
- 48. "Giants and Dodgers (Plus 1) Prefer Gardens.
- 49. "Greenberg Gardens Razed—Homers: Foes 285, Bucs 265," *The Sporting News*, March 10, 1954, 29.
- 50. Al Abrams, "Sidelights on Sports," Pittsburgh Post-Gazette, April 14, 1954, 18. At the same time, The Sporting News referred to Greenberg Gardens as "the atrocity in left field in Forbes Field." Joe King, "Passing of Greenberg Gardens to Aid A.L.," The Sporting News, April 14, 1954, 8.
- 51. Warren Corbett, "Ralph Kiner," SABR Biography Project, https://sabr.org/bioproj/person/b65aaec9.

The Mystery of the Disappearing Three-Bagger

Theo Tobel

[I]n my book the most exciting play in baseball is a three-bagger. [...] You used to see a fair number of them in the old days, but now they're the rarest plays in baseball. For sheer excitement, I don't think anything can beat when you see that guy go tearing around the bases and come sliding into third or into the plate, with the ball coming in on a line from the outfield at the same time."

—Tommy Leach, holder of the record for most triples in a World Series (4)1

ver the past 100 years, there has been a steady increase in home runs and a decline in triples in the American and National Leagues. As home runs have climbed, triples have nearly fallen off the scorecard. As shown in Figures 1 and 2, the rate of triples in 1900 was almost four times greater than the rate in 2020, and the rate of home runs in the early twentieth century was three-fourths less than the present-day rate.

The "long ball revolution" is generally attributed to the game's evolving focus on developing hitters

Figure 1. Triples per At Bat, 1900–2020

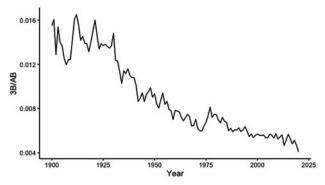
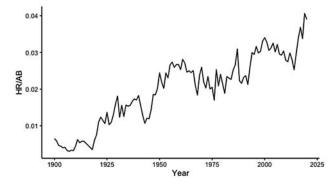


Figure 2. Home Runs per At Bat, 1900-2020



with greater power, capable of slugging home runs—the best possible outcome for an at bat. But is the concerted focus on hitting home runs the cause of the downward trend in triples, or are there other unquantified factors at play?

Another factor that has been widely supposed in the baseball community is the shrinking of MLB stadiums.² Over time, new stadiums have been constructed (and reconstructed) with smaller and more uniform fields of play than the older ones, and in this paper I aim to confirm that this factor solves the mystery of the disappearing three-bagger.

I gathered stadium data from the Seamheads Ballparks Database.³ As a measure of the size of the ballpark, I used the distance, in feet, from home plate to center field ("center-field distance"). Although center-field distance is not a perfect indicator of a ballpark's size, since there may be varying distances to left or right field, center-field distance sufficiently represents stadium size for purposes of this study. I only included ballparks from 1906 onwards, due to the lack of available dimensions from earlier fields. I then used R to analyze the dataset.

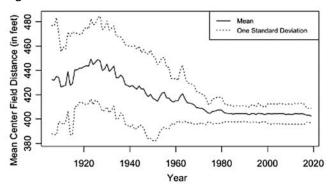
Early twentieth century ballparks in the NL and AL were a clutter of mismatched sizes, with some ballparks extending more than 500 feet to center field, such as the Huntington Avenue Grounds (530 feet), Exposition Park (515 feet), and Ebbets Field (507 feet), to name a few. Ballparks of this era also varied widely in terms of shape. One striking example is the New York Giants' Polo Grounds, known for an elongated field shape.

As time passed, the size of ballfields grew increasingly homogenous, in part due to a rule implemented by both leagues in 1958 mandating a minimum centerfield distance of 400 feet.⁴ Enormous ballparks like the

Huntington Avenue Grounds gradually disappeared; today, not one ballpark has a center-field distance exceeding 420 feet.

To illustrate how ballparks league-wide changed year to year, I found the mean and standard deviation for the center-field distance of every big-league ballpark in every year, from 1906 to 2019 (Figure 3).

Figure 3. Center Field Distance over Time



This graph confirms that over the last one hundred years, ballparks have become increasingly homogenous in center-field distance, based on the following characteristics:

- 1. The negative slope of the solid line demonstrates that center-field walls in stadiums nationwide have moved closer to home plate as time passed.
- 2. The range of center-field distance among MLB ballparks at present—and in the last half century or so-is unmistakably smaller than the range in the early twentieth century, as shown by the smaller space between the dotted lines (plus/minus one standard deviation).

From this starting point, I will show that playing fields that are smaller and more uniform in size have directly resulted in greater percentages of home runs and correspondingly fewer triples. Closer fences increase the likelihood of deep fly balls and line drives going out of the park, and smaller playing fields offer less space in which the ball can roll around, giving the baserunner less time to reach third base.

SMALL-SAMPLE EXAMPLES THAT SUPPORT THE HYPOTHESIS

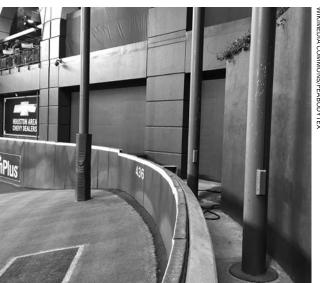
Initially, to test my assumptions, I explored three ballparks that underwent dimensional changes to determine if there was a change in triple rates. These anecdotal examples are a preface to the full hypothesis test that follows, which includes data from all ballparks whose size decreased after 1906. I first investigated one of the most iconic ballparks in baseball history: Fenway Park. The center-field distance was 468 feet in 1933, but shrunk to 389 feet before the 1934 season.

With this stadium change, triples changed from being hit 1.3% of at bats in 1933 to 0.9% of at bats in 1934. Notably, this would be the last change to the center-field dimensions for Fenway Park; maybe the Red Sox owners didn't want to see the triple disappear completely!

In 1960, the center-field fence at windy Candlestick Park was 420 feet away from home plate. In 1961, that fence was moved ten feet closer to home plate. Like



The Polo Grounds' unique shape.



An unusual feature of the baseball field at Minute Maid Park was an upward slope in center field that included a flagpole on the field of play. Known as "Tal's Hill," the slope was taken out in 2016.

IMEDIA COMMONS/PEABODYTEX

Fenway before it, Candlestick's triple rate dropped off after the size change. The "Say Hey Kid" alone accounted for a portion of the swing: Mays smacked four triples at Candlestick in 1960 but zero in 1961, while seeing an upswing in homers, hitting 11 more home runs than the previous year, 9 of them at Candlestick.

Lastly, Minute Maid Park, home of the Houston Astros, had a well-known and unique feature, Tal's Hill: a patch of grass that sloped upwards to a center field wall. Not only was Tal's Hill a slope, but it also had a large flagpole just to the left of straightaway center, which made it a "triples heaven" as outfielders scrambled to track down hit balls. Did removing it after the 2016 season—and shortening the distance to the center field wall—diminish triples?

Yes. With a Tal's Hill-less Minute Maid, the distance to center field shrank by 27 feet and as a result, the triples rate in 2017 was less than half that of the year before.

These initial results encouraged me to run a full hypothesis test on all of the post-1906 data.

HYPOTHESIS TESTS

To test the hypothesis statistically, I used not only the home team's data (home runs and triples per at bat) but also the away team's data at each ballpark, resulting in data by park for each year.

Then I filtered every year in which the center-field dimensions changed for a team. Since my hypothesis is that smaller ballparks decrease triple rates and increase home run rates, I collected extra-base-hit rates for the year the ballpark changed its center-field dimension, and the year prior to the change.

Then, I calculated the change in center-field distance, and gathered all the "negative" differences between the dimension for the year of change minus the dimension for the prior year. A negative difference would mean that the ballpark's dimensions in the previous year were greater—in other words, smaller ballparks. I then took the means for the triple and home run rates for before and after the stadium change:

Average 3B/AB for year before change = 0.0093Average 3B/AB for year after change = 0.0088

Average HR/AB for year before change = 0.0192Average HR/AB for year after change = 0.0208

To calculate whether these differences are significant, I used a paired t-test with the following conditions:

$$\alpha = \frac{0.05}{2} = 0.025$$
 (Bonferroni Connection)⁵

 H_0 : Smaller center-field distance has no effect on triples per at bat (true difference in means = 0).

 H_a : Smaller center-field distance decreases the rate of triples per at bat (true difference in means < 0).

```
t = -2.5632
df = 141
p-value = 0.005709 < 0.025, reject H<sub>0</sub>.
```

 H_0 : Smaller center-field distance has no effect on home runs per at bat (true difference in means = 0).

 H_a : Smaller center-field distance increases the rate of home runs per at bat (true difference in means > 0).

```
t = 2.36

df = 141

p-value = 0.009823 < 0.025, reject H<sub>0</sub>.
```

The two above hypothesis tests strongly support the alternative hypothesis. The sample size is large and the p-values are much lower than the significance level. We can conclude from these data what has been presumed for many years: smaller stadiums lead to a lower number of triples and a higher number of home runs.⁷

REGRESSION ANALYSIS

I also ran a regression model on *all* ballpark data to see the overall effect of center-field dimension on triples per at bat. By accounting for year and team in a multivariable regression model, I found that decreasing center field dimensions by **one** foot leads to an average decrease in triples per at bat of **0.47**% with a p-value of < 0.001. While this seems like a small percentage, the maximum average league center field distance (429 feet) in 1923 against the average in 2019 (403 feet) predicts the change in center field dimension to be responsible for a 12% decrease out of the actual 65% decrease in that timespan—a weighty piece of the puzzle.

To illustrate, the same team from the same year plays in two different ballparks: one with a center-field distance of 430 feet and another with a center-field distance of 400 feet. If 15 triples are hit in 1000 at bats in the bigger ballpark, we would expect about 13 triples to be hit, in the same number of at bats, in the smaller ballpark.

CONCLUSION

Although this study has its shortcomings—such as quantifying stadium size with center-field distance, and ignoring other confounding variables (additional field characteristics, the baseball itself from year-to-year, etc.)—the hypothesis was strongly supported in a paired t-test and multivariable regression model: smaller ballparks are a significant factor contributing

to the disappearance of the three-bagger. So if you happen to see a triple when you take in a game—whether on TV or in attendance at one of today's cozier stadiums—consider yourself lucky! You've seen a rarity.8

Acknowledgments

A special thank you to Professor Jeremy Losak, Phil Birnbaum, Jonah Richards, Jonathan Schwartz, and the creators of the Seamheads Ballparks Database.

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- There have been a variety baseball statisticians and savants such as Bill James and Tom Tango who have written about "park factor," an all-encompassing statistic of a ballpark's effect on outcomes.

- However, I have yet to find an analysis on the direct effect of dimension changes on extra base hit rates.
- Seamheads.com Ballparks Database. Accessed September 30, 2022. https://www.seamheads.com/ballparks/index.php.
- 4. Curiously, a handful of present-day ballparks defy the MLB minimum distance rule, maintaining a center-field distance of less than 400 feet (exactly four as of 2019: Fenway Park, PNC Park, Petco Park, and Oracle Park). These smaller ballparks fall into two categories: those that were "grandfathered" in, and those that simply break the rule. For example, Fenway Park is a grandfathered ballpark, as its last reconstruction of the center-field distance was in 1936 (390 feet), 22 years before the MLB rule was implemented. PNC Park of the Pittsburgh Pirates is an example of a rulebreaker. Although constructed after the institution of the minimum center-field distance rule, PNC's center-field distance is 399 feet.
- "Bonferroni Correction." Wolfram MathWorld. Accessed September 30, 2022. https://mathworld.wolfram.com/BonferroniCorrection.html.
- 6. Note that the true difference in means is the previous year rate minus the change year rate—thus, if the rate of triples was greater in the previous year than the change year (a decrease), then the true difference in means <0.</p>
- The differences in each sample (home runs and triples) were checked for normality with a Q-Q plot and the distribution was proven to meet the assumptions of the paired t-test.
- 8. While collecting data for this study on triples, I stumbled across the following triple of fun facts: 1) The highest rate of triples at a stadium in one year was at 1912 Forbes Field. 2) The last person to hit four triples in a game was Bill Joyce in 1897. 3) Evan Gattis hit eleven triples in 2015—and only 12 total triples in his career.

Were Pitchers More Likely to Throw at Black Batters? 1947–66

Jerry Nechal

generally accepted narrative of the early days of baseball integration is that White pitchers deliberately threw at Black batters. According to Ken Burns' *Baseball*, when Jackie Robinson broke the color barrier, "Pitchers threw at his head." His counterpart in the American League, Larry Doby, stated, "I was knocked down in many games. I was hit more by pitched balls than any player of equal power in the league."

There exists some documentation to support these claims. The most widely publicized was a 1947 incident where Philadelphia Phillies manager Ben Chapman instructed his pitchers when to throw at Robinson.³ Likewise, pitcher Hank Wyse confirmed that Cubs pitchers had standing orders to knock Robinson down. "Paul Erickson knocked him down four times..." Consistent with this directive, in the film 42, Pirates pitcher Fritz Ostermueller is depicted as both verbally abusing and deliberately throwing at Robinson.⁵ Years later, one of Ostermueller's teammates confirmed the pitcher's intentions.⁶ Unfortunately, verbal confirmation of these incidents is sparse and mostly confined to the 1947 season. However, we can undertake a statistical study rather than rely on anecdotes.

The ranking of batters by the number of times hit per season 1947–56 reveals evidence to support the narrative. A Black player ranked first or second in either the AL or NL hit by pitch category 16 times from 1947 through 1956. A brief review of those who ranked in the top ten in both leagues on the hit-by-pitch leaderboard reveals a disproportionate share of Black players, as well. Although representing only slightly over four percent of the total player population, out of the top ten percent of players being hit by pitch, Black players made up over 16 percent of that group.

PRIOR RESEARCH

A search for quantitative analysis of pitchers intentionally throwing at Black batters produced minimal results. Little seems to have been done in this area, with one recent exception. In April 2020, Bryce Kanago and David George Surdam published a study titled

"Intimidation, Discrimination, and Retaliation: Hitby-Pitches during the Integration of Major League Baseball." Their work analyzes AL and NL batters hit by pitchers from 1947 through 1956. They attempted to determine if Black batters were hit more often because of their superior performance rather than the color of their skin. Using advanced regression analysis, Kanago and Surdam adjusted for performance, but still found that differences exist between Black and White batters in the likelihood of being hit by a pitch. They also found that superior-performing Black players are more likely to be hit than superior-performing White players.

While this one study supported the premise that Black batters were targeted in the early days of baseball integration, more research is needed in this area. The Kanago and Surdam study is restricted to the first ten years of baseball integration when the percentage of Black players remained small, partially due to racial quotas.⁸ In the final year of their study, 1956, there were still only 25 batters in their research calculations. For statistical purposes, larger sample sizes are always preferred.

Besides the need for further confirming research, other important questions remain regarding White pitchers throwing at Black batters. If widespread targeting did happen, how long did it last? Was the practice curtailed as more Black players entered the leagues? This study will explore the answers to these questions by examining data covering a longer time period. For analytical purposes, it will extend the range of study to cover the first two decades after integration, from 1947 through 1966. Likewise, this study will attempt to address the question of small sample sizes in the early years of baseball integration.

METHODOLOGY

Within this study, the vital statistic is this: times hit by pitched ball (HBP). Whether a pitcher deliberately threw at a batter is a subjective decision for which no data exist. If certain players were deliberately targeted, then it is logical that those same players would ultimately be more likely to be hit by pitches. Certain batters are hit more frequently than others for various reasons, such as crowding the plate or deliberately diving into pitches. However, this analysis assumes that those characteristics would be evenly distributed across both White and Black players. Adopting these assumptions, the likelihood that a Black player was targeted can be measured by calculating the number of times batters were hit relative to the number of times they came to bat. For the purposes of this study, only players who had 200 or more plate appearances in a single season were considered. Establishing this threshold excludes observations which are not representative of a regular player. These overall data are readily available in Baseball-Reference.com, both by individual player and aggregated into totals by league.

The first obstacle was the challenge of separating the data into racial categories. Standard baseball statistical resources do not identify players by race. Fortunately, an earlier research project had faced and overcome the same problem. In his pioneering study, "The Effects of Integration, 1947–1986," Mark Armour assembled a list of Black major league players by year. This study uses that list as the final authority on identifying Black players. Also for purposes of this study, "White" was defined as any non-Black player, including those of Latino, American Indian, and Mexican descent.

The next step was to list and total both the number of plate appearances (PAs) and the number of HBPs for each player making 200 or more plate appearances by year. Because of the difficulty in producing the data, no distinction was made regarding which plate appearances were against Black pitchers versus White pitchers. As with Black batters, there were relatively few Black pitchers in the first two decades of baseball integration covered by the study. A comparison of the White and Black groups was made by calculating the average of total plate appearances divided by total HBPs.

INITIAL RESULTS

The results for each of the first 10 years studied showed that Black batters were hit by pitches more frequently than their White counterparts. The average number of plate appearances per HBP was lower for Black batters. For example, in 1950 White batters were hit by a pitch once every 219 plate appearances. For Black players, this number was every 112 times, or

nearly twice as often. Figure 1 shows these results for the first five years of baseball integration.

One would expect that as the presence of Black players became more accepted, pitchers would throw at them less often. If so, the differences in average plate appearances per HPB between the two groups would diminish. Figure 2 shows that to be the case over twenty years, with the annual difference between year one and year ten being greater in the first decade than in the second.

In the second decade the difference between White and Black is narrower, although the rates fluctuate by year. Nevertheless, there is no single year in the entire 20 years where Black players are hit less often than White ones. Even in the final year of 1966, the difference between the two groups widens again—White: 190 PA, Black:150 PA.

VALIDITY TESTING

While collecting and compiling the data for this study, one major concern regarding the validity of its conclusions stood out. For the first ten years, the total number of Black players was very small relative to the total number of White players. In 1947, 170 White players and one Black player—Jackie Robinson—met the 200 plate appearances criterion. The number of Black players in Jackie's wake increased year by year, but quite slowly. For example, in 1953 there were still only 11 Black players who came to bat at least 200 times.

Figure 1. Average At Bats Per HBP, 1947-52

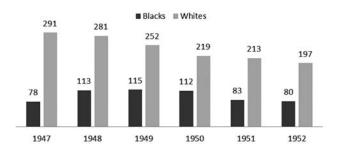


Figure 2. Average At Bats Per HBP, 1947-66

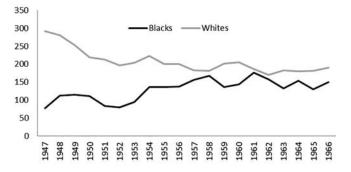
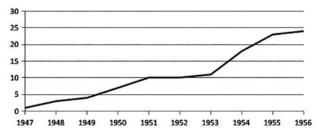


Figure 3 shows that although the number of black batters with over 200 ABs grew steadily over that first decade, the number was still below 25 batters in 1956.

Figure 3. Total Black Batters > 200 ABs



With the small population sizes of the Black players, the data are potentially subject to distortions due to outliers or other variables such as those suggested by Kanago and Surdam in their 2020 study. One or two players could possibly distort the results. In statistical terms this does not result in a normal distribution. For example, Minnie Miñoso, a Black player who ranks number eleven in all-time HBPs, first qualified for the study group in 1951 when there were only nine other Black players with 200 PAs. In that year he was hit by pitches a league-leading 16 times. He averaged 17 over the next six years. It is not as if there weren't White counterparts to Miñoso. For example, in that same year (1951), Nellie Fox was hit by 14 pitches. However, his total was spread over a much larger distribution of White players. It should be noted that Kanago and Surdam attempted to adjust for players with high hitby-pitch numbers by excluding them from their analysis.

With the small number of Black batters, the use of standard statistical testing methodologies is problematic. A common rule of thumb among statisticians, following the Central Limit Theorem, is that sample sizes should be at least 30 or more. ¹⁰ The reaching of this minimum threshold increases the likelihood that the sample will approach a normal distribution. In our case, this can prevent the possibility that players like Miñoso can distort the findings.

Because of the small number of Black players, especially in the early decade, this study avoided statistical testing for single seasons. Instead, it aggregated data for the first ten years into one larger period. The data for all ten seasons were aggregated in order to produce a sample size of Black players of at least 30 in total. This method showed that across all ten seasons

there were a total of 34 Black players that had at least one season where they achieved 200 or more plate appearances. This total population of Black players was used as the sample. To produce an equivalent comparative group, 34 White players were randomly selected from a pool of 435 eligible White players from the same ten year period.

To test the hypothesis as to whether there is a significant difference between the two groups, the Z Test for Difference of Proportions was selected. This tool allows us to conduct a null hypothesis test to determine whether the difference between two proportions is statistically significant. The null hypothesis theorizes that there is no difference between the two groups. If the null hypothesis is rejected, then there is a statistically significant difference in the two groups. In our case the proportions are calculated as follows:

Sample Total Hit By Pitches (HBPs)

Sample Total Plate Appearances (PAs)

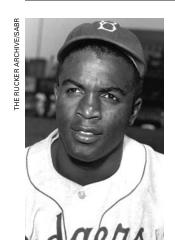
Total plate appearances for each group were surprisingly close in number: Black: 58,864, White: 54,107. Within the actual formula, these numbers were used as the sample size. For Black players, the calculated proportion was .0086; for the White sample, it was .00462. After inputting these values into the Z test formula, the result is a minute p-value of .0001%. For the 95 percent confidence interval all p-values below 5% indicates a rejection of the null hypothesis. Even with a 99% confidence level, where p-values need to fall below 1%, the null hypothesis is rejected. Thus, in our case, there is a statistically significant difference between the two groups being hit by pitched balls during the ten-year period of 1947 through 1956.

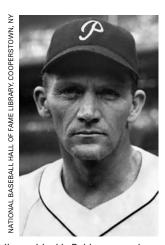
Testing or analysis of the next ten years (1957–66) is more problematic. As Figure 2 illustrates, the difference in frequency of HBPs between the two groups narrowed, although there was no consistent trend. The number of Black batters finally did reach the statistical testing milestone of 30 in 1958. The total was a robust 66 in 1966. Thus, for this ten year period, the data were not aggregated. Z tests for Difference in Proportions were conducted for each of these ten seasons. Table 1 shows the results.

Over this second decade of baseball integration, the null hypothesis was rejected five times and accepted

Table 1. Difference in Proportion Test Results, 1957–66

Year	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966
P-Value	25.13%	54.77%	0.13%	0.17%	60.18%	41.65%	0.02%	8.39%	0.01%	0.66%
Reject Null	N	N	Υ	Υ	N	N	Υ	N	Υ	Υ





An incident between Fritz Ostermueller and Jackie Robinson may have been overdramatized in the movie 42, but the fact remains that Robinson and the Black ballplayers who followed him were hit by pitches more often than their White counterparts.

five times. Additionally, there was no linear trend across this time span. In other words, there does not appear to be a consistent, clear difference between White and Black players in terms of the likelihood of being hit by a pitch. It is still worth noting that for this second decade, just as in the first, the yearly rate at which Black batters were hit by pitches always exceeded that of White batters.

CONCLUSIONS

The raw numbers and statistical testing do support the idea that White pitchers deliberately threw at Black batters in the first decade of baseball integration (1947–56). This phenomenon appears not to be just something that was directed at the few initial pioneers of integration; it lasted for several years. Over the first decade of integration, Black batters were nearly twice as likely to be hit by a pitch as White batters. That there was a difference between the groups was unequivocal, and tested out statistically at the 99 percent confidence level.

However, as speculated, when baseball integration extended into a second decade, it is less clear that White pitchers deliberately threw at Black batters. When the percentage of Black players became larger, statistically significant differences between the two groups were inconsistent. This could be attributable to either larger sample sizes or that discrimination by White pitchers against Black batters became less prevalent. Despite this conclusion, Black batters were still hit by pitches more frequently than White batters in every season of the study period from 1947 through 1966. Further study is needed to determine if or when this latter phenomenon ended.

Acknowledgments

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ENVIRONMENTAL CHANGE

Data Visualization and Baseball Research

Art, Science, and the COVID-Shortened 2020 Season

Adam Korengold

ata visualization is an art. Alli Torban, a Washington, DC-based data visualization consultant, defines the art as a tool to "widen the circle of people who know what you know"—a truly apt description of the value of data visualization in an environment of information overload.1

Data visualization is also a science, using charts and graphs to supplement and clarify quantitative or qualitative information. Alberto Cairo, another leading writer and teacher of data visualization, defines this clarification element as "any kind of visual representation of information designed to enable communication, analysis, discovery, [and] exploration."²

Baseball's long history and devotion to recordkeeping make it highly suitable for data visualization. More than any other sport, baseball has a remarkably rich and consistent body of statistical knowledge, dating as far back as 1869 with the Cincinnati Red Stockings, the first fully professional team that openly paid all its players.³ In comparison, the National Football League began in 1920, and the National Hockey League in 1917. While both those leagues have their own bodies of statistics, they are not nearly as extensive as the century and a half of data collected on professional baseball. The baseball database is robust enough that certain measures like wins above replacement (WAR) and on-base plus slugging average (OPS) can be calculated for players who were active decades before those measures came to be. At the same time, a review of baseball research shows a greater emphasis on creating mathematical and statistical models for assessing and predicting competitive results than on visualizing them. While this statistical research is inherently valuable, for readers without statistical or quantitative backgrounds, the conclusions are less clear and understandable than they could be if presented in a compelling and visual way, as a supplement of—not a substitute for—the traditional tools of statistical analysis.

Baseball data have tended to be quantitative, beginning with the box score first developed in the 1840s and 50s for amateur players in the New York City area,

with some efforts to improve on it to show the running score.⁴ Data visualization is also a tool for analyzing and presenting qualitative information and relationships, such as the development of the layout of the baseball diamond, in a way that adds a layer of visual and even literal interaction with the data.⁵ Most quantitative baseball research tends to focus on statistical insight and ranking, creating a need in today's fastmoving visual media environment, to use data visualization to communicate, discuss, and share those insights more widely and with new audiences.

A WALK THROUGH THE DEVELOPING PRACTICE OF DATA VISUALIZATION

Data visualization offers a fundamentally unique way of seeing data generally, and baseball particularly, in a way that lends itself well to today's highly visual environment. Visualizing data is an essential tool to make findings more accessible to audiences. While the practice may be new to some, it is not new, with antecedents that run from the most ancient ways of recording information up to the present day.

While the practice of data visualization is too broad in scope to discuss fully here, there are several types of visualizations, among many that are possible, that baseball researchers can (and in some instances have) used.⁶ Graphics standing for numbers are incredibly ancient. Tally sticks, with notches cut on bones to denote numbers, have been discovered in caves that are 30,000 or more years old. Cuneiform tablets nearly 5,000 years old account for barley harvests.⁷

More recently, the modern practice of data visualization began to appear in eighteenth and nineteenth century Europe, with the work of Edward Playfair, Charles Joseph Minard, and William Herschel. Playfair was arguably the first data visualizer, creating a collection of infographics that later became the *Commercial and Political Atlas* in 1785. This work would be easily recognizable today, showing international trade volumes, national accounts, and other economic data for European countries. (A Scot, Playfair focused his work on the United Kingdom and other European powers.)⁸

There is a direct line from Playfair's "Linear Chronology, Exhibiting the Revenues, Expenditure, Debt, Price of Stocks, and Bread from 1770 to 1824" and Edward Tufte's set of sparklines, or line graphs, showing the competitive landscape and pennant races across all six MLB divisions during the 2001 season. ¹⁰ Line graphs are useful for showing progress over time; for example, whether batting averages or other measures have increased over a period or showing a team's progress over a full season.

Mapping techniques are useful for showing where events occur. Geographical maps date from as long ago as 6200 B.C. in Turkey, but other types of mapping are useful for baseball research, in particular coordinate mapping that creates scatterplots mapped on two axes. Scatterplots are common across disciplines. Francis Galton, in 1874, used a correlation diagram (essentially a scatterplot) to show a relationship between head circumference and height in people whom he observed. Likewise, in astronomy, the Hertzsprung-Russell diagram plots the brightness of stars against their temperature for purposes of classification.¹¹

In baseball, spray charts—a form of geographic mapping—show the parts of the field that players successfully reach with a batted ball. Similarly, in a 2019 study, the locations of fan injuries in major league baseball stadiums were mapped, resulting in MLB and the affiliated minor leagues expanding the use of protective netting in ballparks.¹³ Mapping data points along two dimensions in a scatterplot is also a useful way to show relationships between player statistics.

DATA VISUALIZATION IN PRACTICE FOR BASEBALL RESEARCH

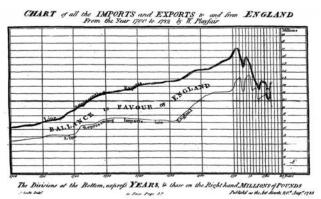
We operate under a few assumptions. Firstly, the value of data visualization lies less in showing right or wrong answers and more in using visual tools to present that information and allow the audience to make sense of it. The goal is less about providing answers than guiding the questions to be asked. As such, a good data visualization can lead an audience towards a particular finding, but it can also highlight inconsistencies or details that are worth discussing.

Secondly, data visualization is tool-agnostic, meaning that similar principles apply no matter what tools are used to produce the visual. It is possible to create outstanding visuals using no more than a pencil and paper. This paper will not recommend any particular software application for data visualization, though we will mention a few. There are many available, both free via open source and through purchase or subscription. Depending on a researcher's preferences and capabilities, a full toolbox of applications could include

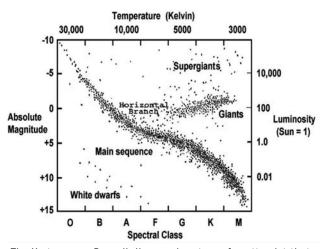
off-the-shelf packages like Microsoft Power BI, Qlik, or Tableau, or if one prefers coding tools, RStudio, Python, or many others. Tradeoffs exist between cost and usability out of the box; while open source applications like RStudio and Python are free, they require more time to learn and master.

This paper includes examples created in Tableau because it is widely available. The free version, Tableau Public, is a useful platform for building and sharing visualizations thanks to its availability as a free tool and relative ease of use, particularly for those who are not familiar with coding languages and tools like RStudio and Python.

Finally, a note about color. Modern data visualizations are often designed to be shown and interacted with in full color on computer screens. In published journals, where black and white or greyscale are needed, similar principles apply where gradations of black and white are valuable for showing differences. The visualizations in this paper appear in black and white.¹⁴



Edward Playfair was the first great data visualizer, as seen in this example of England's trade balance during the 18th century.⁹



The Hertzsprung-Russell diagram is a type of scatterplot that compares stars' brightness to their temperature. 12

A BASEBALL CASE STUDY: WAS THE 2020 MLB SEASON AN OUTLIER?

For the case example, the first step defines the problem to be addressed and the story to tell. The most effective visualizations include a narrative, which can be as simple as a situation/action/result framework. What was the situation that existed, what did the research or analysis try to show, and what were the conclusions or outcomes? Ideally, data visualization exists not for its own sake, but rather aims to show an insight or finding that can be a basis for discussion, action, or further analysis.

In this case, the visualization focuses on the 2020 baseball season, which was limited to 60 games due to the COVID-19 pandemic. The normal spring training period was cut off in mid-March and resumed in abbreviated fashion for a July 23 regular season start. As a result of the truncated spring training and season, researchers could wonder if the offensive results and records set during the short 2020 season were in line with recent seasons. The focus for this analysis is therefore on the five most recent seasons, from 2017 through 2021, including the 2020 campaign.

METHODOLOGY

Tableau Public, as described above, was chosen as the application for this analysis. The data source is Stathead, a searchable online archive of baseball statistics served by Sports Reference.¹⁵ Key offensive statistics including hits (H), home runs (HR), on base average (OBP), and slugging average (SLG) were collected for batters qualifying for batting titles during the 2017 through 2021 Major League Baseball seasons. (Qualifying batters were defined per MLB standards as logging a minimum of 3.1 plate appearances per team

game, or 502 for the 2017–19 and 2021 seasons and 186 for the 2020 season.) Data were selected for the parameters above, exported into a .csv file, saved as a Google Sheets file, and imported into Tableau Public using the application's proprietary Google data import tool.

ANALYSIS

The next steps will show whether the 2020 season was in fact different from the other four, using statistical analysis but also using data visualization to clarify and contextualize these points, and set up a basis for discussion. Two scatterplots will each plot two pairs of key offensive statistics against each other. The first pair are hits versus home runs, which are two "counting" statistics that are clearly changed by the length of the season, and the second pair are OPS and SLG, which are "rate" statistics that are more easily comparable across normal seasons, but a shorter season like 2020 will likely produce more outliers.

The analysis begins with a simple scatterplot showing hits (on the x axis) versus home runs (on the y axis). Each data point stands for a single season between 2017 and 2021 for a qualified batter. Figure 1 shows the average figures, and the 95 percent confidence interval, through the dark grey line and light grey shading, respectively.

The "constellation" of squares in the lower left-hand corner represents the 2020 season, with substantially lower hit and home run totals. In that season, hits totaled from 32 to 79, compared to between 95 and 213 hits for the other analyzed seasons. Home runs totaled between 8 and 22 for 2020, and 4 and 59 for the other years. The trend lines in the same shades as the data points illustrate the linear regressions describing the model. They will also be analyzed statistically, but for purposes of the data visualization, it is useful to note that the lines are of different slopes, and different y-intercepts, lower for the 2020 season than the other four. This finding is not surprising, since the season was only about one third the length of a typical one.

Turning to the OBP versus SLG analysis (Figure 2), the scatterplot featuring OBP on the X axis and SLG on the Y axis is below. This analysis shows even more interesting findings: a convergence of all the data

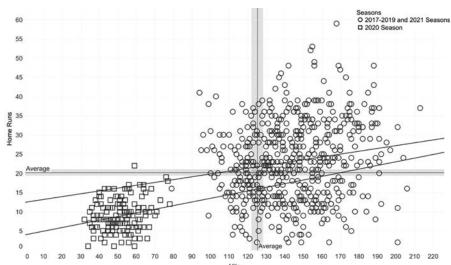


Figure 1. Hits and Home Runs 2020 vs Full Seasons, Qualified Batters

points around a single origin, and virtually identical regression lines.

It's interesting to note that the most extreme data points-at the high and low ends of the X and Y axes-are for the 2020 season, which accounts for greater variability across a smaller number of games. When one analyzes the data statistically, the regression line, R² measure (which shows the degree of variability accounted for by the model, and the P value (which shows the statistical significance) are in Table 1.

For hits and home runs (Figure 3), the analysis shows that there is not much of a relationship between the 2020 season and the others. The R² values are small, less than 0.05 and 0.03 for the 2020 and other seasons, suggesting that the simple regression model does not account for much of the variability between hits and home runs. (The P values, however, do show that the findings are statistically significant, especially in the case of the other four years.)

For on-base and slugging averages, these data indicate that the seasons are similar, if not virtually identical. The slopes are within 0.003 of each other, the intercepts within 0.15 of each other, and the R² are both nearly 0.41. Again, looking at the visualization itself is insightful, because it shows how aligned the two sets of statistics are.

Finally, the power of the data visualization comes through in Figure 3 when it is edited to show each year in succession, denoted by data

points represented by different shapes for each season between 2017 and 2021, for hits versus home runs and OBP versus SLG respectively. The charts are slightly more complex, but further show that, particularly for averages, the 2020 season was not significantly different from the other four between 2017 and 2021.

Rather than show a regression line for each season in the chart above, for clarity and simplicity, only the overall regression line is shown, along with the 95 percent confidence interval. For the seasonal analysis, the

Figure 2. OBP vs SLG, 2020 vs Full Seasons, Qualified Batters

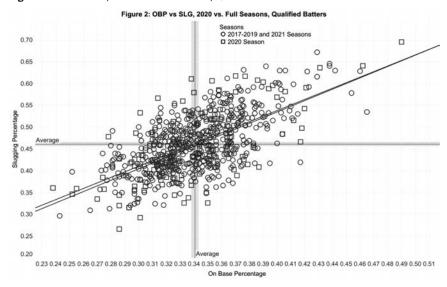
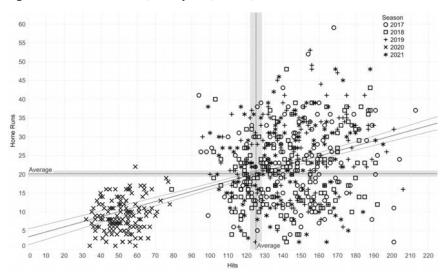


Table 1. Regression Data, 2020 vs. Other Seasons

Year	Regression Equation	R ²	P Value
2020	HR=0.0950154H + 3.9917	0.0464245	0.0100191
2020	SLG=1.275850BP + 0.0129675	0.409597	< 0.0001
2017-19,21	HR=0.0737248H + 12.4659	0.0280438	< 0.0001
2017-19,21	SLG=1.2725850BP + 0.0270964	0.40825	< 0.0001

Figure 3. Hits and Home Runs, Year by Year, 201721, Qualified Batters



linear regressions, R2 values, and P values for each season are shown in Tables 2 and 3 (page 60).

From the visualizations, in terms of absolute statistics (hits and home runs), 2020 was an outlier for the fact of its much shorter length, which is intuitive. More comforting, given baseball's interest in keeping the game's essential elements, the analysis of important averages like OBP and SLG seem to show that despite the season's unusually short length, batters achieved the expected level of excellence in 2020. The

Table 2. Regression Data, HR vs. Hits, All Years

Year	Regression Equation	\mathbb{R}^2	P Value
2017	HR=0.0378998H + 17.3391	0.0081795	0.281016
2018	HR = 0.0890712H + 0.03558	0.0479789	0.0090653
2019	HR = 0.0884071H + 12.6478	0.040408	0.0193972
2020	HR = 0.0950154H + 3.9917	0.046425	0.0100191
2021	HR = 0.0890712H + 8.03558	0.0479789	0.0090653
(Source: S	Stathead)		

Table 3. Regression Data, SLG vs. OBP, All Years

Regression Equation	\mathbb{R}^2	P Value
SLG=1.237150BP + 0.0393837	0.453148	< 0.0001
SLG=1.177490BP + 0.502462	0.41867	< 0.0001
SLG=1.48560BP + (-0.0312955)	0.471719	< 0.0001
SLG=1.303020BP + 0.012	0.409597	< 0.0001
SLG=1.124120BP + 0.0760386	0.276925	< 0.0001
	SLG=1.237150BP + 0.0393837 SLG=1.177490BP + 0.502462 SLG=1.48560BP + (-0.0312955) SLG=1.303020BP + 0.012	SLG=1.237150BP + 0.0393837 0.453148 SLG=1.177490BP + 0.502462 0.41867 SLG=1.48560BP + (-0.0312955) 0.471719 SLG=1.303020BP + 0.012 0.409597

(Source: Stathead)

visualization shows that those elements of performance were consistent with other recent seasons.

In data visualization, the ability to see those similarities or differences, in a way that can't be intuited merely from reading the numbers, is an important feature. The individual numbers are of course still there: much as a fan can pore over numbers or pull old baseball cards from a deck, a researcher can examine the visualization online and mouse over each data point to see which players they stand for, including the relevant statistics for each player, the teams that they played on—or examine the regression lines to see the data for themselves.

SUGGESTIONS FOR INCORPORATING DATA VISUALIZATION INTO BASEBALL RESEARCH PRACTICE

This paper is meant as the beginning, not the end, of a discussion on how to incorporate principles of data visualization into baseball research. Further, the author's intention is not to be proscriptive about the kinds of ideas or visual forms to use, but rather to encourage baseball researchers to include visualizations as part of their ongoing work to analyze, predict, categorize, and suggest developments in the analysis of baseball.

Visualization is both the first and last mile of research. At the beginning of a research project, it can help the researcher identify and prioritize truly relevant or interesting areas to examine more closely. At the end of the process, through effective visuals, the researcher can make a set of findings relevant, clear, and understandable for an audience that is unfamiliar with statistics or quantitative research. In today's digital and visually rich research environment, a tremendous

volume of ideas can be shared on online platforms and through social media. In a world where a tweet can only hold a maximum of 280 characters, visuals become essential.

Further, using an interactive visual—where the reader or viewer may interact with multilayered data, choosing and analyzing specific data points—gives readers a personal experience with the information that they are absorbing. The data become more relatable and actionable, and easier to share across disciplines. Most essentially, the value lies in communicating and interacting with others about research findings; not so much to prove right or wrong answers, but to encourage exploration of the data and spur discussion to its own end.

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TWEAKING THE RULES

Rounding Second

A Probabilistic Investigation of the Major League Baseball Modified Extra Innings Rule

David C. Hyland, PhD, CPA

ajor League Baseball (MLB) has seen the length of games increase and has explored ways to shorten it.1 Because increasing runscoring disparity should shorten extra-inning games, in 2020 MLB introduced a rule intended to reduce the length of extra-inning games. The rule, which places a runner on second at the beginning of each extra inning, was adopted during the COVID-19 pandemic to reduce the number of pitchers used and to limit player exposure to each other and staff. After the 2020 season, MLB Commissioner Rob Manfred said, "I think the players like it. I think it's really good from a safety and health perspective that keeps us from putting players in situations where they're out there too long or in positions they're not used to playing."2 The rule was continued in 2021 and 2022.3

The purpose of this paper is to demonstrate a methodology that shows how a rule change—such as the runner on second to start extra innings—can be analyzed without having to run the experiment in actual games. The modified rule is intended to increase scoring, resulting in fewer ties after each extra inning, thereby ending the game sooner. We use conditional probabilities to predict how many extra innings would have been played under the modified rules in 2019. We also examine how many innings are predicted by our methodology under the new rule and compare our predicted results to what actually occurred in 2021.

We use run-scoring probabilities with the modified rules to analyze the probabilities of the number of innings that would be played out under the pre-2020 rules versus the modified rules. Our methodology predicts that under the modified rules approximately 54% more games would end in 10 innings instead of going longer. Results from 2021 show that actual games played according to the modified rules end in a similar length to what our methodology predicts.

In 2020 and 2021, at the start of an extra inning, the player who precedes the leadoff batter that inning in the batting order starts at second and the inning is played out. In this paper we use the 2019 MLB runscoring environment to predict scoring in extra innings

to analyze how quickly games would have ended compared to how long they actual went. We then use the methodology on 2021 data where games were played under the modified rules. Our methodology predicts an outcome similar to what actually occurred.

Proponents of the modified rule argue that fans would be more likely to stay for the end of a game if it was expected to be shorter. Opponents of the rule object to the different rules for an extra inning on purity grounds and argue that part of the fun of the game is that it might go on for a long time. In 2019, approximately 9% of MLB games went to extra innings and the average extra inning game lasted 11.3 innings.⁴ In 2021, 9% of MLB games also went to extra innings, but they averaged only 10.3 innings.

We will examine how much shorter (or longer) a game would go if the inning starts with a runner on second. This methodology could be used to examine alternative rule proposals as well. If MLB wanted to predict the change in innings played with a runner on third, or first and second with one out, this methodology could also be used.

METHODOLOGY

The methodology of the paper is to use the probabilities from the past season data to investigate the effect of a modified rule without having to actually run the experiment. We can analyze prior season MLB playby-play data to calculate the probability of scoring 0, 1, 2, and so on runs in an inning. In extra innings, when one team scores a different number than their opponent, the game is over. For example, if the probability of scoring 0 runs is 60%, then the probability of both teams scoring 0 runs is $60\% \times 60\% = 36\%$. If the probability of scoring 1 run in an inning for both teams is 20%, then the probability of the game continuing because each team scored 1 run is $20\% \times 20\% = 4\%$. We can add up the probabilities of scoring the same number of runs to determine the probability of the game continuing. This assumes that scoring by the two teams in an inning is independent. We show that it is independent.

The following equation shows the probability of a game continuing after an extra inning:

$$P_c = \sum_{i=1}^{N} p(\mathbf{v})_i p(\mathbf{h})_i$$

where:

 P_c = the probability of continuing the game

i = the number of runs scored in an inning

N = the maximum number of runs that might be scored in an inning

 $p(v)_i$ = the probability of the visiting team scoring i runs in the inning

 $p(h)_i$ = the probability of the home team scoring i runs in the inning

There are 24 base/out states that can occur in the game of baseball. A typical inning starts with nobody on and nobody out, but as the inning progresses, the state changes. For example, the bases could be loaded with no outs, one out, or two outs. The inning ends when three outs occur. It is common to calculate the number of runs expected based on the base/out state. For example, with a runner on first and nobody out, we can calculate the change in run expectancy for strategies like sacrifice bunting and stealing.

In the modified rules extra inning scenario, we can use the 24 base/out states to determine the probability of scoring different numbers of runs given that a runner starts on second base with no outs. In fact, we can analyze many different modified rules this way (such as runners on first and second with one out, etc.). We can compare the probabilities of the game continuing under the modified rules scenario with the traditional baseball rules to determine the difference in probabilities for the length of the game.

Retrosheet data from 2019 are used to determine how many runs are scored in a typical inning, along with the probability of scoring one run and the probability of scoring additional runs. We also examine whether scoring in an inning by two teams is independent. Using the typical run-scoring environment, we calculate the probabilities of scoring the same number of runs from each extra inning going forward. When the home team scores a different number of runs, the game is deemed to be over. We calculate the probability of the inning ending based on the scoring environment. We compare the probability of an inning ending under modified rules to the probability under traditional rules.

DATA

We used the Retrosheet 2019 and 2021 play-by-play data to get the most recent run-scoring environment for our analysis. We do not show results from the 2020 season, which was shortened to 60 games due to the pandemic, but the results are consistent with our methodology.

Table 1 lists the number of extra-inning games in 2019 by the number of innings played. The 208 extra inning games in 2019 represented approximately 9% of all games played. Of those games that went extra innings, 91 finished in the tenth inning (approximately 44%). The remaining 117 are the most interesting for the purpose of this study, because we want to study the extent to which the extra inning rule would shorten those games.

In 2021, 216 games went to extra innings. For the purposes of this study, we only count a game as going to extra innings if it went beyond 9 innings and limit our sample to games that went 10 innings or more. In 2021, both games of double headers were only 7 innings, not 9. If they went 8 or 9 innings, they were not counted as "extra innings" in this study.

Table 1. MLB Extra Inning Games in 2019 by Number of Innings

Number of Innings	Number of Games
10	91
11	58
12	22
13	14
14	7
15	8
16	3
17	1
18	3
19	1
Total	208

The 117 games that went beyond 10 innings in 2019 represented about 4 games per team or 5% of a team's 81 home games. If a fan at one of those games decided to go home because the prospect of a long contest was unappealing, the team would experience an inherent financial impact if that fan was discouraged from attending future games. Additionally, teams have to cover pitching and playing for all the additional innings. A long contest might require a team to burn through a lot of pitchers, which would affect the team for many games to come.

In 2019 the San Francisco Giants played 16 extrainning games, totaling 54 extra innings during the season (the most in MLB), while the Chicago White Sox played 8 games, for a total of 19 extra innings (the least in MLB).⁵ Thus, the Giants had to come up with 35 innings-worth of pitching (almost four regular-length games) more than the White Sox, a considerable strain on the Giants' pitching staff.

In 2021, with modified rules, the Minnesota Twins played the most extra-inning *games* with 21, whereas the Los Angeles Dodgers played the most extra *innings* with 30. Half the teams in 2019 played more extra innings with traditional rules than the Dodgers played in 2021 with modified rules.

ANALYSIS

The first step in analyzing the modified extra-inning rule is to examine the current scoring environment. Table 2 lists the pertinent data for the 2019 season. The first two columns list the number of times the visiting team scored 0-11 runs in an inning. The third column lists how many times the home team scored the same number of runs in the same inning as the visiting team, and the fourth column shows how many times the home team scored a different number of runs. Teams scored the same number of runs in an inning 54% of the time and a different number 46% of the time. For example, if the visiting team scored seven or more runs, the home team never scored the same number of runs as the visiting team. The most common number of runs scored by the visiting team was zero. Seventy-two percent of the time when the visitor scored zero runs, the home team also scored zero runs. However, if the visitor scored one run, the home team responded with one only 14% of the time. Probabilities drop significantly as additional runs are scored by the visitor.

We tested to see if there is a correlation between runs in the same inning. We find that there is a 0.009 correlation in scoring the same number of runs in the same inning by both teams. For the purposes of this paper, we treat scoring within an inning as independent. In other words, the runs scored by the visitor does not affect the number of runs that will be scored by the home team.

Table 2. Scoring by Number of Runs in an Inning in 2019

Number of Runs Scored by the Visiting Team	Number of Innings with this Score by Visiting Team	Same Number Scored by the Home Team	Different Number Scored by the Home Team	Percentage that Are Different
0	15,422	11,105	4,317	28%
1	3,284	457	2,827	86%
2	1,615	111	1,504	93%
3	734	39	695	95%
4	331	10	321	97%
5	149	1	148	99%
6	55	1	54	98%
7	27	_	27	100%
8	8	_	8	100%
9	3	_	3	100%
10	1	_	1	100%
11	1	_	1	100%
Total	21,630	11,724	9,906	46%

According to Table 2, the most common outcome in an inning is for both teams to score zero runs. This occurs 51% of the time. Increasing the probability of scoring by the teams (up to a certain point) is likely to make the teams score a different number of runs, which would end the extra-inning game.

RUN EXPECTANCY

Analytically-inclined baseball analysts commonly view the game as a Markov chain. A normal inning starts with nobody on and nobody out. The game progresses to new states after each batter. If the leadoff batter hits a home run, the state remains at nobody on and nobody out. If the batter strikes out, the state goes to nobody on and one out, while a single changes the state to a runner on first and no outs. The inning continues until the absorbing state of three outs. Table 3 (page 66) lists the expected number of runs that will score based on each of the 24 base/out states using the Retrosheet play-by-play data.

In 2019, in the normal scoring environment of no outs and nobody on base, 0.53 runs are expected to be scored by the batting team. Under the new extra innings scenario, 1.17 runs are expected if a runner starts on second with nobody out. The run expectancy is increased, but it is increased for both teams. We need to find out the probability of scoring a specific number of runs—namely, the probability of scoring 0, 1, 2, and so on runs.

Table 4 (page 66) lists the expected probability of scoring one or more runs for the rest of the inning based on each of the 24 base/out states. The probability of scoring a run from the traditional nobody on and nobody out state is 0.29, but if the inning starts with a runner on second and nobody out, the probability of scoring one or more runs jumps to 0.61.6

Table 5 compares the probability of scoring 0–7 runs in an inning under traditional baseball rules (i.e., nobody on, nobody out) and the probability of scoring 0–7 runs under the modified rules (i.e., starting with a runner on second base). The probability of scoring more than seven runs in an inning is negligible. The table also lists the probability of the inning continuing, which occurs when both teams score the same number of runs. For example, under traditional rules, each team has a 71 % chance of scoring zero runs, and there is a 50.6% chance that they will both score zero runs. Under modified rules, there is a 39.4% chance that each team will score zero runs and only a 15.6 % chance that they will both score zero runs.

The total probability of both teams scoring the same number of runs under *traditional* rules is 53.5%, whereas the total probability of both teams scoring the same number of runs under *modified* rules is 28.3%. This suggests that 53.5% of games will continue after the 10th inning under traditional rules, while only 28.3% will continue under modified rules. We assume that scoring is also independent across innings. This means that $53.5\% \times 53.5\% = 28.6\%$ of extra innings

Table 3. Expected Runs for Each of the 24 Base/Out States that Can Occur in the Rest of an Inning*

Base Runners		Nur	Number of Outs			
1B	2B	3B	0 Outs	1 Out	2 Outs	
_	-	-	0.53	0.29	0.11	
1B	_	_	0.94	0.56	0.24	
_	2B	_	1.17	0.72	0.33	
1B	2B	_	1.56	1.00	0.46	
_	_	3B	1.43	1.00	0.38	
1B	_	3B	1.80	1.23	0.54	
_	2B	3B	2.04	1.42	0.60	
1B	2B	3B	2.32	1.63	0.77	

^{*}The expected runs are calculated using 2019 MLB play-by-play data.

Table 4. Expected Probability of Scoring One or More Runs for the Rest of the Inning*

Ba	se Runn	ers	Nur	nber of O	uts
1B	2B	3B	0 Outs	1 Out	2 Outs
_	_	_	29%	17%	8%
1B	_	_	43%	28%	13%
_	2B	_	61%	41%	22%
1B	2B	_	63%	43%	23%
_	_	3B	83%	65%	26%
1B	_	3B	84%	64%	29%
_	2B	3B	87%	68%	26%
1B	2B	3B	86%	67%	32%

 $^{{}^{*}\}text{The expected runs are calculated using 2019 MLB play-by-play data}.$

games will go at least 12 innings under traditional rules, while $28.3\% \times 28.3\% = 8.0\%$ of extra innings games with modified rules will go at least 12 innings.

Table 6 breaks out the extra innings games in 2019 by innings along with the number predicted from the 2019 scoring environment and the number predicted based on the modified extra innings rules. In 2019, there were 478 extra innings played. Based on the average scoring environment in 2019, we would predict that there should have been 440 extra innings played under traditional rules and 288 extra innings played using modified rules. It is possible that this number is lower than expected because teams make late inning substitutions for defensive purposes, which might make run scoring decrease from the average. Under the modified extra innings rules, we would predict that 53 games or 54% more would end in the 10th inning.

The final two columns of Table 6 list the number of extra innings predicted using our methodology and the actual number of extra inning games played in 2021. We used the 2021 run-scoring environment in our analysis. The average number of runs scored per team per game was 4.53 in 2021 versus 4.83 in 2019. These numbers are statistically significant. The average number of runs scored in the period 2016–19 was 4.60, which is not statistically different from the number of runs scored in 2021.⁷

The prediction for ending in 10 innings is only off by one game, while the number of games expected to end in 11 innings is lower than actual. The difference isn't large. It will be interesting to observe if this difference persists going forward. Will teams employ different strategies under the modified extra inning rules (e.g., will teams attempt to advance the runner on second via the bunt?) and will these strategies be optimal? Also of interest was the one 16-inning game in 2021, which can be viewed as an outlier or possibily a limitation of the methodology. The possibility of the extreme outlier might make that game even more special for the lucky fans who were able to see it.

CONCLUSION

In this paper we show how to use conditional probability analysis to examine the effect of changing the rules for extra innings in Major League Baseball. We can use the probability analysis to determine how the modified rules will affect the length of the game without actually having to run the experiment. The modified extra innings rule is expected to reduce innings beyond the 10th by 53%. Additionally, 92% of the extra innings games are expected to end by the 11th inning, and there is almost no chance of going

Table 5. Probabilities of Scoring Runs Under Traditional Rules and Modified Extra Inning Rules with Probabilities of Both Teams Scoring the Same Number

	Traditional Rules		Modified Extra Inning Rules	
Runs Scored in the Inning	Probability of Scoring this Many Runs	Probability of Both Teams Scoring the Same Number of Runs	Probability of Scoring this Many Runs Under Modified Extra Innings Rules	Probability of Both Teams Scoring the Same Number of Runs
0	71%	51%	39%	16%
1	15%	2%	32%	10%
2	7%	1%	14%	2%
3	4%	0%	8%	1%
4	2%	0%	4%	0%
5	1%	0%	2%	0%
6	0%	0%	1%	0%
7	0%	0%	1%	0%

Table 6. Breakdown of How Many Extra Innings Will Occur Under Traditional and Modified Extra Inning Rules

Extra Inning	Number of Extra Inning Games in 2019	Number Predicted by 2019 Average Scoring Environment Under Traditional Rules	Number Predicted with Modified Extra Inning Rules and 2019 Scoring Environment	Number Predicted with Modified Extra Inning Rules and 2021 Scoring Environment	Number of Extra Inning Games in 2021
10	91	97	149	155	154
11	58	52	42	33	46
12	22	28	12	22	13
13	14	15	3	5	2
14	7	8	2	1	0
15	8	4	0	0	0
16	3	2	0	0	1
17	1	1	0	0	0
18	3	1	0	0	0
19	1	0	0	0	0

beyond 14 innings. Other potential rules, such as putting runners on first or third or first and second, can be analyzed with this methodology. The results from 2021 show that the methodological results are similar to what teams actually experience with the continuation of extra innings. Our methodology predicts that in the full season of 2021, 61 games would go beyond the 10th inning based on the 2021 run-scoring environment with a runner on second. In actuality 62 games lasted beyond the 10th inning.

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- These types of extra innings rules are used in youth baseball and have been tested in other professional baseball leagues, such as the Korean Baseball Organization (KBO), as well as independent and affiliated minor leagues.
- 4. In 2021 there were 9 more extra innings games than 2019.
- The Tampa Bay Rays played 19 extra innings games for the highest number of games but did not play as many extra innings as the Giants.
- In 2021 the probabilities are very similar. For example, the probability of scoring 1 or more runners with a runner on second base and no outs is also 61%.
- 7. There is no statistical difference in the proportion of home team wins between 2021 and 2019 and no statistical difference between 2021 and the period 2016–2019.

Six-Man Baseball

Kevin Warneke and John Shorey

n the eve of the 1943 season, Boston Red Sox manager Joe Cronin faced a daunting task: replacing Ted Williams and Dom DiMaggio in his outfield. The two All-Stars were serving their country as World War II raged across Europe and the Pacific. Sensing Cronin's predicament, Associated Press features sports editor Dillon Graham shared a rumor with his readers that Cronin would favor six-man baseball. "You know, just slice off the outfield entirely. Use four deep-playing infielders, a catcher and a pitcher."

Graham's suggestion to his readers may have been intended jokingly, but the idea wasn't as far-fetched as it may sound. "This, of course, is not unthinkable," Graham wrote. "Football, in some sections, has blossomed as a six-man sport and, baseball men are quick to say, whatever football does, baseball can do, and better."

Graham knew about the recently introduced sixman version of football, but apparently was unaware that its inventor also had designed an alternative to traditional baseball. Stephen Epler, who devised sixman football during the Great Depression as a way for high schools with smaller enrollments to field teams, introduced a six-man version of baseball in 1939 as a sequel. Epler, who coached and taught at Chester High School in Nebraska, would later serve in the US Navy, found two institutions of higher learning, and serve as president of a third.³

Epler suggested six-man baseball might be best suited for younger players.⁴ "Probably the greatest field for six-man baseball is the playgrounds, sandlots, and the intramural field," Epler wrote. "Like its brother, six-man football, it speeds up the action and makes the game more fun for the players."⁵

Six-man baseball made inroads after being featured in *American Boy* magazine in 1939. "Six-man baseball probably has advanced further in the past year than six-man football did in its first year," Epler wrote. The article, published in the May 1939 edition, noted that six-man football, which he had invented four years earlier, was played in 2,500 schools throughout the country at the time. "Here, for the first time, are formal rules for the (six-man) game—rules designed to

make the game yield maximum fun and thrills for the player!"⁷

Epler shared the rules, which included accommodations for use in softball, in *American Boy* and the *Journal of Health and Physical Education*. He stated that the main rules for baseball would still apply, but with six main adjustments:⁸

Rule 1: Each team consists of six players: a catcher, pitcher, two infielders (which he called basemen) and two outfielders (called fielders).

Rule 2: The playing field has three bases, including home, which are an equal distance (standard 90 feet) apart to form an inverted equilateral triangle (at 60-degree angles instead of 90-degree). The pitcher's rubber remains at the traditional distance of 60 feet, 6 inches from home plate.

Rule 3: Two strikes make an out, with a foul ball counted as a half-strike. Four fouls make an out. Three balls earn the batter first base. Each batting side has four outs each inning. A game is six innings. "At the end of six innings you will probably be more tired than at the end of nine innings of nine-man baseball so this is made the official length for six-man baseball." 9

Rule 4: No player shall wear metal spikes or hard cleats. "The fourth rule does not affect the actual playing but is needed to eliminate unnecessary injuries." ¹⁰ Epler suggested players wear shoes made from soft materials similar to those worn in softball, basketball, and six-man football competition.

Rule 5: Players may change positions at any time, if Rule 6 is in play. A pitcher cannot be replaced during an at-bat.

Rule 6: After each batter has finished his turn, the team in the field rotates positions. The order: pitcher, first baseman, right fielder, left fielder, second baseman, catcher and back to pitcher.

(Epler allowed that position rotations in base-ball could be made after every fourth batter, partly to eliminate the need for a different player to don the catching gear after each batter). "Rotation gives boys practice in every position and helps them learn baseball from A to Z." Epler noted that rotating players in the field evens the playing field. "A team with nothing but a good pitcher will not win many games." 12

Along with the rules, Epler listed the following attributes of his version of baseball:

- Players bat every sixth time. "The more you bat the better hitter you will be." ¹³
- With only six to a side, fielding a competitive team will be easier. "The result is less standing around and more action for every player."
- Six-man baseball's rules and the layout of the field will lead to more action, which means more scoring. A batter has to touch three bases to score instead of four. "You will like higher scores because the most fun after socking the apple is sliding safely into home plate." 15
- Through player rotation, weaker players from opposing sides could be matched against one another.

Six-man baseball also received attention in *Popular Mechanics* in 1939. "Six-man baseball requires a smaller playing field and less equipment than its big brother, and permits wider flexibility of the rules." 16 Six-man baseball also protects players from overdoing it in competition. "Rotation in games between office league oldsters should prevent a lot of sore-arm trouble for those middle-aged would-be athletes who insist on pitching the full game and then spend the next three days beefing about ailing arms." 17

Epler, in his *American Boy* article, rallied support for his game, thus: "So get out on the diamond, the first sunny day, and play baseball the six-man way. Play it for just one week to prove that you like it. Get the old glove out, limber up your arm, take a few grounders, then pick up the bat and—Play ball!" 18

He apparently had some early takers on his suggestion to try his version of America's favorite pastime. Some examples:

 Coaches and physical education instructors taking a summer coaching class in 1939 at Columbia University's Teachers College participated in a demonstration game umpired by former big lea-

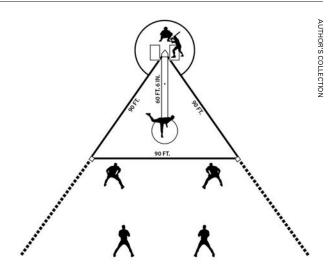


Diagram showing the dimensions of a six-man baseball field and placement of players.

guer Ethan Allen. Said Professor F.W. Maroney: "Simple organization, inexpensive equipment, and an opportunity for every boy to play every position are three attractive features that the six-man game has to offer."¹⁹

- Epler participated in a coaching clinic in Victoria, Texas, in August 1939 that included a demonstration game featuring players from York Oil and St. Joseph.²⁰
- A report for *Transradio Press* in June 1939 touted the success of six-man baseball at Roosevelt Junior High School in St. Joseph, Missouri. Coach Jimmy Streeter, who predicted success for six-man baseball, said: "There is a lot of action and plenty of chances to bat. And after all, most players fancy the batting more than any other part of the game."²¹
- Ken Corcoran wrote in the *Boys Town Journal* in 1940 that he would introduce boys living at Father Flanagan's Boys' Home near Omaha, Nebraska, to six-man baseball.²²
- Even as late as 1953 newspapers throughout the country featured a story explaining the rules of six-man baseball. The correspondent summarized his article with the following statement, "Besides being a fine game for the players, six-man is also a good spectators' contest. Why not get your teams ready now and start a game on the nearby baseball field."²³

Despite the positive accolades that this version of baseball received, not everyone was smitten with Epler's



Stephen Epler

creation. In 1940, Dick Hackenberg, a sports staff writer for the Minneapolis Star, penned an editorial in which he imagined Abner Doubleday turning over twice in his grave. "'Why, oh why,' wailed Mister Doubleday, 'don't they leave things alone, anyway? Who is this Stephen Epler? Where's he ever get that silly idea?'"24 Continuing his tirade for the fictitious Doubleday, he addressed some of the specific rules with which he took exception, "'It is pointed out that the batter must hit into a 60-degree angle instead of 90, which will develop more accurate hitting—yeah, to the fielders. Accurate hitting in nine-man ball is down the lines or between the fields. In six-man, a guy either would be out P.D.Q. on four of those half-strike fouls—which might be doubles or triples ordinarily—or he'd hit the ball into a concentrated fielding area. Pooey!"25

Robert McShane, in his newspaper column "Speaking of Sports," wrote about Epler's game in 1939 and his story was carried in newspapers throughout the country, saying, "Spectators said very plainly that it wasn't exactly baseball. That didn't bother Epler, who more or less agreed with them. He introduced the game to please the players not the fans." Apparently those spectators were correct. The game didn't catch on like its predecessor, six-man football, which is still played in high schools throughout the country, including in Nebraska where Epler lived when he invented it.

One of the most expansive critiques of Epler's base-ball variant came in 1940. Early that year, the *Des Moines Register* published a story describing the rules of six-man baseball. After reading the story in the newspaper, the baseball coaches at two small high schools in Southwest Iowa arranged two experimental games of six-man baseball to see whether the game had real possibilities beyond playground adaptation.²⁷

"Defiance jumped on Tennant pitching for ten runs in the first inning to help win one of the first six-man baseball games in the state, 11 to 0." proclaimed the brief story from the Council Bluffs newspaper.²⁸ After the two experimental games coaches Tom Orr and William Nechinicky shared their analysis with *Des Moines Register* sports editor Sec Taylor. The experimental games led the coaches to the conclusion that "six-man baseball can never be a strong contender with the nine man sport." The Iowa prep coaches shared the following observations with the newspaper:

- "The two strikes do not enable the batter to look the pitcher over. Many hitters prefer to let the first strike go by. With only two strikes this would be most detrimental."
- "Any team that could develop two or three place hitters that could hit the ball just over the pitchers head to the edge of the infield or any distance beyond would have a great advantage. This takes away the long-hit thrills of the game."
- "Stolen bases are at a premium due to the nearness of the two bases to home plate and the pitchers mound. This also eliminates many thrills of the long throw to second base to pick off a coming base runner."
- "A two-man infield is not adequate to cover ground balls hit at a fair clip or to cover bunts and at the same time protect the bases. There is just too much space for two men."
- "It is impossible to bunt unless done on the first strike. This eliminates many would be sacrifices and another of the thrills of the nine-man game." ²⁹

Decades later, Larry Granillo, writing for *Baseball Prospectus*, examined Epler's version of baseball. Granillo pointed out that the game, on offense, wouldn't change much, except for the pace of play. "Defensively, however, is a different story." The infielders, to be effective, would have to move up, similar to a drawn-in infield. "We all know how that plays out—anything that isn't a weak grounder would fall in for a hit due to the decreased reaction time the fielders would have." 30

The outfielders would have even more difficulty. The 60-degree foul lines would lessen the ground they needed to cover, but they still must cover the power alleys. "This is possible with two quality fielders, but would mostly result in more hits. And, with all the extra grounders they'd be forced to field due to the infielders' poor reaction times, the two outfielders would find their job that much harder and more tiring." ³¹

Granillo acknowledged that Epler's game wasn't created for "full-on major league play," but rather for kids. He lauded Epler's invention and praised the "very cool looking field," but said the increase in offense at the expense of defense wasn't worth it. "Of course, if I were a ten-year-old kid hoping to get a full game of baseball in at recess with my schoolyard friends, I might be singing a different tune."³² ■

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SIX-MAN BASEBALL ALL-TIME TEAM

Six-man baseball, had it been widely accepted, would have caused major league teams to re-evaluate their talent, with a call for those who could play multiple positions. And had six-man baseball endured, the authors suggest that those selected to an all-time six-man team possess some or, all, of these qualities:

- Hall of Fame or multiple All-Star selections
- Pitching experience in high school or later
- Gold Glove Award winners (especially pitchers)
- Catching experience in high school or later
- Experience playing multiple positions at the professional level
- OPS at .850 or higher

The authors' all-time six-man roster in this batting order would be:

Craig Biggio: A Hall of Famer who broke in as a catcher, and then played second base and center field. He is the only player in MLB history with at least 3,000 hits, 600 doubles, 400 stolen bases and 250 home runs. Despite switching positions, he won four Gold Glove Awards.

Pete Rose: He broke into the majors as a second baseman, but also starred as a corner outfielder, as well as playing first and third base. In high school, he caught and played shortstop. Rose could serve as the team's player-manager.

Babe Ruth: His batting exploits included a .342 average and 714 home runs, along with 2,214 RBI, 136 triples, 506 doubles and 123 stolen bases. His career OPS was 1.164. His best season as a pitcher was 1916, in which he won 23 games with a 1.75 ERA. He caught for his high school team.

Charles Wilber "Bullet" Rogan: Hall of Famer Rogan was one of the best two-way players in the Negro Leagues. His career pitching record was 120-52 with a 2.65 ERA. As an outfielder and second baseman, he typically batted fourth, producing a .338 career batting average and 106 stolen bases.

Dave Winfield: He was drafted by the NBA, ABA, MLB and even the NFL, despite never playing football in high school or college. As a collegiate pitcher, he boasted a 9-1 record his senior season with a 2.74 ERA. He was a five-tool player with four seasons in the majors of 20+ stolen bases to go with 465 career home runs.

Stan Musial: He began his baseball career primarily as a pitcher, going 18-5 with a 2.62 ERA in his third season in the minors before switching to outfield and first base. Musial finished his career with a .331 batting average, 475 home runs, 1,951 RBI and 78 stolen bases. He had a career OPS of .976 and held or shared 17 MLB records when he retired.

TWEAKING THE RULES

The Impact of the One-off 1887 Four-strike Strikeout

Woody Eckard, PhD

In 1887, for the only time in major league history, a strikeout required four strikes. Giving hitters an extra strike obviously would increase offensive production. However, an interesting (and unanswered) question is the size of the increases across various performance measures. This article presents the first statistical analysis of this issue, made possible by the 1888 reversion to three strikes, and by the availability of offensive performance data for teams in both the National League and American Association, the two major leagues of the day.

PITCHER-BATTER RULE CHANGES IN 18871

The 1870s through 1880s was an era of organizational tumult in professional baseball, with teams and leagues coming and going, and almost annual experimentation in playing rules with non-trivial changes. Those concerning pitching and batting had major impacts on the critical pitcher-batter interaction and thereby on performance outcomes. Changing the rules was a balancing act, with rules advantaging pitchers disadvantaging batters, and vice versa.

Probably the most significant single year for pitcher-batter rule changes was 1887. The main change favoring pitchers was the elimination of the batter's right to request either a high or low pitch.² The purpose of this change was to relieve umpires of the chore of calling two separate "high-low" strike zones, but it constituted a major boon for pitchers by roughly doubling the strike zone. This created a problem for rule-makers who were already concerned about a declining trend in offensive production—created by a combination of previous rule changes and improved fielding—and associated attendance declines.

They countered by simultaneously introducing three rule changes that favored batters. The most important of these was the four-strike strikeout (4SK). This gave batters additional swing(s) that inevitably would increase offensive output. The second offsetting rule change was a decrease from six to five in the number of balls required for a base on balls, which of course would produce more walks, but also placed

greater pressure on pitchers to throw hittable pitches, thereby increasing the number of hits as well. The third "change" was actually several related changes restricting the pitcher's delivery in ways that helped the batter. For example, the pitcher was required to begin his delivery with his back foot set on the back line of the pitcher's box, and he was allowed only one step toward home before delivering the pitch, similar to the modern delivery.

Another one-year rule change introduced in 1887 affected the computation of batting averages (BAs): a base on balls was counted as a hit (and an at-bat), creating significant increases in BAs. This was not a playing-field rule change to the pitcher-batter interaction, but it might have influenced batters' behavior by causing some to seek a base on balls to "pad" their BAs, which at the time were the principal measure of hitting prowess.

In what follows, we report 1887 BAs computed conventionally, i.e. not counting bases-on-balls as hits or at-bats. This can be easily done with available data, and avoids what would otherwise be a significant exaggeration of the 4SK impact. We also test the BA "padding" hypothesis.

MEASUREMENT OF THE 4SK IMPACT

Isolating the impact of the fourth strike, however, is problematic given the multiple simultaneous rule changes. Hershberger (2019, 211) correctly observes: "In 1887, offense was actually higher than in 1886 (although concurrent change to the delivery [and other] rules make [sic] it difficult to assign credit to any particular rule change)."3 Similarly, Thiessen (2018, 252) concludes that, as compared to 1886, "the cumulative advantages that [the 1887] rule changes afforded to the batsman contributed to the significant improvement in the productivity of the players, teams, and leagues" (emphasis added), and no conclusion was drawn regarding individual rule changes.4 Indeed, isolating the performance impact of any single rule change introduced in 1887 by a comparison with 1886 is impossible given available data.

However, a "work-around" is possible. In 1888, when MLB reverted to the three-strike strikeout, the other major rules governing the pitcher-batter interaction that were introduced in 1887 remained unchanged. And no new rules related to pitching and batting were introduced. Thus, an estimate of the inevitable *decline* in offensive performance from *eliminating* the 4SK is possible. This, in turn, can serve as an estimate of an "all-else-equal" introduction of the 4SK rule assuming symmetry, i.e., the two impacts are equal in magnitude but opposite in effect. This is the basis of the estimates presented below.

MAIN IMPACTS ON OFFENSIVE STATISTICS

We first examine five key offensive statistics affected by the rule change. Separate results are reported for the National League (NL) and the American Association (AA), comparing the 1887 and 1888 seasons. The NL had the same eight teams in both years. The AA had seven that were the same in both years, having replaced the Metropolitan Club with Kansas City in 1888. Team performance data are from Baseball-Reference.com.

The comparisons are shown in Tables 1 and 2 for the NL and AA, respectively. All metrics are league averages and all are reported on a per game basis, except BA, to adjust for differences in the number of games played between the teams and the two seasons. The performance differences are calculated subtracting 1888 data from 1887 data, treating a performance decline from 1887 to

Table 1. National League 1887–88 Differences in Selected Per-game Offensive Statistics

	Means			Difference	
	1887	1888	Total	Percent	p-value
K/G	2.78	3.69	-0.91	-24.7%	0.0000 ***
Hits/G	9.47	8.25	+1.22	+14.8%	0.0006 ***
BA	.269	.239	+.030	+12.6%	0.0004 ***
BB/G	2.69	1.93	+0.76	+39.4%	0.0002 ***
Runs/G	6.09	4.55	+1.54	+33.8%	0.0008 ***

^{*** 0.1%} significance level

Table 2. American Association 1887–88 Differences in Selected Per-game Offensive Statistics

	Means			Difference	
	1887	1888	Total	Percent	p-value
K/G	2.76	3.75	-0.99	-26.4%	0.0009 ***
Hits/G	9.83	8.36	+1.47	+17.6%	0.0009 ***
BA	.276	.241	+.035	+14.5%	0.0012 **
BB/G	3.01	2.43	+0.58	+23.9%	0.0078 **
Runs/G	6.76	5.30	+1.46	+27.5%	0.0027 **

^{***} 0.1% significance level; ** 1.0% significance level

1888 as an estimate of the increase that would have occurred from 1886 to 1887 under an all-else-equal implementation of the 4SK. Statistical significance is measured by p-values for a matched-pairs difference-between-means test for teams in each league.

The most obvious result of the 4SK is fewer strikeouts. They fell in both leagues by similar amounts, 0.91 per game in the NL and 0.99 per game in the AA, proportionate decreases of roughly one-quarter.

For those at-bats that reached a three-strike count, the additional strike meant at least one additional pitch, producing a second obvious result: more hits. Hits per game increased in both leagues, by 1.22 in the NL and 1.47 in the AA, proportionate increases of roughly one-sixth. Thus, BAs increased, from .239 to .269 (.030 points) in the NL and from .241 to .276 (.035 points) in the AA. Recall that we compute BAs ignoring the 1887 walk-equals-hit rule.

The additional pitches generated by the fourth strike could, of course, be balls, leading to the less obvious result of more walks. Also, three-strike counts would be more likely to occur with weak batters and/or strong pitchers. In both cases batters might be more likely to take borderline pitches hoping for a walk. Note that this happens even without the walk-as-hit BA calculation. In fact, bases-on-balls increased in both leagues, by 0.76 per game in the NL and 0.58 per game in the AA.

More hits and walks together increased the number of baserunners, which in turn created more runs. The NL had 1.98 additional baserunners per game, and the AA had a very similar 2.05 per game. The AA's lead in hits per game (1.47 vs 1.22) was nearly offset by the NL's lead in walks per game (0.76 vs 0.58), resulting in similar increases in runs per game of 1.54 (NL) and 1.46 (AA).

Note that all the differences reported in Tables 1 and 2 have a high degree of statistical significance, despite the small sample sizes. The reported p-values indicate that all NL metrics pass a 0.1 percent significance test. In the AA two pass a 0.1 percent test (K/G and Hits/G), while the remaining three pass a 1.0 percent test. Strikeouts per game decreased for all teams in both leagues. Similarly, all four offensive metrics of Tables 1 and 2 increased for *all* teams in both leagues. Thus it is extremely unlikely that the observed changes were mere happenstance.

Myriad factors affect batter and pitcher performance from year to year, and are in a constant state of flux across teams and individual players. However, it is generally reasonable to view such changes as statistical noise, i.e., random offsetting factors with a mean zero

expected impact. The above significance tests address the likelihood of this assumption being wrong. A possible factor not falling in this group concerns pitchers' adjustments to the 1887 delivery rule changes mentioned above. If these adjustments were not complete by the end of the 1887 season, a lingering impact might have existed in 1888, in which case our estimates might be somewhat overstated.

BATTERS' STRATEGIC REACTION

Another interesting question is the batters' reaction to the 4SK in terms of their approach to at-bats. We analyze two such possible changes. First, batters could "spend" the additional swing on a "power stroke" looking for an extra base hit (EBH), most likely early in the count. The associated "cost," more swings-and-misses, would be mitigated by the extra strike. This would be evident as a larger *proportion* of EBHs.

Second, as noted above, another unique 1887-only rule change involved counting a base on balls (BB) as a hit when calculating BAs. This may have created an incentive to draw BBs to pad BAs, i.e., batters electing to take extra borderline pitches. An implication is more BBs *relative to* hits, i.e., an increase in the BB/Hit ratio.

Table 3 presents data on EBHs and BBs per 100 hits for both leagues. First, EBH per 100 hits increased by 3.6 in the NL and 2.2 in the AA. The larger NL increase might explain the above noted larger NL increase in runs. While neither EBH increase is large, both are statistically significant. Thus, at least some batters were likely using the extra strike for a "power stroke."

Regarding more BBs, however, the results are mixed. The NL shows a statistically significant increase of 5.0 percentage points in the ratio of BBs to hits, consistent with batters padding BAs. In contrast, while the AA

Table 3. Differences in Extra Base Hits and Walks per 100 Hits, 1887–88, National League and American Association

NATIONAL LEAGUE

	Means			Difference		
	1887	1888	Total	Percent	p-value	
EBH/100 Hits	26.4	22.8	+3.6	+15.8%	0.0024 **	
BB/100 Hits	28.4	23.4	+5.0	+21.4%	0.0075 **	

AMERICAN ASSOCIATION

	Means			Difference		
	1887	1888	Total	Percent	p-value	
EBH/100 Hits	24.1	21.9	+2.2	+10.0%	0.0272 *	
BB/100 Hits	30.6	29.1	+1.5	+5.2%	0.3790	

^{** 1.0%} significance level; * 5.0% significance level

ratio shows an increase, it is insignificant. Perhaps the higher BA batters in the AA (see Tables 1 and 2) were simply less inclined to trade hits for walks.

IMPACT ON PITCHING

Another question of interest is the impact of the 4SK on pitching. First, basic pitching effectiveness measures such as ERA, WHIP, and the K/BB ratio necessarily mirror the above changes in hitting performance, and so will not be detailed here. In sum, these measures deteriorated as related offensive performance measures improved.

However, two other pitching-related questions remain open. First, did pitchers respond to the fourth strike by more "purpose pitches" designed to keep batters from getting too comfortable at the plate? This would be evident as an increase in the proportion of batters faced (BF) hit by pitches (HBP). Both statistics are available in 1887 and 1888. Second, did managers use more relief or "change" pitchers in response to the offensive surge? This implies fewer complete games (CG), a statistic also available during the study period.

The data are presented in Table 4 for both the NL and AA. The HBP percentage (HBP/BF) shows a trivial change for the NL. But the AA HBP percentage change is contrary to the prediction. It is lower in 1887 compared to 1888, by 0.22 percentage point, although falling just short of significance at the 5 percent level. Perhaps concerns about the significant BB increase noted above (Tables 1 and 2) created a countervailing pressure on pitchers to throw strikes.

Regarding the use of change pitchers, both the NL and AA CG percentages (CG/G) show a decline, but both are small and statistically insignificant.

Table 4. Differences in the Percentage of Complete Games and Proportion of Batters Hit by Pitches, 1887–88, National League and American Association

NATIONAL LEAGUE

	Me	eans			
	1887	1888	Difference	p-value	
CG/G	95.4%	96.4%	-1.00	0.151	
HBP/BF	0.83%	0.78%	+0.05	0.231	

AMERICAN ASSOCIATION

	IVIE	eans			
	1887	1888	Difference	p-value	
CG/G	95.6%	96.4%	-0.80	0.139	
HBP/BF	1.03%	1.25%	-0.22	0.054	

SUMMARY AND CONCLUSIONS

The offensive performance impacts of the unique 1887 4SK cannot be measured by comparison to 1886 performance because of the confounding influence of several other pro-batter rule changes also introduced in 1887. However, these other rule changes remained in place when the three-strike strikeout was restored in 1888. Thus the impacts of removing the 4SK can be measured by comparing 1887 and 1888 performance metrics. These in turn can be used to estimate the impacts of its introduction assuming equal but opposite effects

As expected, the data reveal that strikeouts per game in both the NL and AA declined as a result of the 4SK; hits and BAs increased; and, less obviously, walks also increased. The result was more baserunners that in turn produced more runs, which indeed was the objective of the rule change. All the measured changes were substantial and statistical tests demonstrate they were very unlikely to be happenstance. An increase in the proportion of extra-base hits in both leagues indicates that batters responded in part by using the extra strike for a power stroke. However, the results were mixed regarding the hypothesis that batters were also seeking walks to pad their BAs because of the simultaneous walk-equals-hit rule.

Two possible impacts of strike-four on pitching were analyzed. The results do not support the hypothesis that the offensive surge resulted in more relief (change) pitchers. Also, there was no evidence of an increase in batters hit by pitches, which could result if pitchers responded by increased batter intimidation.

Baseball magnates quickly decided the 4SK was a mistake. In May 1887, only one month into the season, AA owners passed a resolution asking the Joint [AA and NL] Committee on Rules to rescind the rule, along with the base on balls equals hit rule (Thiessen, 2018, 252). The motivations were varied, and apparently did not include the "power surge" per se. Hershberger (2019, 212) notes the following:

[T]he stated reasons were that batters were delaying the game by waiting for two strikes before swinging [walks did indeed increase] and that the one year of the four-strike rule was merely a period for batters to adjust to the new [larger] strike zone, which they now had done. Underneath this is a subtext that the three-strike strikeout had the weight of long tradition behind it, making four-strike outs seem unnatural.

The NL owners agreed. That fall (November 1887), at the annual joint meetings of the two major leagues, the three-strike strikeout was restored (Rippel, 2018, 261). And in 1888 the surge in offensive performance disappeared. ■

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Notes

- 1. For descriptions of pitching rule changes during the 1880s, see Shipley (1994), Thiessen (2018), Rippel (2018), and Hershberger (2019).
- Additionally, a strike was officially defined as a pitch over the plate between the knee and shoulder.
- 3. It should be noted that Hershberger in his book *Strike Four* made no attempt to quantify the impact of the fourth strike on performance statistics.
- 4. Thiessen (2018, 247–48) provides tables comparing aggregate league offensive performance in 1887 to 1886 and 1888, although his 1887 data count bases-on-balls as hits, per the new 1887 rule. Also his 1887–88 comparison is not linked to the 4SK. His offensive metrics are among those reported in the present article.
- 5. At this time, foul balls were not counted as strikes, e.g., see Nemec (1999, 33–34).
- 6. 1887 was the first year that NL batters were awarded first base when hit by a pitch, the AA having adopted the rule in 1884 (Nemec, 1999, 103–4). Thus, one wonders if the new NL rule was introduced to protect batters in recognition of this possible response by pitchers to the fourstrike rule. In this regard, it is surprising that the HBP rate is actually higher today than in 1887, given the "tough-guy" image of 19th century ball players. The 2020 aggregate MLB rate (HBP/BF) was 1.23 percent, compared to the 1887 NL and AA rates of 0.83 percent and 1.03 percent, respectively (Table 4).
- At this time, a player could not leave a game unless injured. Thus, to be relieved, a pitcher had to change positions with another player already in the game.

EXPANSION

Entering the National League

The Phillies' Bumpy Journey

Robert D. Warrington

NOTE: This is the final installment of a three-part series addressing the founding of the Philadelphia National League Baseball Club.¹

raditional histories of the Philadelphia Phillies portray the club's entry into the National League as a straightforward and smooth process. It was anything but. Numerous challenges had to be overcome in establishing the franchise and assembling a team for the 1883 regular season. The fledging club was also overshadowed by the rival Athletics, who already held major league status and represented "the first name in Philadelphia baseball." Whether the Phillies could compete effectively against other NL teams and secure a prominent place in Philadelphia's baseball landscape was uncertain. Hope attended the Phillies' ascendance to the National League, but so did doubt, and success was not guaranteed.²

PHILADELPHIA IN THE NATIONAL LEAGUE—AN INAUSPICIOUS START

Philadelphia's first membership in the National League was a failure.³ The Athletics represented the city during the League's inaugural 1876 season, but were banished when—out of pennant contention—the club refused to make a final western road trip believing it would lose money by doing so.⁴ The A's brief tenure exemplified the organizational tumult the NL experienced in the early years of its existence. The Hartford Dark Blues, Louisville Grays, St. Louis Brown Stockings, and other teams had entered and departed the League's ranks between 1876 and the Phillies' arrival in 1883.⁵

Despite their short stay in the NL, the Athletics remained the lead name in Philadelphia baseball, as they had since the 1860s.⁶ The 1883 version of the club had a one-year head start over the Phillies in the major leagues. The A's had become a member of the American Association—a new organization established to challenge the NL's monopoly on major league status—in 1882.⁷ The upstart Phillies had spent the year in the League Alliance—the group of minor-league teams affiliated with the NL.⁸ The Athletics dominated the allegiance of Philadelphia fans, and it remained to be seen if those fans would find room in their hearts to embrace a second major league team.

THE STARS ALIGN FOR PHILADELPHIA'S RETURN TO THE NL

Though the Athletics enjoyed preeminent baseball status in the city, the formation of the Association served as the genesis for the Phillies gaining major league membership. By placing teams in the nation's two biggest cities—Philadelphia in 1882 and New York the following year—the AA created an imperative for the National League to do likewise. Owners were not about to cede those cities to the Association in their fight to remain the sole major league.⁹

From a marketing perspective, Philadelphia had a lot going for it as the future home of an NL team. By 1880, the city's population had grown to 847,170—the second-largest city by population in the United States—trailing only New York (1,206,299). Industrial giants dominated Philadelphia's economy—the Baldwin Locomotive Works, Pennsylvania Railroad, and Cramp shipyards. Together with myriad smaller enterprises they provided steady employment for thousands of workers, many of whom were, or were about to become, devoted baseball fans. The game had proven to be widely popular in the city by the time the Phillies joined the National League. 12

The position of NL owners who favored allowing Philadelphia and New York to reenter the League was strengthened when president William Hulbert died on April 10, 1882. His refusal to permit those cities to return after teams representing them were expelled for failure to complete their 1876 schedules was the last institutional obstacle to welcoming them back into the fold.¹³

The advantageousness of the moment for the Phillies to join the NL was further enhanced by the League's desire to jettison its two weakest clubs—the Worcester Brown Stockings and Troy Trojans—from the ranks. 14 At a September 22, 1882, NL owners' meeting, it was announced that both Worcester and Troy had resigned from the league effective the end of the season, and that clubs from Philadelphia (Phillies) and New York (Metropolitans) had filed applications for membership to replace them. 15

The Phillies' time in the NL-affiliated League Alliance in 1882 had served as a crucial prelude. ¹⁶ Membership in the alliance afforded the Phillies the opportunity to develop their organizational structure, build a ballpark, assemble a pool of talented players, develop a fan base, and compete against a variety of opposing teams. All of this was done under the watchful gaze of NL owners eyeing the club as the League's future Philadelphia representative. ¹⁷ Thus the Phillies began the 1883 season possessing many features of a more established major league franchise.

REACH IS THE PHILLIES' FACE, BUT NOT ITS PATRON

The Phillies were also fortunate to have a former star player and by then a highly successful businessman as their president—Alfred J. Reach—who had led the club when it was in the League Alliance.¹⁸ His baseball career had begun in the 1860s as a member of the Brooklyn Eckfords. A talented player, Reach became the first openly professional baseball player in 1865 when he accepted \$25 a week to play for the Athletics. Upon leaving Brooklyn for Philadelphia, Reach also became to first player paid a salary to change cities to play baseball.¹⁹

As his career started to wind down, Reach turned his talents to entrepreneurial pursuits. Beginning with a cigar store, he expanded into sports equipment manufacturing, opening his first sporting goods store in 1874.²⁰ Reach's businesses prospered, and achieving considerable wealth provided an opportunity to pursue his continuing passion for baseball—if not on the field, then in the front office.²¹

Although portrayed by some authors as champing at the bit to join the National League, Reach was far too prudent a businessman to allow unbridled eagerness to dictate his decisions.²² He took actions to strengthen the Phillies' management structure and limit his own financial investment in the club should the venture fail.

Reach procured a partner to work with him in running the new ballclub—John I. Rogers—a well established lawyer with political connections in the city.²³ While acting primarily in a behind-the-scenes role, Rogers handled all the club's legal issues, conducted salary negotiations with players, and used his influence at City Hall to gain preferential treatment for the Phillies in municipal assessments, services, and fees.²⁴

Despite having the welcome mat laid out for him, Reach's misgivings about the Phillies' viability as a major league club caused him to hesitate upon receiving the offer to join the League, arousing the ire of NL owners. The resulting friction was noted in an article in the *New York Clipper* on October 7, 1882:



Alfred J. Reach: star player, business magnate, and Founding Father of the Philadelphia Phillies.

The reason that the Philadelphia Club entered the League was because Al Reach was told that if he did not, a League club would be placed in Philadelphia which would throw out the League Alliance club.²⁵

Reach's negotiating position was sufficiently strong, however, that threats alone would not cause him to ignore his doubts. The League had helped subsidize the Phillies financially during the 1882 League Alliance season while positioning the club for NL membership the following year. The inducements included having League teams travel to Philadelphia to play 65 games, their presence guaranteeing larger crowds for Phillies' home games. The Phillies, meanwhile, did not play away games in any NL cities, helping to minimize the club's expenses for players' travel, room and board. With NL owners promoting fans' attendance at Phillies' games and curtailing the club's operating costs, the Phillies avoided incurring substantial debt in their League Alliance season.

By the time the NL tendered its membership offer, moreover, Reach had become the face of the Phillies.²⁸ He solidified that leadership position by being the club's spokesperson during the 1882 season, and his standing in Philadelphia as a former star player and wealthy businessman enhanced the club's major league credibility and standing with the public. Rogers, meanwhile, occupied an equally important position in establishing the organization's administrative, legal, and financial relationships with the League and the city. Without Reach at the helm, an infrastructure already in place to operate the team, and a political insider (Rogers) to ensure the city's cooperation in assisting the club's operations, the NL owners' threat of a lastminute, hastily assembled, unknown and untried team being installed as the Philadelphia League representative was toothless.

NL owners also confronted a genuine public relations disaster if Reach turned his back on the National League. The Metropolitans—simultaneously groomed to enter the League as the New York member—decided in October to join the American Association instead.²⁹ How humiliating would it be to the League if both clubs, representing the two largest cities in America, declined to join?

Leveraging their bargaining advantage, Reach and Rogers decided to limit their monetary commitment in the Phillies. Insufficient wealth was not the issue; playing it safe was. If the club foundered, their losses would be minimal. Reach and Rogers insisted on running the club, but sought another individual to become majority shareholder. They needed someone who would risk the largest financial investment in the franchise without being in charge of it. NL owners—likely in consultation with Reach and Rogers—used the period between the owners' meeting on September 22 and the end of October to search for such a person.

IS FARRELLY A BACKER OR A FRONT?

On November 1, 1882, the Phillies incorporated as the Philadelphia Ball Club, Limited.³⁰ The amount of capital in founding the franchise, according to the partnership agreement, was \$15,000, divided into 150 shares at the value of \$100 per share. The partners and their share purchases were as follows:

• Stephen J. Farrelly (100 shares: \$10,000)

• Alfred J. Reach (20 shares: \$2,000)

• Thomas J. Pratt (20 shares: \$2,000)

• John I. Rogers (10 shares: \$1,000)

The four men were identified as members of the Phillies' Board of Directors. As a reflection of their determination to be in charge despite being minority stockholders, Reach was elected Chairman of the Board and Rogers its Secretary and Treasurer. Farrelly and Pratt held no management titles.³¹ While Reach's and Rogers' associations with the Phillies are well-known, Farrelly's and Pratt's are not.

Thomas J. Pratt

Thomas Pratt was a noteworthy pitcher during the earliest days of baseball in Philadelphia.³² In 1860, he joined the Winona Club as a pitcher/outfielder. In 1861, Pratt became a member of the Athletics and stayed through the 1863 season, after which he switched to the Atlantic club of Brooklyn. Pratt reached his peak as a pitcher with the Atlantics in 1864–65, going undefeated those years (19–0, 13–0). Between 1866 and 1870,

he played for various teams including the Athletics and Quaker City teams in Philadelphia. In 1871, Pratt was a member of the Athletics that also counted Al Reach among its players.³³

Whether that is when the men first met, or if they had become acquainted earlier, is not known. What is certain is that when Pratt purchased 20 shares of Phillies' stock—equaling the amount bought by Reach—the men knew each other and had extensive backgrounds in baseball.

For Pratt, remaining uninvolved in operating the team was not enough, and he sought a more active role in directing a ballclub. In 1883, Henry Lucas decided to finance the Union Association, an organization intended to operate as a major league in 1884.³⁴ Newspapers reported Pratt would become owner of the Keystones—Philadelphia's entry in the Association—and he attended its inaugural meeting held in Pittsburgh.³⁵

NL rules expressly forbade any of its owners from having a financial interest in a club belonging to another organization that claimed to be a major league but was not recognized as such by the National League. This applied to the Union Association, whose formation was opposed by the NL and AA, neither of which wanted a third major league. A newspaper article reported the Phillies would be called to account by the League if Pratt continued holding stock in the club while also being an investor in the Keystones.³⁶

How this was resolved is unclear, but Pratt almost certainly was compelled to relinquish his stock in the Phillies at some point in 1883 or no later than 1884 when the Union Association began operating. There is no evidence Pratt's association with the Phillies continued after becoming one of the initial stockholders, nor is there any evidence suggesting his role on the club ever extended beyond owning a minority share of the stock.

Pratt's Keystones, meanwhile, were a failure at the turnstiles and on the field. After falling to eighth place (21–46), 50 games behind the league-leading St Louis Maroons, the club announced on August 7 it would leave the Association. Reports indicated the Keystones had lost between \$10,000 and \$12,000 since the season's beginning.³⁷ The Union Association folded after the 1884 season.³⁸

Stephen J. Farrelly

Stephen Farrelly is the most mysterious character in the Phillies' original ownership group. In late 1882 when he became chief stockholder of the club, Farrelly was the head of the Central News Company (CNC) in Philadelphia.³⁹ The company's business was "purchasing, importing, vending and distributing books, newspapers and other printed matter, fruit, candy and similar refreshments, cigars, cigarettes, tobaccos, soft drinks, miscellaneous novelties and merchandise of a like kind in the city." The primary sites where CNC plied its trade were newsstands located in commercial and business sections of Philadelphia.⁴⁰

As business and civic leaders, Reach and Farrelly undoubtedly knew each other, an acquaintance made all the more familiar by the proximity of CNC's head-quarters at 252 South Sixth Street with Reach's sporting goods store located at 23 South Eighth Street.⁴¹ Farrelly's company may even have supplied tobacco products to Reach's cigar store located at 404½ Chestnut Street in Philadelphia.⁴²

But Farrelly had no known links to the Phillies or the game of baseball, and nothing about his background or profession made him a likely candidate to invest \$10,000 in the club—a figure far exceeding the sums of other investors. At this point John R. Walsh enters the story.

Empire builder, financial magnate, and millionaire, John R. Walsh of Chicago owned some eighteen different companies, including three Chicago-based banks and several railroads in Indiana. He also owned the Western News Company (WNC), which brought him into contact with Farrelly and CNC. WNC and CNC each held a regional monopoly on newspaper and magazine circulation in the territories they controlled, making cooperation between the two businesses essential in setting and enforcing distribution charges imposed on content providers.⁴³

In addition to these holdings, Walsh was a stockholder in the NL's Chicago club. Period newspapers and magazines identify him as the "owner" of the club, but he was only a stockholder.⁴⁴ Although club ownership details for that time are sparse, the chief investor almost certainly was Albert G. Spalding, who became president of the franchise in 1882 after William Hulbert died.⁴⁵ Walsh and Spalding were ardent proponents of the National League, and their efforts to ensure its success extended to using their own money to support clubs that were just starting out or experiencing financial difficulties.⁴⁶

It was John Walsh who reached into his pocket to bridge the Phillies' investor funding shortfall, thereby ensuring the franchise would be financially solvent when it joined the League. Stephen Farrelly was the front, investing what was purportedly his money in the club, but which actually came from Walsh's wallet. This fact was unknown when the Phillies were

incorporated in November 1882, and the truth did not surface until 20 years later when Reach and Rogers sold the club. A *Philadelphia Inquirer* article from 1902 revealed it:

The Philadelphia Ball Club, Limited was organized in 1882, with a capital of \$15,000. Of this capital, \$10,000 was subscribed in the name of Stephen Farrelly, who was then agent of the Central News Company in this city. As a matter of fact, however, the money was understood to have been really subscribed by Mr. John R. Walsh, of Chicago, then, as he is now, one of the principal stockholders of the Chicago National League Baseball Club.⁴⁷

But why use Farrelly to mask the true identity of the majority stockholder? The reason was to avoid charges of "alien ownership" that could undermine fan confidence in two ways. Would owners residing in other cities be more focused on making profits than winning championships for local pride, or worse, favor their other team(s)?⁴⁸ The inherent conflict of interest in "syndicate baseball" found in the National League in the late nineteenth century created doubts about the League's commitment to fair play. "Syndicate baseball" refers to the same individual or group of individuals simultaneously owning or being principal investors in more than one club.⁴⁹

The same person owning more than one club was already roiling NL-AA relations in 1883. Both leagues wanted a club in New York—the largest market—and they had each offered membership to John B. Day's Metropolitans. Day declined the NL's invitation, enrolled the Metropolitans in the American Association, and then, in a surprising move, announced the formation of a new club, the New Yorks (later Giants), that would join the NL.

The Association objected, believing Day would favor the New Yorks and treat the Metropolitans as New York's "other" team. These concerns were well-founded. Events proved "...Day's intention to make a champion of the (New Yorks), and to that end, the Metropolitans would be sacrificed." In their last two years in the Association, "the Metropolitans were simply a doormat performing in out-of-the-way Staten Island, a dropout waiting to happen." 51

That Farrelly's (i.e., Walsh's) investment in the Phillies was no more than a temporary expedient to facilitate the club's entrance into the National League became apparent over time.⁵² The team enjoyed financial success and became a profit-making enterprise

after joining the League.⁵³ Farrelly's stock was eventually bought up by the other owners, with John Rogers leading the way. He became the majority stockholder in 1895 by owning 78 of the club's 150 shares.⁵⁴

SETTLING THE FEUD

With the Phillies' financial affairs in order, Reach and team manager Bob Ferguson shifted their focus to preparing for the 1883 season. First, however, there was a feud to be resolved. How it was settled would have a direct impact on the composition of the Phillies' roster and the club's exhibition schedule.

The Phillies' entrance into the National League occurred against the backdrop of an ongoing dispute between the League and the American Association over the latter's claim to be a major league. NL owners refused to acknowledge the Association as an equal, and the resulting friction between the two organizations was further exacerbated by "contract jumping" by players who signed with a club and then hopped to a different team for more money.⁵⁵

Al Reach longed to play the intracity rival Athletics. He knew the games would stimulate fan interest bevond other potential matchups, and serve as a forum to demonstrate the Phillies' legitimacy as a major league franchise. Reach knew because in 1882 his then League Alliance club's two contests against the Athletics drew far more fans to the Phillies' ballpark than any other game his team played that year.⁵⁶ The intracity gravy train had only come to an abrupt halt because of a dispute between the League and Association. John "Dasher" Troy had jumped his contract with the Athletics and switched to play for the NL's Detroit Wolverines. The Association demanded Troy's return, and after Detroit demurred, declared its clubs would no longer play games against League or League Alliance teams. The decision ended Phillies-Athletics square offs for the 1882 season.⁵⁷

Reach's financial incentives went beyond his take of the gate receipts. The Association was a lucrative market for products sold by his sporting goods company. Now an NL owner, the last thing he wanted was to have his business dealings upended by bad blood between the two organizations. Fortunately for him, the League and Association recognized the deleterious effects the feud was having on their operations and profits. Leaders from both organizations met on February 17, 1883, and reached a "National Agreement." Not all issues were resolved, but enough of the major disagreements were settled—the reserve rule was raised to 11 men per team, and the two organizations agreed to honor each other's contracts and

blacklists—that Association president Denny McKnight lifted his ban on interleague exhibition games.⁶⁰

Reach's financial rewards included the Association's executive committee selecting his company's baseball as the one to be used in games during the 1883 season:

The applicants included Mahn, Shibe, Wright & Ditson and Al Reach, and each was heard before the committee. As Al Reach made the most favorable bid for the privilege his bid was accepted, and the Reach American Association ball will hereafter be the only legal ball to be used in all club matches by the American and American-alliance clubs during 1883.⁶¹

The Interstate Association—affiliated with the AA as a League Alliance—selected Reach's ball for all of its games in 1883 as well.⁶² Reach also was given the contract to print *The American Association Baseball Guide for 1883* which a sportswriter called "one of the most complete and valuable annals published in connection with the national game."⁶³

While the "National Agreement" allowed Reach to include the Athletics on the Phillies' exhibition schedule, new frictions soon emerged that cast the games in doubt. In the meantime, building a team roster took first priority.⁶⁴

THE PHILLIES' ROSTER TAKES SHAPE

Al Reach had no illusions about the difficulties his club would face in competing against NL clubs in 1883. During the 1882 season, the Phillies had played 65 games against League teams, winning 16, losing 44 and tying five. One of Reach's primary goals became, in the words of one sportswriter, to secure several good young amateurs to strengthen any weak points in the team that will represent Philadelphia in the League in 1883.

To discover such qualified players, Reach turned to two veteran ballplayers. He asked future Hall of Famer Cap Anson "to keep a look out for me, and let me know if he came across any desirable players." Reach also relied on Bob Ferguson to find diamonds in the rough. A longtime player-manager in the National League—most recently piloting the Troy team—Ferguson was quickly hired as the Phillies' new manager after the Trojans had departed the League. Ferguson's task was to use his contacts in baseball and visit amateur clubs to find major league-worthy talent.

Sportswriters forecasting the composition of the Phillies' 1883 team judged it would consist of holdovers

from the 1882 roster augmented by new arrivals. A reporter with the *Philadelphia Inquirer* offered this prediction of the Phillies' roster:

(John) Manning, (Fred) Lewis, (William) McClellan, (Jack) Corcoran, (Roger) Connor, (William) Ewing, (Peter) Gillespie, (Timothy) Keefe, (Jack) Neagle, and (Hardie) Henderson will be members of the Philadelphia nine next season.⁶⁹

Manning, Lewis, McClellan, Corcoran, Neagle, and Henderson had played for the Phillies in 1882, while Connor, Ewing, Gillespie and Keefe had been with Troy that year. Why the sportswriter supposed Troy players would come *en masse* to Philadelphia is puzzling, especially given the fact none of them did. None of the players from Worcester, the other outgoing franchise, joined the Phillies either. Projections of the Phillies' roster continued to appear in newspapers as the season drew closer. Although the names of players varied somewhat, the lists always included a core of veterans from the 1882 campaign; most prominently, Neagle, Henderson, McClellan, and Manning.

HARDIE HENDERSON'S LEGAL PROBLEMS

Controversy, however, complicated building the roster. It started with Hardie Henderson, the pitcher who had provided yeoman's service to the Phillies in 1882, starting 52 games and compiling a record of 28 wins, 21 losses, and three ties.⁷⁴ His troubles became public knowledge on December 7, 1882, when the *Philadelphia Inquirer* ran an article with the headline, "A Base Ball Player Implicated in the Death of a Young Girl."

According to the article, Sarah McLaughlin had become ill—a condition initially diagnosed as "cramps" by the doctor who examined her. McLaughlin's condition worsened over the next several days, and she confided to her mother shortly before dying "that the cause of her trouble was some 'stuff' which she had taken from a bottle given her by one James Hardy Henderson."⁷⁵

The Coroner's Office held an inquest and autopsy results concluded that "peritonitis, the result of malpractice" had caused McLaughlin's death. The Coroner's Jury returned a verdict that "the deceased came to her death from malpractice, the result of the drug administered by herself and furnished by James Hardy Henderson." A warrant was issued for Henderson's arrest, and he was taken into custody when found at a saloon in the city. Placed in jail "to await the action of the grand jury," Henderson is described in the article as a "ballplayer [who] had gained considerable



John I Rogers: The man whose behind-the-scenes role was crucial in establishing the Phillies' Club.

note as a pitcher last season for the Philadelphia Base Ball Club."⁷⁶

Because no subsequent reporting on this story could be found in the *Inquirer* or other local newspapers, it's uncertain what really happened. There is no evidence Henderson completed high school, attended college, or was a licensed physician. The nature of his relationship with McLaughlin is unknown. He was 20 at the time. McLaughlin's age is not listed, but she is referred to as a "young girl" in the article.⁷⁷ During the late nineteenth century, "young girl" could mean any unmarried female up to the age of 18.⁷⁸

While numerous questions surround the case, a possible explanation is that Henderson had gotten McLaughlin pregnant and gave her a medicine advertised to end a pregnancy by inducing a miscarriage. Not only were such medicines ineffective, they could cause grievous harm and resulted in the death of women who took them with tragic regularity. McLaughlin's symptoms are consistent with those experienced by women who took these fraudulent medications during the late nineteenth century.⁷⁹

If Henderson was unwilling to get married, then McLaughlin may have wished to avoid the social opprobrium—prevalent at the time—of giving birth while unwed, which could also explain her reluctance to identify the cause of the "trouble" to her mother until her condition had become dire. Whether the autopsy revealed McLaughlin was pregnant is not known. If she was, then that information was not included in the newspaper story almost certainly out of deference to her reputation and the family's privacy. What is known is that Henderson was never tried in court for whatever involvement he may have had in McLaughlin's death.

Based on his 1882 performance, the Phillies undoubtedly anticipated Henderson would be a key member of the pitching staff in 1883. He was with the club at the beginning of the season, but he pitched in

only one game before being released. The fact he gave up 24 runs in that single appearance may have contributed to his abrupt departure from the team. ⁸⁰ Henderson subsequently pitched for Baltimore (AA), Brooklyn (AA), and Pittsburgh (NL) before ending his major league career during the 1888 season. ⁸¹

TO WHOM DO COLEMAN AND RINGO BELONG?

A second major imbroglio the Phillies faced while compiling a roster involved pitcher John Coleman and catcher Frank Ringo. In November 1882 the *Philadelphia Inquirer* reported that both men had signed to play with the club the next season.⁸² But a mid-January article in the *New York Clipper* stated that Coleman and Ringo had signed to play for the Peoria Reds of the Northwestern League and were subsequently "tempted to break their contracts by Reach and Ferguson."⁸³

Reach shot back with a letter appearing a week later in the *Clipper* that asserted:

Coleman and Ringo signed contracts with the Philadelphia Club either in late October or early in November...Neither Coleman nor Ringo or any club have intimated to me they have signed elsewhere, and I received a letter from Coleman as late as this week.⁸⁴

The next volley came from Charles Overrocker, who was quoted in the *Clipper* in late January as stating he had signed the two players to the Reds on October 22, 1882, and that Coleman acknowledged signing the contract when it was shown to him the previous week. Overrocker also disclosed that Coleman told him he had written for his release from the Phillies but had been refused. In addition, Overrocker declared, "The Peoria Club intends to hold them."85

But the ground was shifting under his feet. An article in the *Clipper* citing an unnamed source stated Overrocker was a member of the Quincy Club, "and had no authority to represent the Peoria Reds in the matter of Ringo and Coleman." The newspaper also reported the players had notified Phillies' management they would honor their contracts with the club.⁸⁶ The controversy was finally laid to rest at the February 17, 1883, conference held by the National League, American Association and Northwestern League to resolve a number of issues that were causing friction among the organizations.⁸⁷

One of the major agreements reached was that the League, Association and Northwestern League would respect each other's player contracts. This was particularly important to the latter since the League and Association had purloined players from it in the past by sounding the siren's call of higher salaries.⁸⁸

As part of the process of settling outstanding disputes over which organization had legal contracts for which players, the Northwestern League renounced all claims on Ringo and Colemen. The League's president—Elisa Mather—was quoted as saying, "Let bygones be bygones."89

Names of other players who signed to play with the Phillies in 1883 appeared periodically in newspaper accounts as the season approached. Some examples follow:

"C.C. Roberts, who played second base for the Rockford Club last season, will be given a trial on first base by the Philadelphias. He is about twenty-two years of age, and is said to be a very promising player."

"Alexander McKinnon has signed a contract to play with the Philadelphia Club for 1883. The Boston management feels very much disappointed at his action, as they counted on securing his services."91

"Charles W. Gaunt, the third-baseman of the Nameless Club, the amateur champions of Brooklyn, has been engaged by Manager Ferguson to fill the same position for the League team of Philadelphia next season."92

"Weston D. Fisler is to be given a trial at first-base by the Philadelphias. Fisler, who gave up playing in 1878 [sic], was connected with the Athletics for thirteen [sic] successive seasons, and had few equals as a general player, being a magnificent batsman and thrower, while able to field finely in almost any position."

Signing with the club did not mean making the regular season roster. Despite the praise bestowed on these players' baseball skills by sportswriters, neither Roberts, McKinnon, Gaunt, nor Fisler played in any Phillies' games during the regular season.⁹⁴

THE EXHIBITION GAMES

The Phillies scheduled a series of exhibition games throughout April to allow Reach and Ferguson to evaluate players' abilities and separate the wheat from the chaff. The games and associated preseason training were held in Philadelphia at Recreation Park. The ballpark was hardly an ideal location for preseason conditioning. Some accounts of exhibition games that appear in newspapers mention threatening weather—rain and cold—that forced games to be called early and limited the number of patrons willing to attend.

Field conditions also left much to be desired. The poor condition of the grounds reduced the quality of play, increased the chance of injury, and in one case compelled a game to be called after the fifth inning "on account of the bad condition of the ground."⁹⁷ The groundskeeper's job was not made any easier by the fact Reach had allowed the field to be used for football in 1882 once the baseball season was over.⁹⁸

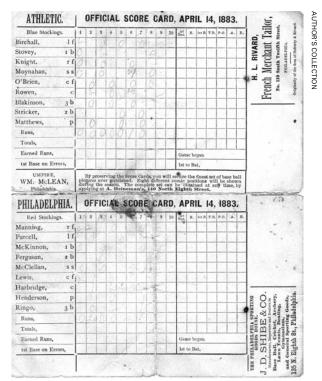
The Phillies played 22 exhibition games during April 1883, but the schedule did not include any games against other NL members. The opponents they did play can be divided into three categories: the Athletics, Association clubs other than the Athletics, and amateur teams. (See Appendix for a list of the Phillies' exhibition games, including opponent, score, won-loss, attendance, and home-away.) The cost of admission to attend games was twenty-five cents.⁹⁹

ATHLETICS

Contests against the Athletics' club were unquestionably the marquee games of the preseason since they were described as determining the champions of Philadelphia. ¹⁰⁰ Interest in the games was so intense that Reach had to go on record to confirm the price for a ticket would not be increased to fifty cents to take advantage of the expected larger crowds. ¹⁰¹ Six scheduled games were clustered in mid-to-late April, so both teams could spend the first two weeks of the month limbering up against amateur clubs. Each team would host three games—April 14, 21, and 28 at the Athletics' Jefferson Street Grounds, and April 16, 23, and 30 at the Phillies' Recreation Park. ¹⁰²

Issues had to be resolved, however, before the games could commence. As noted previously, the NL-AA "peace" agreement in February permitted teams in the two organizations to play exhibition games against each other. The League and Association, however, did not play games by the same rules, and they remained unreconciled. For example, the League required a foul ball to be caught on the fly before a batter could be called out; the Association retained the one-bounce out rule. The League allowed an umpire to call for a new ball at any point in a game; the Association mandated an umpire must wait until the end of a complete inning before introducing a new ball.¹⁰³

The Phillies and Athletics had to resolve under which set of rules their games would be played. In a decision that presaged interleague play of the late twentieth century, games hosted by the A's would be played using Association rules and umpire, and games hosted by the Phillies would be played using League rules and umpire. 104 The clubs simplified matters



Partially filled-out scorecard for the April 14 Phillies-Athletics game. The Phillies won under suspicious circumstances.

somewhat by agreeing Billy McLean would umpire all their games.¹⁰⁵ An experienced and respected umpire who lived in Philadelphia, McLean had been the umpire for the first game in NL history on April 22, 1876, between Boston and the Athletics.¹⁰⁶

Another issue arose, however, that became a serious point of friction between the two clubs. The NL and AA constitutions gave clubs territorial rights within their home cities. For a League team to play an exhibition game against the Athletics in Philadelphia required the Phillies' approval. The Phillies' consent was also needed if clubs in the Northwestern League wished to play the Athletics at the Jefferson Street Grounds. 107 The same veto power extended to the Athletics should another Association team or a member of the Interstate Association—the AA's League Alliance affiliate—seek to play the Phillies at Recreation Park. 108

The Athletics hoped to attract League clubs to Philadelphia for exhibition games, recognizing that such opponents would almost assuredly draw big crowds to their ballpark. The Phillies, however, refused to give their consent. The decision may have reflected some envy on the Phillies' part since no League teams were scheduled to visit Recreation Park during preseason.¹⁰⁹

The Athletics retaliated in kind. The Phillies had a two-game, home-and-home series scheduled against the Association's Baltimores, but the A's refused to sanction the game in Philadelphia, so both contests had to be played in Baltimore. ¹¹⁰ In addition, the Camden Merritts of the Interstate Association planned to visit Recreation Part for two games, but again, the Athletics nixed the plan, forcing the games to be moved to the Merritts' ballpark. While shifting the game across the Delaware River from Philadelphia to Camden involved minimal inconvenience, the Merritts' ballpark could hold 2,000 spectators at most, far fewer than the 6,500-capacity Recreation Park. ¹¹¹

Despite the tit-for-tat sniping, neither club allowed it to escalate to the point of jeopardizing their own head-to-head series. The games had been approved by the League and Association, and neither would look kindly on clubs reneging on the agreement out of pique. The games, furthermore, promised a sizable financial return, and officials on both teams were not prepared to cast that aside.

If Phillies' and Athletics' owners expected big crowds at their series, they were not disappointed. The six games drew over 40,000 fans to their ballparks, dwarfing the size of crowds attending the teams' other games. Attendance of 10,000 fans was reported for two of the games at the Jefferson Street Grounds. The grandstand and bleachers were so densely packed, according to one report, that ropes were used to cordon off the outer portion of the outfield so the overflow crowd could stand behind them to watch the games. 112 Even unpleasant weather didn't daunt the spirits of those eager to see the battle for the city championship. The second game held on April 16 at Recreation Park was played in "a cold drizzling rain, making it extremely uncomfortable for both players and spectators." Yet it still drew 6,000 people.113

The Athletics were expected to dominate the series since, as one sportswriter put it, they were "one of the strongest in the American arena," while the Phillies were regarded as "the weakest in the League." He But those who thought Reach's team would be a walkover for the A's were mistaken. The Phillies won the first three contests by scores of 6–1, 8–1, and 3–1.

The first game at the Athletics' ballpark on April 14 proved especially one-sided,—even suspect. The A's committed 11 errors including dropped fly balls, poor throws, ground balls that fielders failed to stop or fumbled after picking up, and "a high [fly] ball which through bad captaining fell to the ground untouched." All six Phillies' runs were unearned. One sportswriter covering the game wrote:

The Athletics not only marred their efforts to win, but greatly helped their adversaries to a

confidence which was in itself half a victory... The Athletics were badly captained. They did very little team-work together, and were sadly lacking in skillful play at the bat.¹¹⁵

Accounts of the game contained remarks on the presence of gamblers at the ballpark, with one sports-writer observing, "Large sums of money changed hands on the result." Another commented, "The betting men thought they could win easily, and their money talked...." 117

Based on such reporting, an obvious question arises: "Was the game on the level?" A definitive answer is unknowable, but the aforementioned newspaper accounts suggest it was not. In his analysis of the history of gambling in baseball, historian Rob Neyer called the 1865–1920 period a "Stinking Cesspool of Greed." While acknowledging the title is a "gross simplification," Neyer argues it is "generally accurate." In judging whether the Athletics-Phillies game may have been fixed, an assessment in Neyer's study is particularly relevant:

Prior to 1921 there were so many scandals and near scandals and non-scandals that it's impossible to list more than a small percentage of them ...It's worth noting that baseball's scandals weren't related to players betting on baseball games, but rather to players being paid to lose by gamblers betting on baseball games.¹¹⁸

Exhibition games were particularly ripe for corruption. Compared to regular season games, deliberately losing an exhibition match was relatively painless for a club because it had no bearing on the pennant race. Preseason games were primarily intended to help prepare players for the upcoming season; winning them was a secondary consideration.

If the April 14 game was fixed, then the only real losers in the outcome were the people who bet on the Athletics to win. The players came out ahead if they were paid to lose what they likely regarded as a largely meaningless game. The big winners, though, were those gamblers who in placing their money on the Phillies to win knew they were betting on a sure thing.

Any suspicions about the integrity of play in the first intracity game certainly did not dampen fans' enthusiasm for the series. Regardless of which team won an individual contest, people continued to flock to watch the contests because of the intensity of the Phillies-Athletics rivalry.

After losing the first three games of the series, the Athletics came storming back to win the last three—the only exhibition games the Phillies lost during preseason.¹¹⁹ The team had won 19 games in a row when they were stopped, 10–2, on April 26. A reporter covering the game noted, "The Athletic nine both out-fielded and out-batted their opponents." The A's cruised to victories in the last two games, 10–3 and 9–4, playing truer to form and showing the skills that would lead the team to the Association championship in 1883.

Beyond rousing themselves to play to their full potential, Athletics' players grasped at an irrational, but apparently persuasive, explanation for their sudden dominance over the Phillies. After the team's third loss in a row to Reach's club, they decided a change was necessary, as recorded in an article that appeared in the *New York Clipper*:

"Joe Quest," the colored bat-carrier, has been released by the Athletics. The nine thought that "Joe" was a "Jonah," and since their victories over the Philadelphias, they are certain of it.¹²⁰

BALTIMORES

The Phillies journeyed to Baltimore on April 7 to play the Association's Baltimores at their new ballpark called Oriole Park. 121 The game marked the Phillies' first match against a major league club since joining the National League. All previous games had featured amateur teams as opponents. A newspaper account of the game noted it was "the first professional game of the season" for Reach's team and for Baltimore. 122

When the Phillies traveled to play the Baltimores, they could not escape the controversy that seemed to beset them throughout the preseason. The Philadelphia nine won the game, 6–3, before a crowd of more than a thousand. The fans, however, were none-too-pleased by the calls of the umpire. The Phillies had brought Wesley Curry with them to officiate the match, and according to one newspaper report, "His decisions gave great dissatisfaction to the spectators."¹²³

The teams returned to Baltimore for their second game on April 11. The Phillies again emerged victorious by a 9–8 score. What made the game noteworthy was that it featured the club's biggest comeback in an exhibition match. Down 8–5 going into the bottom half of the ninth inning, Reach's team scored four runs to eke out a win.¹²⁴

AMATEUR CLUBS

The Phillies played most of their exhibition games against amateur clubs—13 of 22—winning them all.

All of these contests were held at Recreation Park. With few exceptions, the amateurs were not tough competitors. With scores like 38–1 (Tacony), 21–0 (Five-Twenty), 19–0 (Siddons), and 18–1 (Nationals), it is clear games against such clubs were intended primarily to condition players, practice basic skills and improve teamwork on the field. Still, some games are worthy of note:

In the Phillies' first exhibition game, John Coleman pitched a no-hitter against the Ashland club, allowing one walk with two other players reaching first base on errors.¹²⁵

In the second game (vs. the Siddon club), Hardie Henderson repeated Coleman's feat by throwing a second no-hitter in a row. One batter reached base on a walk, and two others did so through errors. And Fred Lewis hit the Phillies' first home run, a shot over the right-field wall. 126

The game against Archer on April 10 was the Phillies' first extra-inning match, going ten innings to reach a decision. 127

Pitchers on amateur clubs were often victimized by their teammates' poor fielding. Of the 21 runs scored by the Phillies against the Five-Twenty club, only seven were earned.¹²⁸

Despite the lack of stout opponents, these games served another useful purpose for the Phillies—the opportunity to assess players on amateur teams who might be added to the roster. For example, when D. Gallagher—pitching for the Archer club—faced the Phillies on April 13, he gave up only one earned run. 129 Reach and Ferguson were sufficiently impressed to put Gallagher in the pitcher's box for a game against Auburn on April 18. He did not pitch poorly, but was wild at times, and catcher Frank Ringo had trouble handling him. None of Auburn's five runs was earned, but Gallagher was gone from the Phillies' roster after that sole appearance, never to return. 130

The 1883 Phillies' preseason had enabled club officials to identify the most talented players—individually and collectively—to field the strongest team to compete at the major league level. Numerous players were evaluated, and those found wanting were dropped¹³¹

The evaluative process continued into the regular season, causing considerable turnover on the roster. Numerous players were given brief tryouts—sometimes a

single game—and then discharged so others could be appraised. The extent of this testing is evident: the Phillies had 29 different players on their roster in 1883, more than any other NL club—in some cases, more than double the number. 132

But no amount of preparation and planning could avoid the disastrous season that lay ahead for Reach's team. Displaying all the weaknesses of a fledgling club, the Phillies combined the lowest batting average (.240) with the highest earned run average (5.34) in the League to finish in last place with a record of 17–81, 46 games behind pennant-winning Boston.¹³³ The team's winning average of .173 remains the lowest in Phillies' history¹³⁴ It was a bleak beginning.

FROM DISMAL ORIGINS EMERGES ENDURING SUCCESS

Despite the turbulence surrounding the Phillies' entry into the National League, Al Reach could take great pride in the fact he was now president of a major league club. More struggles lay ahead in achieving equal competitive standing with the more established teams, but the Phillies' ability to endure during their embryonic years heralded their ultimate success. Better times were remarkably close at hand. In 1887—only four years after the atrocity that was the 1883 season—the club finished in second place in the League.¹³⁵

And what of the goal Al Reach set out in 1882 to have his Phillies emerge from the Athletics' shadow

APPENDIX. 1883 Phillies Exhibition Games

Date	Opponent	Score	Decision	Attendance	H/A
4/2	Ashlands	11-0	W	2,000+	Н
4/3	Siddons	14-0	W	500+	Н
4/4	Archer	5–4	W	800	Н
4/5	Tacony	38-1	W	500+	Н
4/6	Five—Twenty	21-0	W	500	Н
4/7	Baltimores	6-3	W	1,000+	Α
4/9	Merritts	6-1	W	Nearly 2,000	Α
4/10	Hartville	9-1	W	N/A	Н
4/11	Baltimores	9–8	W	N/A	Α
4/12	Shibe	12-5	W	N/A	Н
4/13	Archer	5-0	W	1,000	Н
4/14	Athletics	6-1	W	10,000	Α
4/16	Athletics	8-1	W	6,000	Н
4/17	Siddons	19-0	W	N/A	Н
4/18	Auburns	11-5	W	N/A	Н
4/19	Nationals	18-1	W	N/A	Н
4/20	Defiance	15–2	W	N/A	Н
4/21	Athletics	3-1	W	7,000	Н
4/25	Foley	10-4	W	N/A	Н
4/26	Athletics	2-10	L	9,000	Α
4/28	Athletics	3-10	L	8,000	Н
4/30	Athletics	4–9	L	10,000	Α

and exist as a prominent franchise in Philadelphia? He surpassed it. The Association's Athletics and their successor of the same name in the American League have long since faded into history. The Phillies continue. For the game he loved so much, Reach was a winner for himself and for the City of Philadelphia.

Notes

- Part One, "Philadelphia in the 1881 Eastern Championship Association," Baseball Research Journal, Spring 2019. Part Two, "Philadelphia in the 1882 League Alliance," Baseball Research Journal, Fall, 2019.
- 2. "Phillies" is used as the nickname for the Philadelphia National League Baseball Club in this text. It was not the team's only nickname in the 1880s. The club was most often referred to as the "Philadelphias" in newspaper accounts of games, achieved by simply adding an 's' to its hometown, as was done in referring to other teams. Additional monikers used to refer to Reach's club included "Philadelphia Club" and "Philadelphia Nine." Phillies is used throughout the text to avoid confusion, and because that is the nickname that prevailed as others were dropped over time.
- 3. For the sake of readability, words spelled differently in the 19th century compared to the 21st century have been modernized. For example, baseball was spelled as two words in the 1880s, but the modern spelling of it as a single word is used in this text. In addition, team names were spelled in singular form in the 19th century. The Philadelphia team in the 1883 American Association was called the Athletic Club of Philadelphia. These and other team names have been pluralized in the text to reflect contemporary usage, and because the clubs themselves began to pluralize them after a few years. The only exception to this rule is when quotations are used in the text. Then, the spelling is kept in its original form.
- 4. Robert F. Burk, Never Just a Game (Chapel Hill: University of North Carolina Press, 1994), 56. According to Burk, Athletics' owners offered 80% of the gate share to the St. Louis Brown Stockings and Chicago White Stockings if those teams would come to Philadelphia to play the two final series of the season rather than have the A's travel to their cities. Both clubs refused, and the Athletics then declined to make the trip, resulting in the latter being axed from the NL's rolls.
- David Nemec, The Great Encyclopedia of 19th Century Major League Baseball (New York: Donald I. Fine, 1997), 90, 103, 115, 127, 139, 157, 176. Nemec lists on those pages all of the teams that composed the NL each year between 1876 and 1882.
- John Shiffert, Base Ball in Philadelphia (Jefferson: McFarland & Company, Inc. Publishers, 2006), 41. He characterizes Athletics as "The first name in Philadelphia baseball."
- 7. David Nemec, The Beer and Whisky League (New York: Lyons & Buford), 21.
- 8. Robert D. Warrington, "Philadelphia in the 1882 League Alliance," Baseball Research Journal (Phoenix: SABR, Fall 2019), 105–24.
- Shiffert, Base Ball, 113. The author writes, "The National League needed to muscle out some of its smaller franchise cities, and, more importantly, it needed the power and prestige of New York and Philadelphia to survive against the American Association."
- https://www.census.gov/library/publications/1883/dec/ vol-01-population.html.
- 11. David M. Jordan, *Occasional Glory: A History of the Philadelphia Phillies* (Jefferson: McFarland & Company, Inc., 2002), 6.
- 12. Donald Honig, *The Philadelphia Phillies: An Illustrated History* (New York: Simon & Schuster, 1992), 13.
- 13. Nemec, Beer and Whisky, 44.
- 14. "Baseball Matters." The New York Times. September 25, 1882.
- 15. "Baseball," The New York Times, September 26, 1882. According to authors Dewey and Acocella, the meeting was held in secret, and during the proceedings, Worcester and Troy were booted out of the League, and plans were laid to replace them with Philadelphia and New York. Donald Dewey and Nicolas Acocella, Total Ballclubs: The Ultimate Book of

- Baseball Teams (Toronto: Sports Media Publishing, Inc., 2005), 648. Worcester's survival as a League member was tenuous from the very start. NL owners circumvented the League's 75,000-person market requirement when approving the Worcester franchise—the city contained around 48,000 residents—by counting everyone within its five-mile territorial radius, not just the people within the city's limits. The Worcesters' finances were in dire straits during the 1882 season, and the League had to give the club a cash bailout so it could finish its schedule. Burk, Just a Game, 59, 72.
- 16. Warrington, "League Alliance," 105-24.
- Newspapers reported rumors emanating from NL sources as early as July, 1882 that Philadelphia would replace Worcester after the season. "Baseball," New York Clipper, July 15, 1882.
- 18. Warrington, 105.
- Shiffert, Base Ball, 237. According to the author, individuals before Reach had been paid to play baseball, such as Jim Creighton, but they were paid under the table. Reach was the first baseball player to openly accept a salary.
- For a biographic sketch of Al Reach as a player, businessman and club owner, see, Rich Westcott and Frank Bilovsky, *The Phillies Encyclopedia*, 3rd edition (Philadelphia: Temple University Press, 2004), 365–67.
 Another overview of Reach's life and career in baseball is contained in Shiffert, *Base Ball*, 237–42.
- 21. Jordan, Occasional Glory, 6. Jordan notes that Reach's "love of baseball" was one of the motivating factors in his decision to start a baseball club.
- 22. Frederick Lieb and Stan Baumgartner, The Philadelphia Phillies (New York: G.P. Putnam's Sons, 1953), 11–13. The authors portray a scene in their book in which Reach is approached by NL president Abraham G. Mills about owning the club that's being moved from Worcester to Philadelphia. Reach eagerly replies, "I'm in!" Reach almost certainly wanted to become involved in the operation of a ballclub, but it's highly unlikely he displayed the unrestrained enthusiasm to do so suggested by these authors.
- 23. Jordan, Occasional Glory, 6.
- 24. Francis C. Richter, "Rogers at Rest," Sporting Life (Philadelphia: Sporting Life Publishing Company) Vol. 55, No. 2 (March 19, 1910), 5. This obituary of Rogers describes him as a "baseball magnate of local and national power." Rogers' significant influence in the city and state Democratic Party is addressed in the article, as is the major role he played in legally compelling players who "jumped" to American League teams in 1901 for fatter paychecks to return to the Phillies. Richter also notes that Rogers was Reach's personal attorney when the two men invested in the Phillies in 1882. An unflattering biographic sketch of Rogers is contained in Shiffert's book. The author writes, "Rogers was, with good reason, as big a problem to the team as Reach was an asset. Read any account of the Phillies' first 20 years, and you'll see adjectives attached to various aspects of (Rogers) and his career in Philadelphia baseball, adjectives like self-promoting, stubborn, arrogant, overbearing, enraged, litigious, bitter, mean-spirited, long-winded, meddler, suspicious, strident and manipulative." Base Ball, 244-46.
- 25. "Baseball," New York Clipper, October 7, 1882.
- NL rules barred member clubs from playing non-NL teams within the territorial confines of another league city. Burk, Just a Game, 54–55.
- 27. Warrington, "League Alliance," 111-12.
- The Phillies were formally admitted to the National League at the League Convention on December 6, 1882. "Baseball," New York Clipper, December 16, 1882.
- 29. Nemec, Beer and Whiskey, 44.
- 30. There is a widely held belief that when the Philadelphia Ball Club joined the National League its nickname was the Quakers. This is a misconception that can be traced to David Nemec's book, *The Great Encyclopedia of Major League Baseball*. The myth has been perpetuated on www.baseball-reference.com that states Quakers was the club's nickname from 1883–89. As 19th century baseball historian Matt Albertson has written, "Nicknames were not official monikers used by major league teams until the 20th century. In the 19th century, nicknames were created and used by newspapers. In 1883 alone, the Philadelphia Baseball Club Limited was identified as "Philadelphias," "Quakers," and

- even "Athletics." The nickname "Phillies" itself is simply a shortened version of "Philadelphias." His article was posted on March 13, 2019 on https://www.sportstalkphilly.com.
- 31. "League Victory in Law Would Mean Defeat on Field," *Philadelphia Inquirer*, March 29, 1901. The whereabouts of the original Phillies' 1882 incorporation document is unknown. Fortunately, it was reproduced in the *Inquirer* 19 years later and is available to researchers.
- Pratt's nickname was "Dump," although it was not associated with his baseball career. "The Old Sport's Musings," *Philadelphia Inquirer*, December 18, 1909.
- 33. Shiffert, Base Ball, 235-36.
- 34. Nemec, Great Encyclopedia, 214.
- 35. When not playing baseball, Pratt was part of the family-owned Pratt Bros., a paint and whitewash distributor and manufacturer in Philadelphia. The company's success provided Pratt the funds to invest in the Keystones. Shiffert, Base Ball, 236.
- 36. "Notes," Philadelphia Inquirer, September 14, 1883
- 37. "Baseball," Philadelphia Inquirer, August 8, 1884. The Keystones' won-lost record, place in the standings and games behind first place are in https://www.baseball-reference.com/teams/PHK/1884-schedule-scores.shtml. It was also reported the Keystones would play out the season in the Eastern League. A check of www.baseball-reference.com shows no evidence the club ever joined the Eastern League. Like other members of the Union Association, the Keystones folded and did not make it through the 1884 season. https://www.retroseasons.com/teams/Philadelphia-keystones.com.
- 38. Nemec, Great Encyclopedia, 214.
- The company is also referred to as the Central News Service in some newspaper articles.
- "Charter Notices," Philadelphia Inquirer, November 25, 1904. In this notice
 of "intended charter," the corporation is identified as the Union News Company Incorporated. Farrelly is listed as one of the officers in the company.
- 41. "Arraigned in Court," Philadelphia Inquirer, November 3, 1896. John 0. Gallen, who lived adjacent to the Central News Company at 250 South Sixth Street, brought suit against the company asking the court to restrain it from moving or harnessing horses in its stable at the property between 10PM and 7AM. The company it was noted, runs many of its wagons and does most of its business in the small hours of the morning.
- 42. The location of Reach's cigar store is identified in, Westcott, *Phillies Encyclopedia*, 366.
- https://www.worldclasschicago.com/wp-content/uploads/2015/06/ Magazine-Preview.pdf.
- 44. For example, Walsh is referred to as the "owner" of the Cubs in, George Kibbe Turner, "The Forces Behind Taft," McClure's Magazine (New York: The McClure Publications) Vol. XXIX, No. 1 (May, 1912), 245.
- 45. That the club's ownership details are unclear for the period is noted in, Jack Bales, Before They Were Cubs: The Early Years of Chicago's First Professional Baseball Team (Jefferson: McFarland & Company, Inc., 2019), 244. For a list of Cubs' owners from the first to the most current, see, https://www.mlb.com/cubs/history/owners.
- 46. Frank L. Hough, "Alien Owners," Sporting Life, February 1, 1913, 12.
- 47. "The Old Sport's Musings," Philadelphia Inquirer, February 3, 1902.
- 48. Hough, "Alien Owners," 12.
- 49. https://www.baseball-reference.com/bullpen/Syndicate_baseball.
- 50. Bill Lamb, *John Day*, https://sabr.org/bioproj/person/john-day.
- 51. Dewey and Acocella, *Total Ballclubs*, 365.
- 52. Ban Johnson employed the same technique when establishing the American League. Charles W. Somers, a Cleveland coal baron, along with others, provided the financial backing for Johnson to inaugurate and sustain the League during its early years. Somers purchased the majority of stock in the Philadelphia Athletics initially. Then, Ben Shibe—ironically a partner in the A. J. Reach Sporting Goods Company—bought Somers' shares to become the majority stockholder, owning 50 percent of the stock. David Jordan, *The Athletics of Philadelphia: Connie Mack's White Elephants, 1901–1954* (Jefferson: McFarland & Company, Inc., 1999), 12, 16. Hough writes that Somers came "across with the requisite capital until such time as arrangements could be made for exclusive local ownership" of American League clubs. "Alien Owners," 12.

- 53. Jordan, Occasional Glory, 7-8.
- "History of the Phillies," Philadelphia Inquirer, February 25, 1909.
 Shiffert, Base Ball, 245.
- 55. The Athletics were among the most active clubs in purloining players from the NL's ranks. Nemec, *Beer and Whiskey*, 44. The NL and AA "blacklisted" players who violated their contracts by "jumping" to another team. In the early 1883 "National Agreement" between the NL and AA, both leagues agreed to respect the contracts of each other's players. Burk, *Just a Game*, 71–73.
- 56. Warrington, "League Alliance," 123. Between 7,000-8,000 fans crowded into Recreation Park on May 22nd to watch the Phillies take on the visiting Athletics. No other Phillies' home game in 1882 attracted more than 4,000 attendees. When the Phillies sold out, Reach was considerably annoyed by the fact hundreds of spectators would view the games from the roofs of houses surrounding Recreation Park. The homeowners would charge ten cents for a rooftop seat, vice the twenty-five-cent entrance fee for the ballpark. Reach had canvas screens stretched around the grounds and outside the ballpark during the 1882 season to block the view of the rooftop squatters, thereby ending the practice and depriving homeowners of additional income. "Stray Sparks From the Diamond," New York Clipper, January 20, 1883. The situation was repeated in the 20th century when homeowners located on 20th Street opposite Shibe Park opened their rooftops to squatters to watch games. Like Reach, Connie Mack was irritated by the practice and had a 22-foot-high barrier of corrugated sheet iron erected on top of the existing 12-foot-high concrete rightfield wall, completely blocking the view from the 20th Street rooftops. Lawrence Ritter, Lost Ballparks: A Celebration of Baseball's Legendary Fields (New York: Penguin Books, 1992), 180.
- 57. Warrington, "League Alliance," 112-14.
- 58. Reach's pursuit of sporting-related manufacturing opportunities was constant. In January, 1883, while in the midst of organizing the Phillies, his company introduced a tabletop version of cricket. It was described this way in the New York Clipper, "Table cricket is the name of a new Winter game for junior cricketers, which Al Reach of Philadelphia has just got out. It is somewhat on the principle of a miniature game of ball invented by Frank Sebring of the Empire Club of this city years ago, but is more complete in both the batting and bowling... It is a very ingeniously constructed game, and an enjoyable contest can be had with it on a dining-room table." "Cricket," New York Clipper, January 20, 1883.
- 59. Elias Mather, president of the Northwestern League also attended the meeting, invited at the behest of NL president Abraham G. Mills. Mills envisioned Mather's role as an informal referent, helping to settle disputes when they arose during negotiations. Nemec, *Beer and Whisky*, 45–46.
- 60. Nemec, *Great Encyclopedia*, 191. The Association's grudging acceptance of the 11-man reserve rule provoked furious objections from some quarters. An article in the *New York Clipper* stated the agreement "has awakened indignant protests from the press, public and players all over the country as being the old reserve-rule in a more virulent form." The article predicted Association owners "will doubtless reject this clause as being most unjust and illiberal." The owners went along with the change, however, and the rule remained in effect. The newspaper also reported there was "talk of professional players forming a protective association," but nothing came of it at that time. "Baseball," *New York Clipper*, March 3, 1883.
- 61. "The American Association Convention," New York Clipper, December 23, 1882. In an interview in early 1883, Reach described in some detail the raw materials and production processes used "for making his patented ball." He also observed, "A dozen men in the course of a day will turn out about twenty-five dozen first-class balls, and as a rule they make good wages." New York Clipper, January 20, 1883.
- 62. "Baseball," New York Clipper, February 24, 1883. Teams in the Interstate Association were called "American Alliance Clubs," reflecting a relationship similar to League Alliance Clubs affiliated with the National League. "American Club Addresses," New York Clipper, March 31, 1883.
- 63. The guide cost ten cents and was titled, "Reach's Official American Association Baseball Guide." It was printed by A.J. Reach & Company

- Publishers, and had the same address as his sporting goods business—23 South Eighth Street, Philadelphia. Advertisement in the *New York Clipper*, March 31, 1883.
- 64. Other official positions related to playing major league baseball games at Recreation Park had to be filled. One, for example, was official scorer. The distinction of being the first official scorer in Phillies' history belongs to Henry H. Diddlebock. His appointment was announced in the *New York Clipper*, which reported, "Henry H. Diddlebock, a well-known journalist and attaché at the Tax Office of Philadelphia has recently been appointed official scorer of the Philadelphia Club for 1883." "Baseball," *New York Clipper*, March 31, 1883.
- 65. "The Philadelphia Club," New York Clipper, January 13, 1883.
- 66. "Baseball," New York Clipper, February 17, 1883.
- 67. Reach wrote in a letter to the New York Clipper that he had requested Anson's assistance in identifying players for the Phillies. The newspaper published the letter. "Coleman and Ringo," New York Clipper, January 27, 1883.
- 68. https://sabr.org/bioproj/person/df8e7d29.
- 69. "Notes," Philadelphia Inquirer, October 3, 1882.
- 70. The players who were on the Phillies' roster in 1882 are listed in an article about the club's season that appears in the *New York Clipper*, January 13, 1883. Connor, Ewing, Gillespie and Keefe are listed as having been with Troy during the 1882 season in, Nemec, *Great Encyclopedia*, 182.
- The Phillies' 1883 roster can be found in, Westcott, *Phillies Encyclopedia*, 7–8.
- 72. Nemec, *Great Encyclopedia*, 182–83, 204–5.
- 73. New York Clipper, January 27, 1883.
- 74. Warrington, League Alliance, 110.
- "A Base Ball Player Implicated in the Death of a Young Girl," *Philadelphia Inquirer*, December 7, 1882.
- 76. "Sudden Death," Philadelphia Inquirer, December 7, 1882.
- Henderson was born on October 31, 1862. https://www.baseballreference.com/players/h/hendeha01.shtml.
- Kathryn Hughes, "Gender Roles in the 19th Century," British Library, May 15, 2014. https://www.bl.uk/romantics-andvictorians/articles/ gender-roles-in-the-19th-century#. For a list of the various definitions applied to the term "young girl," see, https://www.thefreedictionary.com/ young+girl.
- 79. https://www.glowm.com/section-view/heading/History of Contraception/ item/375#.Yg5t0pZ0muk. Pills advertised during the late 19th century as miscarriage-inducing included Dr. Monroe's French Periodical Pills and Madame Drunette's Lunar Pills. One study showed that women who took such pills experienced "violent pain in the abdomen, vomiting and powerful cathartic action...with heat and burning in the stomach, bowels, rectum and anal regions." The study concluded the pills "could prove dangerous in the hands of desperate women."
- 80. "Providence Pounders," Philadelphia Inquirer, May 4, 1883. Social vilification may have followed Henderson in the wake of Sarah McLaughlin's death, and if so, probably convinced the Phillies and Henderson it would be best if he pitched elsewhere.
- 81. https://www.baseball-almanac.com/players/player.php?p=hendeha01.
- 82. "The National Game," *Philadelphia Inquirer*, November 25, 1882. Coleman had pitched for the Peoria Reds in 1882. The article noted, "Ringo is said to be one of the best pitchers in the country." The sportswriter got the name wrong. Coleman was a pitcher and Ringo was a catcher.
- 83. "Baseball," New York Clipper, January 20, 1883
- 84. New York Clipper, January 27, 1883.
- 85. "Baseball," New York Clipper, February 10, 1883
- 86. *New York Clipper*, February 17, 1883. Ringo wrote a letter to the *Clipper* that was published in the February 24th, edition. In it, he stated in part, "Peoria cannot hold us, and we will certainly play for Philadelphia this season."
- 87. "The Work of the Conference," New York Clipper, February 24, 1883.
- 88. "The League Convention," New York Clipper, December 16, 1882. As part of the settlement concluded at the February 17th convention, the NL and AA agreed to recognize the Northwestern League as a minor league, and by doing so, refrain from poaching players under contract from it.

- https://entertainment.howstuffworks.com/minor-league-baseball-team2.htm.
- New York Clipper, February 24, 1883. If Coleman really wanted to play for the Phillies, then getting on the team was a pyrrhic victory. He lost 48 games in 1883, still the major league record for most defeats in a season for a pitcher. https://www.baseballreference.com/leaders/ L season.shtml.
- 90. New York Clipper, February 17, 1883.
- 91. "Baseball," New York Clipper, March 24, 1883.
- 92. "Baseball," New York Clipper, December 23, 1882.
- 93. "Baseball," New York Clipper, March 17, 1883. Some of the article's information about Fisler's career is incorrect. He stopped playing in 1879, not 1878. In addition, he played 14 seasons for the Athletics (1866–79), not thirteen. https://www.baseball-reference.com/players/f/fisler01.shtml. Part of Fisler's appeal as a candidate for the roster is that he was a veteran. The Phillies probably believed his presence on the team as a mentor would be useful in maturing the multiple rookies who were likely to be in the lineup. Fisler, however, decided not to return to the diamond in 1883 or thereafter. New York Clipper, March 24, 1883.
- 94. Nemec, Great Encyclopedia, 204-5.
- 95. Teams traveling to Florida to prepare for the season started in 1888 when the Washington Nationals went to Jacksonville for preseason training. www.floridagrapefruitleague.com/home/history. The Phillies first trained in Florida the following year, also choosing Jacksonville for spring training camp. www.thegoodphight.com/2016/2/14/10977676/phillies-a-history-of-spring-trainingsites.
- 96. In a game between the Phillies and the amateur Five-Twenty Club, "the threatening weather kept many people away," according to one newspaper account. "Another Easy Victory," *Philadelphia Inquirer*, April 7, 1883. The Phillies' game against the amateur Foley Club "was stopped at the close of the sixth inning on account of the cold," a newspaper reported. "A Game of Errors," *Philadelphia Inquirer*, April 26, 1883.
- 97. "Burlesque Base Ball," Philadelphia Inquirer, April 13, 1883.
- 98. "Baseball," New York Clipper, November 4, 1882.
- 99. "Notes," *Philadelphia Inquirer*, April 13, 1883. When playing in the League Alliance in 1882, Philadelphia was permitted to charge only twenty-five cents for a ticket. In an interview in the *New York Clipper* offices on February 10, 1883, Reach acknowledged that now that the Phillies were members of the National League, the club would be obliged to charge fifty cents for a ticket—the League standard. He opined the higher ticket price would not hurt attendance at Phillies' games. Reach added, "Fifty cents will give each person entrance to the ground, and a seat also in the grand-stand, while those that come late or prefer a seat elsewhere than in the grand-stand will be allowed a rebate equivalent to their car-fare to and from the ground." "Baseball," *New York Clipper*, February 17, 1883.
- 100. "Baseball," New York Clipper, March 3, 1883.
- 101. Philadelphia Inquirer, April 13, 1883. Variable ticket pricing depending on the opponent was eventually embraced by baseball in the 20th century. The Colorado Rockies were the first club to introduce a sliding price scale in 1998, with tickets for games against "premium" opponents costing extra compared to those for games played against more pedestrian visiting teams. Other clubs followed suit in this practice. https://bleacherreport.com/articles/203152-all-baseball-games-mightbe-premium-games.
- 102. "Baseball," New York Clipper, April 7, 1883. Six additional exhibition games between the A's and Phillies were scheduled after the season—October 1st, 6th, 8th, 11th, 13th and 15th. New York Clipper, March 3, 1883.
- 103. Nemec, Great Encyclopedia, 191.
- 104. New York Clipper, April 7, 1883. When interleague play started between the American League and the National League in 1997, the decision was made to use the AL's designated hitter rule during games held at AL ballparks, and not to do so during games hosted at NL ballparks. In addition, for the three years of interleague play (1997–99), umpire crews for each interleague game came from the league where the game was being played. www.mlb.com/mlb/history/interleaue/index.jsp.

- 105. "Baseball," New York Clipper, April 14, 1883.
- 106. https://www.baseball-reference.com/bullpen/Billy-McLean. McLean went on to umpire 345 games in the National League and American Association before retiring in 1890.
- 107. New York Clipper, April 7, 1883.
- 108. "The American Association Meeting," New York Clipper, March 24, 1883. According to the newspaper report, "A rule was adopted that no American club shall play any outside clubs in New York or Philadelphia without the consent of the resident club."
- 109. New York Clipper, April 7, 1883.
- 110. "Baseball in Baltimore," New York Clipper, March 31, 1883.
- 111. New York Clipper, April 14, 1883. Recreation Park's seating capacity is found in, Rich Westcott, Philadelphia's Old Ballparks (Philadelphia: Temple University Press, 1996), 11. Officials of the Merritt Club were indignant at the Athletics and threatened to leave the Interstate Association. Cooler heads prevailed, however, and the Merritts remained in the organization. They played three exhibition games against the Athletics—two in Camden on April 19th and 27th—and one at the Athletics' ballpark on April 25th. They lost all three, but the defeats were softened by the knowledge gate receipts far exceeded those that could have been gained playing an amateur club on those dates. "Athletic vs. Merritt," New York Clipper, May 5, 1883. "More Victims," Philadelphia Inquirer, April 20, 1883.
- 112. "Athletic vs. Philadelphia," New York Clipper, May 5, 1883.
- 113. "Eight to One," Philadelphia Inquirer, April 17, 1883.
- 114. "Athletic vs. Philadelphia," New York Clipper, April 21, 1883.
- 115. New York Clipper, April 21, 1883.
- 116. "Field Sports," Philadelphia Inquirer, April 16, 1883.
- 117. New York Clipper, April, 21, 1883.
- Rob Neyer, "Two Distinct Periods of Gambling," (January 7, 2004). https://www.espn.com/mlb/columns/story?columnist=neyer_rob&id= 1702483.
- 119. A review of newspaper accounts of the five subsequent games in the Athletics-Phillies series did not contain any mention of gamblers or gambling being associated with the matches.
- 120. "Baseball," New York Clipper, May 5, 1883.
- 121. A description of the new ballpark and some of the amounts spent to build it can be found in, New York Clipper, March 31, 1883. Only the game on April 7th had been originally scheduled to take place in Baltimore. The game on April 11th was later added to the schedule of games in the Monument City.
- 122. "Philadelphia vs. Baltimore," New York Clipper, April 14, 1883.
- 123. The attendance figure is taken from, "Baseball," *Philadelphia Inquirer*, April 9, 1883.
- 124. "The Game at Baltimore," *Philadelphia Inquirer*, April 12, 1883. Although the visiting team always bats first in contemporary baseball, in 1883, the teams flipped a coin for the option of batting first or second. In this case, the Orioles selected to bat first. Teams often did this because a baseball, which was kept in a game far longer than is the case today, was in prime condition in the top half of the first inning, giving batters the best opportunity to hit it soundly.
- 125. "The Opening Game," Philadelphia Inquirer, April 3, 1883.
- 126. "Another Victory," Philadelphia Inquirer, April 4, 1883.
- 127. "The Philadelphia Club's Opening Week," New York Clipper, April 14, 1883.
- 128. New York Clipper, April 14, 1883.
- 129. "A Good Game," Philadelphia Inquirer, April 14, 1883.
- 130. "The Auburns Beaten," *Philadelphia Inquirer*. April 19, 1883. "Baseball," *New York Clipper*, April 28, 1883.
- 131. "Notes," *Philadelphia Inquirer*, April 20, 1883. "Notes," *Philadelphia Inquirer*, May 1, 1883.
- Nemec, Great Encyclopedia, 199–205. Pennant-winning Boston had a roster of 12 players; second-place Chicago had 11; and, third-place Providence had 14.
- 133. Great Encyclopedia, 197, 204-5.
- 134. Westcott, Phillies Encyclopedia, 8.
- 135. Nemec, Great Encyclopedia, 320.

The Evolution of the American League

John T. Pregler

AN AMERICAN LEAGUE BIRTHDAY

On January 10, 1918, The Sporting News published an article tucked away on page five celebrating the American League's birthday. "If you are a believer in the Darwinian theory of evolution, then January 2 should be a day of interest to you for it marks the 'birth of the American League,' which according to the Darwinian baseball historians is now 39 years of age. It is this way: On January 2, 1879, the old Northwestern League was formed. Out of it grew the old Western League, which in time became the American League of today," explained the paper. "But it is a far cry. The connection may be there, but it is as close as saying that a she-ape in the African jungle was the grandmother of the Queen of Sheba." Outlining the following "evolution" of the American League in a few sparse paragraphs, The Sporting News suggested the AL descended from the Northwestern League of 1879:

Dubuque won the first pennant, the Iowa city's players including Charley [sic] Comiskey, then a pitcher; Charley Radbourne [sic], Ted Sullivan and Tom Loftus. The original Northwestern lasted only one season, but it was revived in 1883 with a bunch of cities... In 1888 the name was changed to the Western Association, and in 1892 the circuit became the Western League and remained such until 1899. Toward this period Ban Johnson enlarged the circuit and in 1900 the name was changed to the American League.²

The lines between the Northwestern League, Western Association, Western League, and American League are not made any clearer in the four-paragraph piece. Although not an "evolution" of direct descendants as *The Sporting News* suggests, the relationship between the Northwestern League and the American League is closer than the she-ape is to the Queen of Sheba. In fact, it is as close as three intimate friends with a lifelong love affair with building up the early game of professional baseball.

Sullivan, Loftus, and Comiskey made up the heart of the original Northwestern League's Dubuque Red Stockings (aka Rabbits). Their association with each other is the common thread that runs between the professional leagues that ultimately evolved into the Western League of 1894-99, and then into the American League, for which Comiskey is enshrined in the National Baseball Hall of Fame, along with Ban Johnson.3 In a previous paper I have written about Loftus and discuss his and Comiskey's roles in establishing the American League.4 The lead-up to the establishment of the American League as a major league between 1899 and 1903 was not by a planned or continuous progression of a singular entity or vision, but rather was preceded by a process of "natural selection," in which different leagues attempted to adapt successfully to their changing baseball environment.

Distorted history by early biographers would place all the credit for the formation of the American League on Ban Johnson with a strong nod to fellow Hall of Famer Comiskey. At the time of the Sporting News article in 1918, Comiskey was in the middle of his now-notorious feud with AL president Ban Johnson as each man tried to fashion public opinion regarding their respective role in the rise and success of the American League prior to 1920. Comiskey's official biographer, G.W. Axelson, disputed the Sporting News article's loose assertion on the evolution of the American League when he published "Commy: The Life Story of Charles A. Comiskey" in 1919. In the biography, Axelson goes so far as to suggest the founding of the AL was solely Comiskey's plan, stating, "The move had been conceived by Comiskey nine years before its actual consummation" in 1899.5 Axelson went on to state, "The fact remains that it was the Western League, founded in 1894 which was expanded into the American League in 1900. The original Northwestern League, organized in 1879, and the Western Association, founded in 1888, cannot claim relationship." There is no denying the newly minted American League of 1900 was the result of a name change of the existing Western League of 1899, which had been reorganized under a newly elected president, Ban Johnson, in 1893 for its 1894 season; it is also recognized that the American League of 1901—the AL's first season as a major league—evolved from the 1900 minor league AL. At best it could perhaps be said that the AL is a relative of the old leagues without being direct progeny. Only two teams from the 1899 Western League—Milwaukee and Detroit—remained to see the 1901 American League season. Six of the eight teams in Johnson's 1894 Western League season had played in the Western Association (aka Western League) between 1888 and 1893.

Axelson's argument seems to assume there was no Western League prior to 1894 and that Ban Johnson helped create a new league out of thin air, when in reality he was brought in after the reorganizing work was complete, and then elected president at the urging of Comiskey and John T. Brush. The Cincinnati Commercial Gazette reported on the October 25, 1893, meeting at the Grand Pacific Hotel in Chicago. In an article entitled, "Reviving the Western League," the Gazette opens the article: "The Western Base Ball Association is being revived today at a conference at the Grand Pacific Hotel. Organized in 1884, the Association was continued until last year..."7 The Gazette article interchangeably referred to the Western League and the Western Association, adding to the confusion of the evolutionary story. Axelson may have also denied any potential relationship because Comiskey did not have claim to direct involvement in the founding of the Northwestern League or the Western Association, although we will later see that he did have an interest in the Western Association.

NORTHWESTERN LEAGUE

The American League's genesis, as suggested by the Sporting News article, begins with the organization of the first Northwestern League for their 1879 championship season—and Timothy Paul "Ted" Sullivan. Sullivan, a Dubuque businessman and the league's treasurer, along with James McKee of Rockford, Illinois, the league's president, co-founded the league in late 1878.8 Organizing a professional baseball league includes countless tasks, including organizing the league office, recruiting cities and ball clubs with the financial support to sustain their team and the league, ensuring interested clubs have adequate playing grounds, finding quality players to fill the teams and providing new players as needed, developing agreeable travel schedules, etc. Sullivan organized his first league which included Omaha, Rockford, Davenport, and Dubuque.9 The Northwestern League of Base Ball Clubs was the first league to use the name Northwestern League in baseball. It was the first professional league west of the Mississippi River and the second professional league in baseball history after the National League (1876-present).10 Milwaukee, member of the 1878 National League, entertained joining the 1879 Northwestern League. Milwaukee had struggled to meet all its debt obligations from the 1878 NL season, was forced to liquidate, and were therefore unable to re-sign their top players for 1879. Rockford signed four players from the 1878 Milwaukee team, creating the nucleus of their team for the new league.11 Sullivan signed most of the Peoria Reds team for Dubuque, adding captain Loftus, Charley Radbourn, and brothers Jack and Bill Gleason to the nucleus of his Red Stockings team, which already included pitcher Comiskey.

The first Northwestern League pennant was taken by Sullivan, Loftus, Comiskey, and the Dubuque Red Stockings.¹² The National League took notice of Sullivan, his league, and his team when his Dubuque Red Stockings beat Adrian "Cap" Anson and his powerhouse NL Chicago White Stockings in Dubuque by a score of 1-0.13 Sullivan and the other team owners in the league quickly learned how cash intensive running a professional baseball club and league was: The league was unable to return in 1880 for financial reasons. Upheaval was not uncommon at the dawn of early professional baseball. Early teams often changed leagues from one season to the next, or even within the same season. Sometimes teams dropped out of a league mid-season, and new teams or cities took their place. Loftus managed Milwaukee in the 1884 Northwestern League. When the league's season ended, Loftus then took Milwaukee into the major-league Union Association to replace Wilmington, who could not finish their season. The next year, 1885, Loftus and Milwaukee would join the inaugural class of the Western League. This kind of movement was commonplace among leagues, cities, and teams throughout the nineteenth century.14

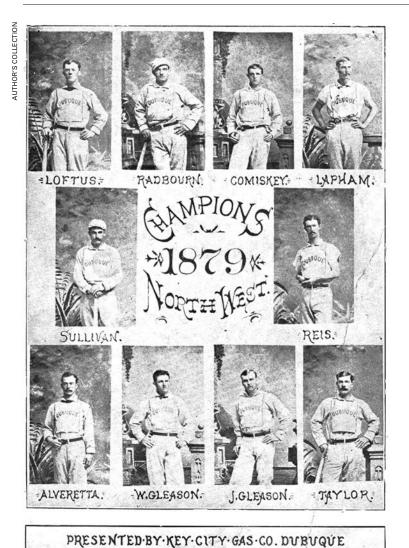
When a team or league would fail—whether due to poor financial performance or poor playing performance on the field—other baseball cranks and financiers were often willing to revive it. Thus a team or league's legacy could be extended through several iterations via reorganizations, often involving many of the same cities and baseballists, until a viable situation arose. This is how the natural selection of various entities that would contribute to the eventual American League progressed between 1879 and 1899, before the Western League changed its name to the American League in late 1899. 15

Sullivan and James McKee did not bring their professional Northwestern League back in 1880 due to financial difficulties. Sullivan and Loftus decided to go with a semi-professional independent baseball team 1880-82. In 1881, Sullivan and Loftus took their Dubuque Rabbits to St. Louis to play a game against Chris Von Der Ahe's St. Louis Browns. Dubuque surprised St. Louis by putting up a lively 2-1 fight on the pitching arm of Sullivan, but eventually lost it in the late innings 9-1, after Sullivan left the game. The St. Louis Globe Democrat said, "Sullivan, who pitches for the Dubuques, Loftus their second baseman, and Commiskey [sic], who guards the first bag, are a little team in themselves. They play a grand game."16 The Missouri Republican observed, "Commiskey [sic], the Dubuques' first baseman, played a splendid game, and is a whole team in himself."17 Clearly Sullivan, Loftus, and Comiskey had made an impression. The following year, 1882, would see Comiskey playing for the St. Louis Brown Stockings in the first year of the newly formed American Association. (Comiskey would eventually captain and manage the Browns through 1889 and again in 1891, winning four pennants and a World Series.) In September 1882, Comiskey and the Browns made a trip north to Comiskey's home in Dubuque to join in celebrating his wedding to Miss Anna Kelley at St. Raphael Cathedral Church.¹⁸ While in Dubuque, Comiskey and the Browns played two games against Sullivan and Loftus's semi-pro Dubuques. St. Louis beat the Dubuques on the first day by a score of 9-5. Loftus and Sullivan scored all five of Dubuque's runs. Game two the following day saw Loftus get three hits and a walk, scoring four runs in Dubuques' upset over the Browns 7-4.19

In 1883, Chris Von Der Ahe brought Sullivan to St. Louis to build him a winning team and manage the Browns. Sullivan brought Loftus with him to serve as team captain, and the team included several men from the 1879 Dubuque team including Comiskey, Bill Gleason, and Jack Gleason.20 Neither Loftus nor Sullivan would see the end of the 1883 season with the Browns, who would come up one game short of winning the 1883 pennant. In August of 1882, the long process to revive the Northwestern League had begun, with the goal of developing a league for "professional clubs of not sufficient strength to compete with the [National] League or the American Association clubs."21 George Gray Jr. of the Grand Rapids Base Ball Association and William S. Hull of the Grand Rapids Democrat met in Milwaukee with a group of interested men from Northwestern cities in the states of Michigan, Wisconsin, Minnesota, Iowa, Illinois, and Indiana. Milwaukee was

tiring in their efforts to get a club back into the National League—having been dropped after 1878—and was interested in any stable professional league they could compete in. A list of proposed cities for the restart of the Northwestern League included Grand Rapids, Bay City, Milwaukee, Janesville, St. Paul, Dubuque, Davenport, Peoria, Rockford, Fort Wayne, and Indianapolis.²²

But because Loftus, Sullivan, and company had gutted the team to join the St. Louis Browns, Dubuque had to back out of joining the league.²³ By the time the league was formed in November of 1882, only four of the originally suggested cities became members. The new circuit consisted of Grand Rapids, Toledo, Springfield, Fort Wayne, Saginaw, Bay City, Quincy, and Peoria. Elias Matter served as league president. The year 1884 would find Comiskey managing the Browns and Sullivan building yet another dominant majorleague team in St. Louis. This time Sullivan was organizing the St. Louis Maroons of the short-lived Union Association for team owner and league president Henry Lucas, while also helping Lucas organize the league.24 Sullivan would bring former Dubuque teammates Joe Quinn and Tom Ryder into the Maroons for the 1884 UA season.²⁵ Quinn would have a long career as one of America's favorite players in the major leagues between 1884 and 1901.26 Loftus, meanwhile, started the 1884 season as the highest paid player in the Northwestern League, serving as captain-second baseman for Milwaukee. Milwaukee had entered the expanded Northwestern League for the 1884 season.²⁷ By June 16, Loftus had taken over the management of Milwaukee as well.²⁸ The Northwestern League had a "second season" in 1884 with only four of the league's 12 teams participating: Milwaukee, Minneapolis, St. Paul, and Winona, Minnesota.²⁹ As the 1884 seasons progressed into late summer and fall for the Northwestern League and the Union Association, both leagues experienced teams folding from financial pressures, jeopardizing the completion of each circuit's schedule. By September, Sullivan had moved from managing the Maroons to player-manager of the UA Kansas City Cowboys. With the Northwestern League's second season over, Sullivan encouraged Loftus to bring Milwaukee into the UA, replacing the short-lived Wilmingtons.³⁰ Sullivan would go 28-3 with St. Louis and 13-46 with Kansas City. Loftus managed Milwaukee to an 8-4 record in the UA. The St. Louis team Sullivan built for Henry Lucas would win the UA pennant with a record of 94-19, while Comiskey would take over as player-manager for the St. Louis Browns in the AA for the final 25 games of the season, going



The 1879 Dubuque Rabbits, Northwestern Base-Ball Champions, printed as a broadside created by the photographers A.H. McKenzie & Co. and sold at the Lapham & Reis Billiard Hall in Dubuque for 25 cents. Lapham and Reis were players on the Rabbits.

16–7–2. (Over the next four seasons Comiskey's teams would win four consecutive AA pennants and one World Series Championship.³¹) On January 15, 1885, a winter meeting of the Union Base Ball Association (UA) was held in Milwaukee. League president Lucas and Justus Thorner were expected to attend. Thorner had been part owner and president of the Cincinnati Reds NL team in 1880, before they were replaced by the Detroit Wolverines for the 1881 NL season. Thorner, a founding member of the American Association and president of the Cincinnati Reds in 1882, was the founder-president of the Cincinnati Unions of the 1884 Union Association.³² But the only delegates to show up at Milwaukee's Plankington House from the eight-team association were from the Kansas City and Milwaukee clubs. Warren White of Washington was there, not as a delegate representing the Nationals, but in his capacity as secretary of the UA.³³ The reason for the no-show was Lucas and Thorner's behind-the-scenes efforts to get their teams into the National League for the 1885 season.³⁴ Lucas was successful, over Chris Von Der Ahe's objections and in violation of the Tri-Partite Agreement between the National League, American Association, and the Northwestern League. His St. Louis Maroons would join the NL for the 1885–86 seasons.

Thorner's request to join was denied, and the Cincinnati team folded. The city of Cincinnati would not see a team rejoin the National League until 1890, with Loftus serving as manager, when the Cincinnati Reds of the AA-originally founded by men including Thorner and Adam Stern in 1881-82, jumped leagues to join the NL.35 The club delegates at the Milwaukee meeting, though, included Sullivan and Loftus. Sullivan accompanied Kansas City's Americus V. McKim, and Loftus accompanied Milwaukee's Charles Kipp.³⁶ Because the meeting was being held in Milwaukee, several of that club's directors were also present. The order of business immediately turned to a proclamation denouncing Lucas and Thorner's absences and a motion to immediately dissolve the Union Association was passed. With a unanimous vote, the Union Association was dissolved and "from its ashes rose the new Western league" proclaimed the Quincy Whig.37 Sullivan and Loftus, who along with Comiskey still lived in Dubuque, had a plan for a new league.38

THE WESTERN LEAGUE

McKim, Kipp, Sullivan, and Loftus agreed to create a new league that January day in Milwaukee, and they called it the Western League. This was the first time the name Western League was used in baseball. During the meeting, a reply telegram was received from Indianapolis of the American Association stating their interest in joining the new league. The cities proposed were Milwaukee, Kansas City, Indianapolis, Cleveland, Columbus, and Toledo. Sullivan was appointed ambassador and was sent forth to Cleveland, Columbus, and Toledo to arrange clubs in those cities. Kipp was sent to Minnesota to see if the Minneapolis and St. Paul clubs of the 1884 Northwestern League would be interested in fielding a single team in the new league.

Should Detroit be dropped from the National League—presumably to make room for St. Louis or Cincinnati—and join the Western League instead, the league would need another team to balance.³⁹ Ultimately, Detroit stayed in the NL, St. Louis ended up joining the NL in 1885, and no opportunity for a Minneapolis-St. Paul team arose.⁴⁰

The Western League was officially organized by McKim, Kipp, Sullivan, and Loftus in Indianapolis on February 12, 1885. Delegates from Kansas City, Milwaukee, Indianapolis, Cleveland, St. Paul, Toledo, and Nashville were present.41 The Western League's inaugural season began on April 15 with Kansas City, Milwaukee, Indianapolis, Cleveland, Toledo, and Omaha fielding teams in the new league.⁴² The Western League made it two months into its inaugural season before disbanding. Four teams had dropped from the league by then: Cleveland, Omaha, Toledo, and then the final straw Indianapolis. The Indianapolis team players were sold and transferred to Detroit, who had stayed in the NL. Sullivan had called a meeting for June 15 in Indianapolis to address the performance of Omaha's replacement in the league (Keokuk, Iowa) and to review the applications of St. Paul and St. Joseph, Missouri, when Indianapolis exited. Similar to the ending of the Union Association, Sullivan of Kansas City and Loftus of Milwaukee were the only delegates in attendance, forcing an end to the first season of the Western League. 43 Bill Watkins's Indianapolis Hoosiers won the 1885 league pennant with Loftus's Milwaukee team in second, seven games behind, and Sullivan's Kansas City team in third, nine-and-a-half games back.44

While Loftus took a break from professional baseball in 1886 to focus on his Dubuque businesses and growing family, Sullivan tried to revive the Northwestern League, which was not organized for the 1885 season, due in part to the national economic panic of 1884, and in part because of the formation of the Western League. Baseball, like other industries in the United States, struggled economically during the Depression of 1882–85.

Sullivan was successful in organizing six cities for the 1886 championship circuit of the revived Northwestern League: Milwaukee, Minneapolis, St. Paul, Duluth, Oshkosh, and Eau Claire, Wisconsin. 45 With Loftus giving up the Milwaukee club for the 1886 season, Sullivan stepped in and managed the team in the city he and his parents had moved to when they first immigrated to the United States from Ireland circa 1855. 46 Sullivan also served as the league's president for 1886, just as he had for the Western League in 1885. 47

Sullivan's Milwaukee club finished in last place at the end of the Northwestern League's 1886 season. At the league's end-of-season meeting in St. Paul in October, Sullivan was expelled from the league for trying to delay a game in Milwaukee by hosing down the field during the game, as well as for his and Loftus's continued efforts to form a premier baseball league out of the best cities from the Northwestern and Western Leagues of 1883–86. At the time of Sullivan's expulsion, he and Loftus were in Kansas City trying to drum up support for the revival of their 1885 Western League circuit.⁴⁸

THE WESTERN ASSOCIATION

In August 1886, a Sporting News headline touted a "new association" being formed at "a secret meeting" in St. Louis. The Sporting News indicated that "Among the prominents present were: Nin Alexander of the St. Joe Club; J.J. Helm of the Kansas City's; Ted Sullivan of the Milwaukee's; Thomas J. Loftus late of St. Louis, but now of Dubuque; Al. Cahn of the Evansvilles and James Thompson of Indianapolis. These gentlemen came here not only to hold a meeting but to meet certain St. Louisans in the interest of a new base ball [sic] association which is to be in the field in 1887. Loftus was long ago the originator of a scheme to form a new base ball association, its list to include the cities of St. Louis, Chicago, Indianapolis, Kansas City, St. Joe and Milwaukee."49 The "certain St. Louisans" the group met with in all probability were Von Der Ahe and Comiskey. By the time the Western Association held its first meeting on October 26, 1887, Von Der Ahe and Loftus were listed as delegates representing St. Louis. As the Saint Paul Globe reported, "Loftus and Comiskey...with Von Der Ahe, are desirous of becoming factors in the new association."50 Loftus and Comiskey, player-manager of the St. Louis Browns, owned 50% of the St. Louis Whites, while Von Der Ahe, owner of the Browns, owned the remaining 50% of the Whites.51

The new "association" took the field as the Western Association in 1888. In 1887 Loftus continued tending to his businesses and family affairs while plotting his course back into professional baseball.⁵² Sullivan left Milwaukee after his expulsion to become a league umpire in the 1887 American Association. Sullivan would be succeeded as president of the Northwestern League and as manager of the Milwaukee club by James "Jim" Hart, former manager of the AA Louisville club and future president of the Chicago NL club, and another friend of Loftus.⁵³ Hart and Loftus would find themselves at the center of the American League–National League controversy regarding moving Comiskey's St. Paul Saints of the Western

AUTHOR'S COLLECTION

League into Chicago for the 1900 American League season.54 Throughout 1899, it had been indicated that Loftus's Columbus Western League team would move into Chicago and Comiskey's club would move to St. Louis, as the Western League transformed into the American League between 1899 and 1900.55 Eventually that would change when Loftus agreed to manage the Chicago Orphans for Hart, after a two-year courtship. Loftus took the Orphans job on the condition that Comiskey could move his team into Chicago.⁵⁶ Hart's blessing was required in accordance with the National Agreement. Another unusual condition of Loftus's contract did not require him to give up ownership of his Columbus-Grand Rapids, soon-tobe-Cleveland, American League team going into 1900—although eventually he did. The contract also allowed Loftus to spend two weekends out of the month during the season back in Dubuque tending to his personal businesses if he desired. "As a matter of fact, the case is one of the most peculiar in baseball history," an American League insider was quoted in the Kansas City Journal. "Loftus is given the privilege of remaining here two weeks and then going away for two weeks to attend to his outside interests, none of which he intends to dispose of, to take care of the Chicago club."57

The Western Association would begin with the close of the 1887 Northwestern League's season. During the annual meeting of the Northwestern League at the Tremont House in Chicago, on October 24, several gentlemen unaffiliated with the league at the time, including Loftus, waited patiently for league president Jim Hart to end the meeting. The next day a new meeting was convened at the Tremont House by the organizers of the Western Association including Von Der Ahe and Loftus for St. Louis, Hart for Milwaukee, Sam Morton for Chicago, E.G. Briggs for Omaha, E.E. Menges for Kansas City, A.M. Thomson for St. Paul, and C.M. Sherman for Des Moines. The groundwork Loftus and Sullivan had laid back in 1886 drumming up interest in their league revival was finally coming to fruition after a one-year delay.58

The 1888 season of the Western Association would put an end to the Northwestern League for three seasons, consuming that league's three biggest cities: Milwaukee, Minneapolis, and St. Paul. Sam Morton of Chicago would serve as the association's first president.

The 1888 Western Association would be the first league mentioned in *The Sporting News* 1918 American League birthday article that resembled "Ban Johnson's" Western League from 1894–99—the precursor league to the AL. Starting in 1888, the terms Western Association and Western League were often



1889 Old Judge baseball card of Tom Loftus, Manager of the Cleveland NL team. This image was taken when Loftus managed the St. Louis Whites.

used interchangeably, until 1894 when the senior league would solidify on the name Western League under Ban Johnson, as it began running simultaneously with the junior Western Association under Dave Rowe and WW Kent. The Cincinnati Commercial Gazette, for example, announcing the formation of the 1888 Western Association, titled their article as "The New Western League" in their header and started out the first sentence of the article with, "The new Western Association has started its career under most favorable auspices."59 The Dubuque Daily Herald reported Loftus's leaving for the league meeting in Chicago by announcing in its Personals, "Tom Loftus left yesterday morning for Chicago to attend the Western League Association meeting."60 The interchangeable usage of Western Association and Western League from 1888 to 1894 has added to the confusion in understanding the minor league predecessors of the American League. Loftus managed the 1888 Western Association St. Louis Whites until poor attendance and resulting financial difficulty forced a premature end to that team. 61 After that, Loftus jumped to the American Association to finish out the 1888 season managing Cleveland. In 1889, Loftus took Cleveland into the National League. ⁶² Loftus would spend three seasons in the NL, one with Cleveland and two with Cincinnati, before taking another break from baseball in 1892–93 due to the baseball war and the economic recession of the early 1890s.

Loftus's business interests grew during his reprieve from baseball before becoming president of the Eastern Iowa League and president/owner of the 1895 Eastern Iowa League/Western Association Dubuque club. At the end of the 1895 Eastern Iowa League season, the Dubuques joined the Western Association. League St. Paul Saints in an exhibition game in Dubuque. League St. Paul Saints in an exhibition game in Dubuque. League Dubuque team that season included young "Pongo Joe" Cantillon—future manager of rookie Walter Johnson. Cantillon first played in Dubuque in 1888.

Loftus joined Comiskey in the Western League under president Ban Johnson in the fall of 1895, when Loftus became owner of the Columbus Senators.⁶⁷ Loftus and Comiskey both had gotten to know Ban Johnson, sports editor of the *Cincinnati Commercial Gazette*, during their back-to-back stretch as managers of the Cincinnati Reds in 1890–91 and 1892–94, respectively, and served on the Western League's board of directors with Johnson starting in 1896.⁶⁸

Baseball underwent a contraction 1891–93 as a result of years of in-fighting between the National League and the American Association and a national economic panic in 1893. The NL won the baseball war and put the AA out of business after the 1891 season, leaving only one major league. The Western Association of 1888–91 started going by the name Western League in 1892 and consisted of five of the eight clubs in Ban Johnson's 1894 inaugural season as the league's president.⁶⁹

BAN JOHNSON-ERA WESTERN LEAGUE

In October 1893, representatives from Milwaukee, Minneapolis, Kansas City, Toledo, and Indianapolis met in Chicago to restore the Western Base Ball Association (aka Western League) to its former glory. Henry Killilea of Milwaukee and Jimmy Manning of Kansas City, who were part of the Western League of 1892, and who would vote to change the name of the Western League to the American League in October of 1899, were part of the revival committee for the 1894 season. Manning, a former major league player, had been with Kansas City in 1887 and was part of Kansas City's entry in the inaugural season of the Western Association in 1888.

In November 1893, at their meeting in Indianapolis, the revived Western League announced Johnson had been selected as league president.72 After the 1891 season, Cincinnati's new owner John T. Brush had replaced the retiring Loftus with Comiskey as the Reds manager. As previously mentioned, both Loftus and Comiskey had gotten to know Johnson while managing the Reds. It was at Comiskey's urging, and with Brush's reluctant support, that the reconstituted Western League hired Johnson as their league president for the 1894 season.⁷³ Comiskey would enter the Western League in 1895 as owner of the St. Paul club, and Loftus would do likewise in 1896 as the owner of the Columbus club. Comiskey and Loftus would serve on the Western League's board of directors with Johnson, who would come to personally know and respect them as mentors.74

In 1898, as the Western League was riding the height of its popularity under Johnson, Al Spink, founder of The Sporting News, and George Schaefer, both of St. Louis, started to promote among national baseball men the idea of a rival to the National League. Spink wrote Sullivan, who was managing Loftus's Dubuque entry in the 1898 junior-circuit Western Association, about their idea. Sullivan was in favor of the idea and was willing to help.75 After a third team folded, the Western Association ended its season at the end of June, freeing Sullivan to meet with Spink. Around the time Sullivan was in Dubuque, Loftus brought his Western League Columbus Senators to Dubuque to play a league-sanctioned three-game series against Comiskey's St. Paul Saints. Columbus took the series, 2-1.76 Ultimately, Columbus would move to Cleveland and St. Paul to Chicago for the inaugural American League season in 1900.

It is unknown how much Sullivan told Loftus and Comiskey in 1898 about Al Spink's idea. It is highly unlikely the three friends and baseballists never spoke about it. What is clear is these three kindred spirits from the 1879 Northwestern League played pivotal roles as leaders in the leagues that preceded the American League. In 1899, Tom Loftus, Charley Comiskey, Ban Johnson, and the Western League owners would transform their minor league—the Western League—into the American League for the 1900 season; and then take on the National League establishment by reincorporating and declaring itself a major league for the 1901 season.⁷⁷

BIRTH OF THE AMERICAN LEAGUE

The "evolution" of the American League discussed in the 1918 *Sporting News* birthday article began with Ted Sullivan and his protégés Tom Loftus and Charley Comiskey in the Northwestern League of 1879. Sullivan and Loftus's Western League of 1885, revived as the Western Association of 1888, were the next milestones in the journey towards the 1894 Western League. That association of Western clubs took on a new president—Ban Johnson—for the 1894 season; Johnson, along with Comiskey, Loftus, and other league magnates such as Jimmy Manning and Henry and Matt Killilea, reorganized their league into the American League. The minor leagues that predated it do not form a continuously linked chain of descendants from one league to the next, rather we could say it was natural selection at work, as various iterations were tried until a viable one succeeded. The desires of three friends—Sullivan, Loftus, and Comiskey—drove these early efforts, along with dozens of other baseball magnates, fanatics, cranks, and financiers who pushed for major-league quality baseball not just in the East, but in the West, giving rise to the American League.

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EXPANSION

The Doomed Pilots of 1969

The Results of Advice Ignored

Andy McCue

In the early 1960s, Seattle's city fathers were confident their city was an attractive and growing market. Its cultural amenities in sports, however, were limited. Power-boat racing and University of Washington football were the major sports in town. The city had hosted professional baseball since 1903, but the teams were all in the minor leagues. In 1960, the city commissioned a Stanford Research Institute study to assess what was needed to gain major league sports, especially baseball.

The think tank's study came back cautiously positive. Attracting major league baseball was possible, the report said, if the city could meet three conditions. It would need to provide a major league quality stadium and the team would need to find support from both the political/financial leadership and the fan base.¹ Ultimately, American League leadership would focus on the first issue rather than the latter two. And they would founder on all three, sinking the Seattle Pilots franchise barely after it had left the dock.

PRIOR ATTEMPTS

Seattle got its first major-league nibble in 1964. In Cleveland, attendance was poor and Municipal Stadium was known as "The Mistake by the Lake." William Daley, an investment banker and major owner of the Indians, visited Seattle on a business trip and was courted and impressed. When Cleveland officials balked at a \$4 million upgrade to Municipal Stadium, Daley told Cleveland's mayor, "I have a chance to move to Seattle. I'll move if I don't get what I want."2 He did not get the stadium upgrades he wanted, but he also did not move. During negotiations, Gabe Paul, the Indians' general manager, had visited Seattle and was dismayed by the available ballpark. Sicks' Stadium had been built in 1938 by Emil Sick, owner of Seattle Brewing and Malting Co. (later known as Rainier Brewing Corp.), for his Pacific Coast League Seattle Rainiers. In 1965, with the minor league tenant Seattle Angels' name no longer providing advertising benefits, the brewery tired of the upkeep and agreed to sell the stadium to the city. The city had other plans for the real estate and maintenance was a low priority. Depending on who was counting, Sicks' Stadium could hold between 11,000 and 16,000 people.³

In Paul's meetings with Seattle officials, it became clear the first two of the Stanford Research Institute's conditions were not going to be met. The city refused to pay for any upgrades at Sicks' and mayor Dorm Braman and his aides indicated they just were not very interested in having major league baseball.⁴

Paul decided the Indians just were not very interested in Seattle.

A few years later, Charlie Finley's roving eye fell on the city. He was determined to leave Kansas City once his lease expired after the 1967 season. The other American League owners, who hated Finley, had already banned or discouraged him from moves to Louisville or Dallas-Fort Worth and ordered him to fulfill the Kansas City lease. Now, while looking at Milwaukee and other Midwestern and Eastern cities, his attention came to focus on Seattle and Oakland.

The West Coast was territory where the other AL owners were more willing to accommodate Finley. Since the Dodgers had moved to Los Angeles and the Giants to San Francisco for the 1958 season, the American League had fallen well behind the National League in total attendance. By 1966, the average NL game drew almost 50% more fans than the average AL game. This difference was almost entirely due to attendance at the NL's West Coast outposts, a difference barely ameliorated by the AL's placement of an expansion team in Southern California in 1961. The AL knew it needed a larger presence on the Pacific and Finley was willing.

But Finley also balked at Sicks' Stadium, a ballpark he described as a "pigsty.⁵" When his fellow owners approved the move in October 1967, he took his Athletics to Oakland with its recently opened Oakland-Alameda County Coliseum. And that triggered the catastrophe that would become the Seattle Pilots.

AL MOVES

When Finley took the A's to Oakland, Kansas City's leaders—with Missouri Senator Stuart Symington

standing behind them and threatening the owners' cherished antitrust exemption—said they would sue. The American League's response was to expand, replacing the Athletics in Kansas City with the Royals and adding a second team elsewhere.

Their favored elsewhere was Seattle, an additional West Coast market. Anticipating Finley's move, American League President Joe Cronin had made a trip to research the Seattle market in August 1967, but his research extended little further than the baseball Old Boys Network and Pacific Coast League president Dewey Soriano. Said Dewey's partner and brother, Max Soriano, "When Mr. Cronin came to Seattle, he was intent on meeting with Dewey and giving him the framework from which to proceed."

Cronin's visit dazzled the brothers who persuaded him they could raise the money needed for the \$5.35 million franchise fee as well as perhaps \$2.65 million for working capital—for spring training, early player and executive salaries, staff to set up sales and marketing, creating a farm system and similar needs. Cronin asked few questions.

But concerns about the stadium situation led AL owners to attach two major conditions: The city would have to bring Sicks' Stadium up to major league standards, and a bond issue which included funds for a new stadium that was scheduled for February 1968 would have to pass.

The bond issue was no sure thing. A March 1963 survey had found barely 50% of residents were interested in major league baseball. And voters had turned down stadium proposals in 1960 and 1966. Now, the voters were faced with another stadium proposal, part of a larger initiative called Forward Thrust. The iniative contained a measure to fund a stadium, but only because the powers that be were looking for an issue to bring out the vote on rapid transit and other concerns. Mayor Braman was not enthusiastic about the ballpark and two (of five) city council members were adamantly opposed to spending any money on Sicks' Stadium.

The stadium bond issue required 60% approval, and the fledgling ownership group had barely two months to build support. The polls were not promising, but Cronin organized a parade of American League stars led by Mickey Mantle to come in and talk up baseball. The stadium initiative squeaked through (although other parts of Forward Thrust did not), and the AL was Seattle-bound.¹⁰

THE THREE PILLARS INTERDEPENDENT; STADIUM, POLITICAL SUPPORT, AND FANS

While they waited for the newly approved ballpark to be built, the Pilots would have to play in Sicks' Stadium. The American League wanted at least 30,000 seats, but failed to formally specify the requirements, a lapse that led to disputes throughout the short life of the franchise. As with Paul's visit in 1964, Mayor Braman and the majority of the city council remained less than enthusiastic. By August 1968, with Opening Day seven months away, the Sorianos were writing the mayor saying the work really needed to get started. The city still felt no urgency to conclude an agreement on the stadium and balked at the costs. In January 1969, with Opening Day now barely three months away, work on expanding and renovating Sicks' Stadium had not begun. 3

The city ultimately agreed to spend \$1.175 million improving the stadium to the league's unspecified requirements in September 1968 but lowered the targeted capacity to 28,000. The contractors' bids came in between \$1.064 and \$1.2 million, but none of them contained the increased seating. The city refused to increase the budget. The targeted capacity was lowered to 25,000 and quality shortcuts were taken in the restrooms, clubhouses, concessions and other facilities. The city eventually came up with about \$1.5 million in total, but the continuing disputes made it clear the city was not as committed to major league baseball as the American League wanted.14 The politicians who opposed the spending or were lukewarm about it were feeling no pressure from constituents. Stanford Research Institute's pillar of strong local political support was crumbling.

All the wrangling took much needed time. In attendance on opening day, baseball Commissioner Bowie Kuhn described Sicks' Stadium as "a facility that was anything but major league."15 Attendance was 15,014 and The Sporting News optimistically reported with a certain understatement that "most of the seats which had been completed for the milestone opener were occupied." Fans arriving in the new left field bleachers had to wait for carpenters to finish and hundreds watched the game for free through holes in a hastily constructed fence.¹⁶ In right field, only the concrete footings for the bleachers had been finished. Restrooms were incomplete in the main seating bowl and bleacher fans had to make do with portable toilets. Concessions were operating below capacity and the beer ran out down the third base side.17

The work, and the problems, continued. When the Pilots returned from their third road trip for a May 6

game, fans found the not-quite-dry paint had stained their clothes. As the season progressed, the toilets began backing up and the Pilots withheld rent payments. The city threatened eviction. Its contract manager was fighting with the contractor, who stopped work because he was not getting paid. By season's end, the city conceded that warping decks and loosening seats were "substandard." ¹⁸

Meanwhile, the successful passage of the bond issue in February was being quickly obscured by a confusing fight over where the new domed stadium should be located. Neither the city nor the team could point to a quick escape from Sicks' Stadium. And while the team had a good radio contract from Gene Autry's Golden West Broadcasting, it could not work out a television deal. Road games required renting a transmission line from the phone company. The cost of that line forced the Pilots to quote advertising rates the local business community was not willing to pay.

The negatives built up as the drumbeat of news kept reminding potential customers the current stadium was a dump and the potential stadium was mired in partisan squabbling. Cronin was aware. "When I was a kid in San Francisco, I remember if you tried to sell fish, you emphasized fresh fish. You didn't talk about the stale ones." ¹⁹ The pillar of a major league quality stadium had a vague future.

There were also the high prices. As early as the first week of the 1969 season, *The Sporting News* noted that the Pilots ticket prices outstripped those of the three other expansion teams.²⁰ The sports editor of the *Seattle Times* lambasted the prices of beer and Cracker Jack.²¹

The effect on attendance was predictable, especially in a city struggling to deal with a slump in Boeing aircraft sales. After fighting with the city to get capacity raised to 30,000, or 28,000 or 25,000, the Pilots only managed to draw two crowds over 20,000. And even those could leave fans wondering. The first came on Elks Night on May 28, when 21,679 came out to see manager Joe Schultz give the umpires the wrong lineup card. When Tommy Davis hit a two-run double, Orioles manager Earl Weaver was able to point out he had batted out of turn according to the official scorecard. The runs were disallowed and the Pilots lost. The other large crowd (23,657 reported) featured the New York Yankees and a Bat Day promotion.

IT ALL COMES DOWN TO MONEY

In June, a worried Max Soriano asked for an accounting department projection for the season. The accountants predicted a \$2.2 million shortfall. "That's when I knew

we were in trouble," he said.²² The Pilots had hoped for a million in attendance but had projected 850,000 to break even. They wound up with 677,944, leading to a loss estimated at \$800,000.²³

"The team was overleveraged and it was a substantial mistake to have done so," Max reflected a quarter century later. "We were not strong enough financially to properly promote the game in Seattle." Cronin and the American League had missed the signals when the Sorianos couldn't find local financial partners.

The weak financial structure should have been apparent from Cronin's first contact. The Soriano brothers were comfortable, but not wealthy themselves, and not well connected with those who were. The money attendant to such companies as Boeing, Weyerhauser, and Nordstrom, which later joined the consortium that brought the National Football League to Seattle, was not tapped. Max said there had been meetings with Boeing people, but those were not successful.

Eventually, the brothers turned for advice to Gabe Paul, whom they had befriended during the Indians' overture. Paul led them back to Daley, who had left Cleveland's ownership. Daley wound up with 47% of Pilots' stock, with his Cleveland associates buying another 13%. The Sorianos, including a third brother, paid for 33.75% and the remainder was spread among several local people. Es Barely seven weeks after bowing to Kansas City's demands for a new team, the American League owners approved the Soriano-led group in early December 1967. Indicating the league's cozy approach, the official screening interview with Daley was done by Gabe Paul, his former partner with the Indians.

Despite the National League's recent courtroom battle after absentee ownership moved the Milwaukee Braves to Atlanta, Cronin and the American League owners were prepared to ignore the Sorianos' inability to raise money in Seattle. Later, Edward Carlson of Western International Hotels—who would play a large role in trying to retain the Pilots—said he never heard of Daley's efforts. Cronin told one potential local partner, restaurateur Dave Cohn, that he would get 25% of the team. Dewey later said Cohn had not been willing to come up with the money.²⁸

Seattle Times sportswriter Hy Zimmerman, a strong advocate for major league baseball in Seattle, assigned the blame in clear capital letters. "In short truth, The Establishment—and Seattle has a strong one—has not gotten with major league baseball." It was not all the establishment's fault. The Soriano brothers were small players in Seattle, and refused to court the big local companies, law firms, and banks. "We talked (with the Forward Thrust people), but not too much," Dewey

said. "We sometimes weren't asked to be in meetings with the establishment."³⁰

Veteran baseball executive Harold Parrott, who had been hired to promote the team, told of trying to persuade Dewey to accept an offer of help from the downtown business community. "We don't need help from outsiders," was Dewey's response.³¹ Parrott complained he could not get funding for promotions he considered basic—such as a knothole gang program. His job lasted until mid-April, when a front office exodus began.³²

Support from the business community, another pillar, had fallen.

THE END DRAWS NIGH

Washington Post sports columnist Bob Addie, after an August visit to Seattle, wrote, "it makes one wonder if perhaps the American League could have been precipitous in granting Seattle a franchise."³³ It made other people wonder, too. While the American League remained positive in public, the Commissioner's office was getting worried. Barely three months into the Pilots' existence, a June 1969 memo on a possible realignment of both leagues had Seattle replaced by Milwaukee.³⁴

Then, in September, William Daley stirred the pot over his investment. It was the first time he had gone public over the team's problems and his view of solutions. He was in Seattle with Cronin to smooth the team's combative relationship with the city over Sicks' Stadium. A reporter asked him if he wanted to back away from an earlier threat that unless attendance

Seattle's Sicks' Stadium as built in 1938 for the Pacific Coast League Seattle Rainiers. Even after the city spent more than \$1 million expanding and refurbishing, it was still a facility that Bowie Kuhn described as "anything but major league."

improved, the Pilots could be a one-year team. Instead, Daley doubled down. Visibly angry, he reiterated, "Seattle has one more year to prove itself." And he blamed the situation on Seattle reporters. The reaction in the newspapers, quick and severe, could have been anticipated. "That's upside down, isn't it?" said *Seattle Times* Sports Editor Georg Meyers, "What we're really doing is giving Daley one more chance." 35

Daley was not willing to take that chance. When the Sorianos asked for more investment, Daley balked.³⁶

As the December Winter Meetings approached, the rumor mill cranked up. The *Seattle Times*'s Zimmerman, who was also *The Sporting News* correspondent, tracked the possibilities, and national baseball reporters chimed in. There were stories about a sale to Dallas-Fort Worth interests and then a Milwaukee group. The Dallas sale never amounted to much, but it was revealed later that the Sorianos had reached a "gentlemen's agreement" with the Milwaukee buyers in October.³⁷

While the Milwaukee deal supposedly was secret, the news spread through Seattle's business community. The local interests the Sorianos had failed to recruit as investors were finally activated. Fred Danz, who ran a theater chain, restaurateur Dave Cohn, and Edward Carlson put together a group to buy out the Sorianos and reduce the holdings of the out-oftown partners. Daley's holdings would drop to 30% (or maybe 25%). The cost would be \$10.5 million (or maybe \$10.3 million). Danz was out raising the cash.³⁸

Approval by the American League was described as a "formality," with Cronin saying, "We are happy



SEATTI E MINICIPAL ABOUNE

about the transaction."³⁹ On December 5, the American League owners approved the sale subject to conditions, including upgrading Sicks' Stadium to AL standards for the 1970 season.⁴⁰

Then, it was revealed that in September, Bank of California had called in a \$3.5 million loan it had made to the Sorianos.⁴¹ The American League had known nothing about the loan. Fred Danz suddenly had another \$3.5 million to raise. Zimmerman, who had covered the Pilots since Day One, summed up: "Not only had the league granted the franchise without the apparent full knowledge of the financial structure, it gave blessing to the sale of the club to Danz, again without full study of the monetary pitfalls."⁴²

Danz's efforts, built around selling season tickets, faltered and soon Daley was saying, the "Pilots are up for grabs." A Dallas group was back in the running, he said. Chicago White Sox president John Allyn agreed. "There's no real leader there," he said of Seattle, adding that he leaned towards Milwaukee getting the team as Dallas did not have a major league stadium. ⁴³

Carlson stepped forward with a variation: the team would be bought by a non-profit civic group for \$9 million. Carlson's delegation included Washington's governor, the state's attorney general, Seattle's new

mayor, and other officials, in order to show broad, and political, support. But, the AL owners had a fundamental problem with Carlson's proposal. As Allyn expressed it: "The real hang-up is that no one person, group, or firm will be committed to the financial responsibility of the club. They have a lot of fancy-dan plans, but no solidity."

Nevertheless, as 1970 spring training approached, Allyn and three other AL owners voted against the Carlson group, leaving it one vote short.⁴⁵ It was part of baseball's long-standing aversion to community-based ownership. "The non-profit factor, which is completely foreign to baseball, could not fit in," said Cronin.⁴⁶ Warren Magnuson, Washington's senior senator, again threatened an examination of baseball's immunity to antitrust law.⁴⁷ Along with the Carlson group, the AL pondered a trusteeship under which the league would operate the club or a move to force the Sorianos and Daley to keep operating despite the losses. The Milwaukee and Dallas groups still hovered on the edges.⁴⁸

TOO LITTLE, TOO LATE

Ultimately, late on the night of February 11, the league chose a mashup of the alternatives. It would compel

THE SORIANO BROTHERS

In Seattle, Dewey Soriano was Mr. Baseball. He and his brother Max had been schoolboy pitching sensations and had remained embedded in the local baseball scene ever since.

The Soriano brothers had been born in Prince Rupert, British Columbia, sons of an immigrant Spanish fisherman and his Danish wife. Dewey was born in 1920 and Max in 1925, with the family using its halibut boat to move to Seattle when Max was six weeks old. After high school, Dewey headed to the University of Washington. When the Pacific Coast League's Seattle Rainiers offered him \$2,500, he spent the 1939–42 seasons there, winning 11 and losing 13.1

After World War II, Max attended, and pitched for, the University of Washington before going to law school. Dewey returned to baseball. He continued pitching through the 1951 season, mostly in the Pacific Coast League, but spent one spring training with the Pittsburgh Pirates.

Dewey then played for two seasons in a lower minor league, but it was a harbinger of his career as a baseball executive. With \$15,000 mostly borrowed from his brothers, he bought a quarter interest in the Yakima Bears of the Western International League. He spent 1949 and most of 1950 there as a starting pitcher, president, and general manager. Attendance almost doubled.

In 1952, he got a call from Emil Sick. Given Dewey's experience as Yakima general manager and his Canadian roots, Sick figured he would be a good operator for the Rainiers' farm club in Vancouver, British Columbia. After the 1953 season, Sick promoted him to Seattle as general manager.

Dewey, with close ties throughout the Seattle baseball community, brought back Fred Hutchinson, his high school teammate, as manager and the Rainiers won the 1955 PCL pennant. In 1959, Dewey became executive vice president of the Pacific Coast League, a move made in anticipation of the retirement of President Leslie O'Connor. When O'Connor left a year later, Dewey moved into the presidency, giving him a higher profile throughout the baseball world, a profile he used to promote Seattle as a major league city.

The profiles of the Soriano brothers are drawn from "Wayback Machine: Dewey Soriano Story, Part I," April 16, 2013 at sportspressnw.com/ 2149411/2013/wayback-machine-dewey-soriano-story-part-i, and "Wayback Machine: Dewey Soriano Story, Part II," April 23, 2013 at sportspressnw.com/2149857/wayback-machine-dewey-sorianostory-part-ii; "Baseball Figure Dewey Soriano dies at age 78," Seattle Times, April 7, 1998; "Where are they now: Max Soriano," Seattle Post-Intelligencer, August 1, 2007; and "Max Soriano was praised and pilloried for bringing Pilots baseball team to Seattle," Toronto Globe and Mail, October 17, 2012, retrieved Oct. 17, 2012.

the Sorianos and Daley to keep running the club but would provide them with a \$650,000 loan. The cash was to tide them over through spring training and to get the most pressing creditors off their backs.⁴⁹

On the field, the Pilots started spring training in Tempe, Arizona. Off the field, the skirmishing continued. Carlson dropped his bid despite a plea from Commissioner Bowie Kuhn to re-apply. On March 16, Seattle and the State of Washington sued Major League Baseball over the move, alleging antitrust violations. There were already two restraining orders in place and the Superior Court of King County had scheduled a hearing for later that week about why the orders should not be amended into an injunction. ⁵⁰ At a meeting in Tampa, AL owners pondered Milwaukee and Dallas.

Then, the Sorianos blew it all up. They calculated the league's \$650,000 infusion was inadequate to keep them from losing more money. On March 19, Pacific Northwest Sports, Inc. filed for bankruptcy. The American League had the Pilots ripped from their control and placed in the hands of a bankruptcy referee whose duty was to ensure the best deal for the team's many creditors.

On March 31, bankruptcy referee Sidney Volinn made his decision. He had only one viable offer for the team, \$10.8 million from Milwaukee Brewers, Inc. The Seattle Pilots, seven days from the opening game of their second season, were going to Milwaukee.⁵² A young car dealer there named Bud Selig burst into tears.⁵³

Bill Mullins, the historian who delved most deeply into the Pilots' story, summed it up thus: "The American League owners, in their ardor for the Seattle market, were able to suppress a nagging awareness that they were getting themselves into a sticky situation. They had breached each of the Stanford Research Institute's three nonnegotiable criteria. They had voted a franchise to a city without a major league stadium, in an area that had not pursued a team avidly, and with an ownership group that was, at best, financed by a penny-pincher and, at worst, insufficiently capitalized."54

The Seattle debacle would drag on through various courts until 1977. Much of the delay was because both sides used the lawsuits to advance their different agendas. Seattle wanted a major league team and the American League wanted complete freedom from the lawsuits and a solid, local ownership group with access to a major-league-quality stadium. In January 1976, AL President Lee MacPhail announced his league's decision to award a franchise to Seattle.

"What the people in Seattle want is a ballclub, not a lawsuit," he said. Years later, MacPhail would add, "I didn't think we were going to fare very well" in a jury trial in the state of Washington. "[So] we gave them an expansion team." 55

Seattle was pleased, but not impressed. They accepted the offer but declined to drop the lawsuit until the expansion Mariners actually played a game in Seattle

It was, said new Commissioner Bowie Kuhn, "a bad chapter for baseball." ⁵⁶ ■

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STARS AND STATS

Assessing Hall-of-Fame Worthiness

Flaws in JAWS

Benjamin Alter

his paper explores potential areas of improvement in the JAWS statistic and proposes an alternative for evaluating candidates for the Hall of Fame. In 2004, Jay Jaffe created the Jaffe WAR Score system (JAWS) based on Baseball Reference's bWAR.1 Its stated purpose is "to improve the Hall of Fame's standards, or at least to maintain them rather than erode them, by admitting players who are at least as good as the average Hall of Famer at the position." JAWS averages a player's career bWAR with the sum of the bWARs from his best seven seasons. This "peak" factor provides a counterbalance to the accumulation of statistics; players who only accumulated statistics through long careers have lower JAWS than similar players who dominated during their peak seasons. Players are grouped by position, enabling direct comparisons between a player and the average Hall of Famer at that position.2 Players are considered Hall-worthy if their JAWS exceeds that of the average Hall of Famer at that position.

While JAWS works very well in indicating who should be enshrined, it can be improved.

THE PROBLEM WITH DEFENSIVE WAR

Like bWAR, JAWS includes both oWAR and dWAR. How important is dWAR in determining Hall-worthiness?

Because some positions are more challenging than others, Baseball Reference assigns positional adjustments in its calculation of dWAR. Positions where good defensive skills can have a more-than-average effect on the outcome of a game have positive adjustments, and positions where good defensive skills have less of an effect on the outcome of a game have negative adjustments. By definition, these adjustments must add up to zero for a given season.

Positional adjustments vary over time. For the last several decades, shortstop and catcher have had big positive adjustments, while left field, right field, and first base have had big negative adjustments, with second base, third base, and center field somewhere in the middle.

To assess whether defensive metrics correlate with the likelihood of getting into the Hall of Fame, the author collected the dWARs and oWARS of all players with a minimum of 5,000 plate appearances (the de facto minimum for viable Hall of Fame candidates outside of the Negro Leagues), sorted them by position, and then divided them into quintiles. If better fielders preferentially get into the Hall of Fame, they would be prominently represented in the upper quintiles for dWAR, especially for the higher-valued defensive positions. Similarly, the better offensive players would be represented in the upper quintiles for oWAR, which does not have a positional adjustment. Let's evaluate the data position-by-position, starting with catchers.

As shown in Figure 1a, the dWAR quintiles of catchers have no discernable pattern, with almost one-third of the Hall of Famers in the bottom two quintiles. On the other hand, there is a clear preference for offense among catchers, as shown in Figure 1b. Almost

Figure 1a. Percentage of Hall of Fame Catchers by dWAR Quintiles

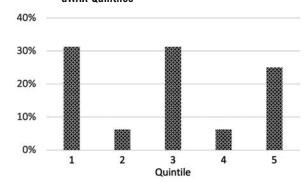
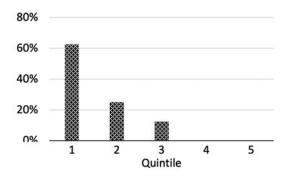


Figure 1b. Percentage of Hall of Fame Catchers by oWAR Quintiles



90% of the Hall of Fame catchers are in the upper two quintiles, and none of them are in the bottom two quintiles. This implies that either no consideration is given to a catcher's defensive performance when evaluating that player's HOF candidacy, or defensive performance by catchers isn't well measured by dWAR.

The quintiles for shortstops and second basemen tell a more nuanced story. As shown on Figure 2a, the dWAR quintiles for HOFers at these two positions are very similar, with more than half of the plaques going to top-fielding shortstops and second basemen, and less than one-quarter of the plaques going to shortstops and second basemen in the bottom two quintiles. While these results may suggest a consideration to defensive prowess for these two highly-valued positions, there is an even greater emphasis on offensive prowess at these two positions, as shown in Figure 2b. The top quintiles are occupied by 70% of the Hall of Famers at each position, with Bill Mazeroski being the only Hall of Famer in the fourth quintile and none in the lowest quintile. These results suggest that, while there is interest in the gloves of shortstops and second basemen, they also need to hit to make it into Cooperstown.

Figure 2a. Percentage of Hall of Fame Shortstops and Second Basemen by dWAR Quintiles

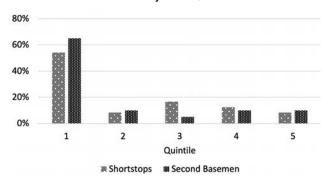


Figure 2b. Percentage of Hall of Fame Shortstops and Second Basemen by oWAR Quintiles

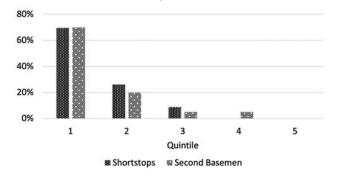
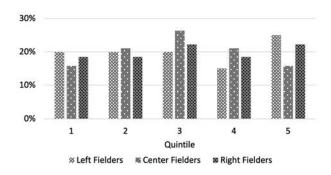
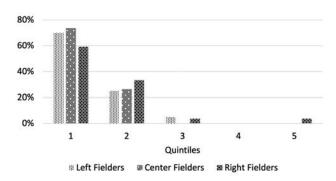


Figure 3a shows the dWAR quintiles for HOFers who were outfielders. It shows highly random distributions in dWAR for all three outfield positions, including center field, which has a positive positional adjustment. Therefore, there is no correlation at all between defensive metrics and being inducted into Cooperstown. As shown in Figure 3b, it's pretty much all about the offense for outfielders, with all but four outfielders placing in the upper two quintiles.

3a. Percentage of Hall of Fame Outfielders by dWAR Quintiles



3b. Percentage of Hall of Fame Outfielders by oWAR Quintiles

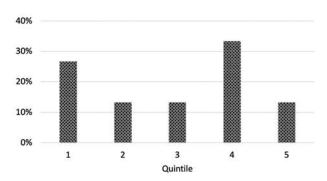


As shown in Figure 4a, not only do the dWAR quintiles for HOF third basemen have no discernable patterns, there are more Hall of Famers in the bottom two quintiles than in the top two quintiles. In contrast, except for Freddie Lindstrom, all third basemen enshrined in Cooperstown were top batsmen, as shown in Figure 4b.

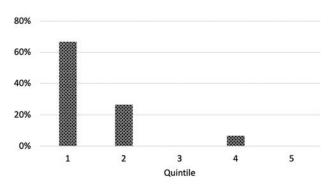
As shown in Figure 5a, the dWAR quintiles for first basemen also show no preference towards defensive metrics, with close to 30% of Hall of Fame first basemen in the bottom quintile. In contrast, with just one exception (High Pockets Kelly), all first basemen in the Hall are in the upper two quintiles, as shown in Figure 5b. Only great-hitting first basemen get a plaque.

In summary, with the possible exceptions of shortstop and second base, and some individual exceptions, dWAR is a poor predictor of a player landing in Cooperstown. And since dWAR is an element of JAWS, this

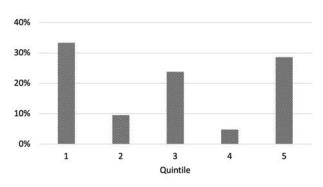
4a. Percentage of Hall of Fame Third Basemen by dWAR Quintiles



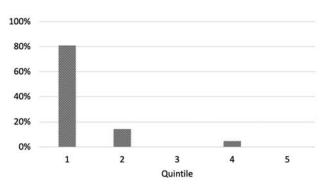
4b. Percentage of Hall of Fame Third Basemen by oWAR Quintiles



5a. Percentage of Hall of Fame First Basemen by dWAR Quintiles



5b. Percentage of Hall of Fame First Basemen by oWAR Quintiles



in turn casts doubt on the validity of JAWS as a predicting tool.

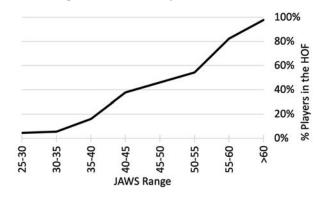
THE DIFFERENCE BETWEEN PRE-EXPANSION ERA AND EXPANSION ERA PLAYERS

DWAR is not the only problem with JAWS. There also is a problem with players from a wide range of eras being homogenized into a single statistic.

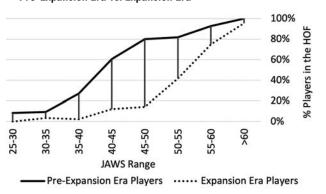
Figure 6 shows that there is a more or less linear relationship between increasing JAWS and increasing odds that the player is in the Hall of Fame. Players with JAWS below 40 have a less than 20% chance of being enshrined and therefore are "unlikely" candidates. Players with JAWS above 60 have a better than 80% chance of being enshrined and therefore are "likely" candidates. Players with JAWS between 40 and 60 are "uncertain" candidates. This is a very broad range. It is very broad because there is at least one other factor at work—the difference between playing before the Expansion Era and during the Expansion Era.

In Figure 7, the data from Figure 6 are separated into two categories: Pre-Expansion Era players and Expansion Era players.³ The JAWS distributions for these two sets of players are quite different, especially in the 40 to 55 JAWS range. Whereas pre-Expansion Era players become likely HOF candidates at 45 JAWS and virtual

6. Percentage of Hall of Famers by JAWS



7. Percentage of Hall of Famers by JAWS, Pre-Expansion Era vs. Expansion Era



locks above 55 JAWS, Expansion Era players must have a JAWS at least in the high 50s to be likely candidates for Cooperstown.

The bifurcation between Pre-Expansion and Expansion Eras has many causes. While the 162-game season is 5% longer than the 154-game season, this difference is too small to be meaningful here. The even shorter seasons prior to 1904 also play a minor role, since there are comparatively few Hall of Famers from those early days. The careers of Pre-Expansion Era HOFers were, on the average, 0.8 years shorter than Expansion Era HOFers, and Pre-Expansion Era players had, on the average, 27% fewer plate appearances than their fellow HOF denizens from the Expansion Era. This factor seems to contribute to the bifurcation. That said, the most probable and significant cause for this bifurcation is that many pre-Expansion Era HOFers simply don't have the same playing skill or merits as others in the Hall of Fame, but they are in the Hall nonetheless. (See Jaffe, *The Cooperstown Casebook*.)

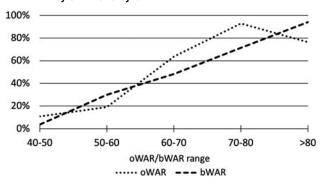
Mixing pre-Expansion Era players with Expansion Era players lowers the bar for the Expansion Era players to an unrealistic level, a level not supported by the history of HOF enshrinement. JAWS would be a more useful barometer for its stated purpose if it had two averages per position —one for pre-Expansion Era players and one for Expansion Era players.

CAREER OWAR AS A BAROMETER OF HALL-WORTHINESS

Since dWAR is an unreliable barometer of Hall-worthiness, let's ask the question: is oWAR by itself a reliable barometer for Cooperstown? What follows is an analysis of the Expansion Era dataset.

Figure 8 shows the trendlines for oWAR and bWAR among Expansion Era players. Defining 20% or less as an "unlikely" Hall of Fame candidate and 80% or more as a "likely" HOF candidate (excluding players whose candidacies are besmirched by PED accusations), the trendline for bWAR, which includes dWAR, has an

Figure 8. Percentage of Expansion Era Hall of Famers by oWAR and by bWAR



uncertain range between 50 and 80, whereas the oWAR trendline has a much tighter uncertain range, between 60 and 70. This suggests that oWAR is a much better diagnostic tool than bWAR. Consequently, JAWS would be a better diagnostic tool for Expansion Era players if it was based only on oWAR for Expansion Era players.

In a play on words, let's call the new saberstatistic "JoWLS", the "Jaffe Offensive WAR Ledger System." It would work similarly to JAWS in that a player's JoWLS would entail averaging his career oWAR with the sum of his best seven oWARs. As with JAWS, the players would then be sorted by position and the average JoWLS for each position calculated for both eras. Let's see what JoWLS would look like for Expansion Era players.

For this paper, JoWLS were calculated for all HOFeligible (as of 2020), Expansion Era position players who had more than 5,000 plate appearances. The top 20 players in JAWS and in JoWLS have been identified and tabulated, and the two lists compared to each other.

There were only minor differences in the two lists for catchers, first basemen, left fielders, and right fielders, which is consistent with the oWAR and dWAR analysis for all players that was presented earlier in the paper. Tables 1 through 4 show the top 20 players in JAWS and JoWLS at the other four positions, with the Hall of Famers shaded in each table.

Table 1 lists the top 20 shortstops from the Expansion Era in both JAWS and JoWLS. One big difference between the two lists is Derek Jeter, who is at the top of the JoWLS list but is behind five other HOFers on the JAWS list due to his inferior fielding sabermetrics. His place on the JoWLS list is more consistent with his first-ballot induction into Cooperstown. In contrast, Ozzie Smith and Luis Aparicio fare far better in JAWS than JoWLS, which suggests that that their defense played a big part in their induction into the Hall. It is unlikely that they would have gotten into the Hall on their offensive stats alone. Cal Ripken, Jr. is a good example of a player who fares much better under JAWS than JoWLS but would still have gotten into the Hall on his offensive stats alone.

The JAWS and JoWLS rankings for second basemen have some significant differences. As shown in Table 2, Bobby Grich and Lou Whitaker, who received little or no support in their first year of HOF eligibility, are in the middle of the five HOFers on the JAWS table, but are just below them on the JoWLS table. Both players were excellent fielders: Grich with four Gold Gloves and the 8th highest dWAR among Expansion Era second basemen, and Whitaker with three Gold Gloves and the 9th highest dWAR among Expansion Era second basemen. Apparently, their defensive achievements did

not sway the HOF voters. Conversely, Craig Biggio's 3,000 hits appeared to have swayed the HOF voters despite his tepid defensive metrics (which do not jibe with his four Gold Glove awards).

In summary, there are some significant differences in JAWS and JoWLS for Expansion Era shortstops and second basemen. This result is consistent with the earlier analysis of oWAR and dWAR.

Table 3 (page 110) lists the top 20 center fielders from the Expansion Era in JAWS and in JoWLS. Defensive prowess does not appear to have been an important consideration when evaluating center fielders for the Hall of Fame, with the possible exception of Andre Dawson, whose JAWS is much higher than his JoWLS. This may be changing, as evidenced by the candidacy of Andruw Jones, which has gained trac-

Table 1. Shortstops from the Expansion Era Ranked by JAWS and by JoWLS

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Rank	Name	JAWS	Rank	Name	JoWLS
1	Cal Ripken Jr.	76.1	1	Derek Jeter	73.0
2	Robin Yount	62.3	2	Robin Yount	65.1
3	Ozzie Smith	59.7	3	Cal Ripken Jr.	62.3
4	Alan Trammell	57.8	4	Barry Larkin	54.9
5	Barry Larkin	56.9	5	Alan Trammell	52.0
6	Derek Jeter	56.8	6	Miguel Tejada	45.1
7	Jim Fregosi	44.9	7	Jim Fregosi	44.2
8	Bert Campaneris	44.9	8	Nomar Garciaparra	40.8
9	Luis Aparicio	44.2	9	Ozzie Smith	38.9
10	Nomar Garciaparra	43.7	10	Bert Campaneris	38.8
11	Miguel Tejada	41.9	11	Michael Young	35.5
12	Tony Fernandez	37.9	12	Tony Fernandez	34.8
13	Mark Belanger	36.5	13	Maury Wills	33.7
14	Omar Vizquel	36.2	14	Jay Bell	33.4
15	Rico Petrocelli	36.1	15	Luis Aparicio	33.2
16	Rafael Furcal	35.1	16	Rico Petrocelli	30.7
17	Dave Concepcion	35.0	17	Edgar Renteria	30.1
18	Maury Wills	34.6	18	Dave Concepcion	29.1
19	Jay Bell	34.4	19	Rafael Furcal	29.0
20	John Valentin	32.0	20	Omar Vizquel	28.4

Table 2. Second Basemen from the Expansion Era Ranked by JAWS and by JoWLS

Rank	Name	JAWS	Rank	Name	JoWLS
1	Joe Morgan	79.8	1	Joe Morgan	80.5
2	Rod Carew	65.5	2	Rod Carew	64.4
3	Bobby Grich	58.7	3	Craig Biggio	59.2
4	Ryne Sandberg	57.5	4	Roberto Alomar	57.3
5	Lou Whitaker	56.5	5	Ryne Sandberg	51.7
6	Roberto Alomar	55.0	6	Lou Whitaker	51.4
7	Craig Biggio	53.6	7	Bobby Grich	50.7
8	Willie Randolph	51.1	8	Jeff Kent	48.1
9	Jeff Kent	45.6	9	Willie Randolph	42.5
10	Tony Phillips	42.5	10	Julio Franco	40.4
11	Chuck Knoblauch	41.6	11	Chuck Knoblauch	38.6
12	Julio Franco	37.2	12	Tony Phillips	38.2
13	Placido Polanco	37.1	13	Davey Lopes	37.8
14	Davey Lopes	36.3	14	Dick McAuliffe	36.4
15	Don Buford	34.8	15	Ray Durham	35.7
16	Dick McAuliffe	33.6	16	Ron Hunt	31.3
17	Robby Thompson	32.1	17	Bill Doran	29.8
18	Bill Mazeroski	31.2	18	Don Buford	29.5
19	Bill Doran	31.0	19	Robby Thompson	27.9
20	Ray Durham	29.9	20	Brian Roberts	27.2

tion in recent voting. Jones has the highest dWAR in history for an outfielder, which may make him an outlier rather than a trendsetter. Nevertheless, if he gets into the Hall, he will be the first outfielder from the Expansion Era whose defensive prowess clearly played a major factor.

Table 4 shows the top 20 Expansion Era third basemen by JAWS and JoWLS. There are two major

differences between the two tables: Brooks Robinson and Dick Allen. Unsurprisingly, Robinson fares well in JAWS, having by far the highest dWAR for a third baseman in baseball history. However, he is a weak candidate for the Hall without his defense in the equation. Poor defensive metrics may be keeping Dick Allen (dWAR of -16.3) out of Cooperstown. However, defensive metrics have not helped draw attention for Graig

Table 3. Center Fielders from the Expansion Era Ranked by JAWS and by JoWLS

Rank	Name	JAWS .	Rank	Name	JoWLS
1	Willie Mays	114.8	1	Willie Mays	99.2
2	Ken Griffey Jr.	68.9	2	Ken Griffey Jr.	66.4
3	Kenny Lofton	55.9	3	Bernie Williams	53.1
4	Andruw Jones	54.6	4	Jim Wynn	52.3
5	Andre Dawson	53.8	5	Jim Edmonds	48.2
6	Jim Edmonds	51.5	6	Brett Butler	47.5
7	Willie Davis	49.8	7	Vada Pinson	46.5
8	Jim Wynn	49.5	8	Cesar Cedeno	46.4
9	Vada Pinson	47.1	9	Kirby Puckett	46.4
10	Cesar Cedeno	47.1	10	Kenny Lofton	45.7
11	Chet Lemon	46.4	11	Dale Murphy	45.6
12	Johnny Damon	44.6	12	Andre Dawson	45.4
13	Kirby Puckett	44.4	13	Fred Lynn	45.0
14	Fred Lynn	44.3	14	Johnny Damon	44.4
15	Dale Murphy	43.9	15	Ellis Burks	43.3
16	Bernie Williams	43.6	16	Amos Otis	40.2
17	Brett Butler	42.6	17	Bobby Murcer	39.2
18	Devon White	41.4	18	Eric Davis	38.8
19	Ellis Burks	40.9	19	Willie Davis	38.4
20	Torii Hunter	40.7	20	Al Oliver	38.3

Table 4. Third basemen from the Expansion Era ranked by JAWS and by JoWLS

Rank	Name	JAWS	Rank	Name	JoWLS
1	Mike Schmidt	82.8	1	Mike Schmidt	70.6
2	Wade Boggs	73.9	2	Chipper Jones	67.9
3	George Brett	71.0	3	George Brett	66.4
4	Chipper Jones	66.0	4	Wade Boggs	65.8
5	Brooks Robinson	62.1	5	Dick Allen	61.0
6	Ron Santo	62.1	6	Paul Molitor	57.7
7	Paul Molitor	57.7	7	Ron Santo	56.7
8	Scott Rolen	56.9	8	Edgar Martinez	55.5
9	Edgar Martinez	56.0	9	Toby Harrah	51.2
10	Graig Nettles	55.2	10	Sal Bando	50.5
11	Buddy Bell	53.4	11	Scott Rolen	43.4
12	Sal Bando	53.0	12	Darrell Evans	43.1
13	Dick Allen	52.3	13	Ron Cey	41.1
14	Darrell Evans	48.0	14	Graig Nettles	40.9
15	Robin Ventura	47.4	15	Bill Madlock	40.7
16	Ron Cey	45.4	16	Brooks Robinson	39.5
17	Toby Harrah	43.4	17	Buddy Bell	37.9
18	Matt Williams	40.3	18	Carney Lansford	37.7
19	Doug DeCinces	36.6	19	Aramis Ramirez	36.3
20	Troy Glaus	35.5	20	Bobby Bonilla	36.2

Nettles, whose JAWS is a hair below 55.7, which is the current JAWS average for third basemen. Defensive metrics may, however, be aiding the candidacy of Scott Rolen, the eight-time Gold Glove winner, who garnered 63.2% of the vote in 2022. Rolen would not be a serious candidate for the Hall based on his JoWLS.

In conclusion, defensive metrics in HOF consideration appear to be important for third basemen, but the data are not consistent across the board.

CONCLUSIONS

To be a more reliable prognosticator of Hall-worthiness, JAWS should generate two averages per position: one for pre-Expansion Era players and one for Expansion Era players. While JAWS appropriately utilizes both offensive and defensive statistics, HOF voters generally do not, with but four or five exceptions (Ozzie Smith, Luis Aparicio, Brooks Robinson, and maybe Andre Dawson) from the Expansion Era.

Recent BBWAA votes have shown increased interest in players known for their superior defensive abilities whose offensive metrics may fall short of HOF consideration, including Andruw Jones and Scott Rolen. Inducting some or all of these players into Cooperstown would be a sign that the HOF voters are placing the appropriate value on defensive achievements, negating the need to use JoWLS in assessing the Hall-worthiness.

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Notes

- Wins Above Replacement (WAR) is widely recognized as a useful metric for assessing a ballplayer's overall performance. It allows each player's performance to be compared to others' around the playing field, across the years, and even across eras. Baseball Reference and FanGraphs have similar but different versions of WAR (bWAR and fWAR, respectively).
- JAWS assigns players who played multiple positions to the position at which they earned the most bWAR over their careers, which sometimes is different from their most often-played position.
- 3. Players whose careers straddle the 1961–62 border were assigned to the era in which they earned more bWAR. Fifty-seven Hall of Famers are defined as Expansion Era players for the purpose of this paper.
- 4. HOFer Mazeroski occupies 18th place on the JAWS table and is not even on the JoWLS table, consistent with the evidence presented earlier in this paper that Maz should not be in the Hall of Fame. But note that Mazeroski was voted in by the Veterans Committee, not the BBWAA.
- The difference between Dawson's JAWS and his JoWLS suggests a strong defense component, but anecdotal evidence from his Hall of Fame plaque and other resources suggests that he was inducted primarily because of his offensive achievements.

STARS AND STATS

Using Career Value Index (CVI) to Evaluate Hall of Fame Credentials of Negro League Players

David J. Gordon, MD, PhD

subject that animates baseball fans is ranking its greatest players, particularly regarding membership in the National Baseball Hall of Fame in Cooperstown (HOF). In the past decade or two, Wins Above Replacement (WAR) has moved to the forefront of this discussion among analytically minded fans. Unlike many "traditional" stats (wins, losses, saves, runs, RBI), which inextricably mix individual performance with the performance of teammates, WAR is based on a rigorous analysis of the elements of individual performance that contribute to a team's ability to score or prevent runs. WAR also controls for differences in the scoring environment across historical eras and among ballparks in a particular year. Although there are several versions of WAR and its calculation is opaque, WAR values for every player are easily accessible in real time on websites like Baseball-Reference.com and FanGraphs.^{1,2} I will use the Baseball-Reference version here.

While WAR represents a huge step forward in baseball analysis, it is not really up to the task of assessing career value, since it gives too much weight to quantity and too little weight to peak performance. When we think of a Hall of Famer, we think of a player who was ideally among the best in the game over a significant stretch of time, rather than someone who was merely above average for a very long period of time. However, career WAR makes no distinction between a 70-WAR superstar, who averaged 7.0 WAR per year (near MVP level) for 10 years and made multiple All-Star appearances with an occasional MVP or Cy Young award, and a 70-WAR "compiler," who averaged a good but unspectacular 3.5 WAR per year for 20 years and was rarely an All-Star. For example, WAR tells us that Don Sutton (66.7 WAR with 4 ASG, no MVP, no CYA in 23 years) had a better career than Sandy Koufax (48.9 WAR with 7 ASG, 3 CYA, 1 MVP in 12 years). HOF voters clearly believed Koufax to be superior: electing Koufax on the first ballot, while passing on Sutton until his fifth year on the ballot.

WAR is also highly dependent on the length of the schedule and on historical patterns of player usage,

which have differed radically across the generations, especially for pitchers. For example, was Old Hoss Radbourn's 19.2 pitching WAR in 678.2 IP (!) really better than Clayton Kershaw's 7.7 pitching WAR in 198.1 IP in 2014, when he swept the NL Cy Young and MVP awards? Where does Mariano Rivera's 53-save 2004 season (4.2 WAR in 78.2 IP) fit in? This "opportunity inequity" also suppresses WAR for hitters and pitchers in leagues playing shorter schedules. For example, Cap Anson never made more than 550 PA or accrued more than 6 WAR until 1886, when he was 34 years old.

In my 2021 book, Baseball Generations, I introduced Career Value Index (CVI) as a tool to evaluate the Hall of Fame (HOF) candidacy of players from the National and American Leagues and other leagues that were recognized as "major" before 2020, which a) placed premium value on players who were at or near the top of their league for multiple years—the longer the better—rather than on players who were merely good enough to hold a job for twenty years, and b) considered historical opportunity inequities—particularly among pitchers of different eras.3 The tool accomplished this by defining an "all-star threshold" (AST) of WAR corresponding to all-star quality performance, which differed for pitchers and non-pitchers and from season to season, and giving players triple credit for the amount by which their WAR in any particular season exceeded the AST for that season. The default value of the AST was 5.0 in 1924-67, but it ranged from as high as 11.0 for pitchers in Radbourn's heyday (1883-84) to 4.0 for modern pitchers, and dipped as low as 2.0 for 1871–78 position players and for all players in the 60-game 2020 pandemic season.4 The original version of CVI also contained numerous customized secondary adjustments, including adjustments for catchers, designated hitters, and relief pitchers, discounts for PED use, and credits for time lost to wartime military service or years lost to enforcement of the color barrier.

The Jaffe WAR Score (JAWS), first introduced in 2002, takes a different approach to valuing players

who were dominant in their prime by awarding double weight to a player's seven best seasons of WAR.⁵ However, Sutton's 50.3 JAWS still beats out Koufax's 47.4. As we shall see, CVI (like the HOF electorate) assigns the higher career value to Koufax. Furthermore, until the recent introduction of S-JAWS, which attempts to control for the large WAR scores accrued by the workhorse pitchers of the nineteenth and early twentieth, JAWS did nothing to address opportunity inequity.⁶

Unfortunately, neither JAWS nor the original version of CVI is sufficiently flexible to accommodate the Negro Leagues, seven of which have now been recognized as major leagues by both SABR and MLB.7 Negro League schedules varied between 50 and 100 games, and tended to get shorter after the demise of the first Negro National League in 1931. Many prominent Negro League players (Oscar Charleston, John Henry "Pop" Lloyd, Smokey Joe Williams, etc.) began their careers well before 1920. Even after 1920, other players (Josh Gibson, Satchel Paige, Martin Dihigo), looking for bigger paychecks, played significant portions of their careers in Cuban, Mexican, and other independent leagues, which have not yet been recognized as "major" by MLB. Furthermore, before 1930, Negro Leaguers often played in a summer league, a winter league, and on barnstorming all-star teams within a single 12-month period. One would have to customize the original CVI formula (CVI 1.0) one player at a time to accommodate this complexity. In this article, I will present a generalized streamlined version of CVI (henceforth referred to as CVI 2.0), which yields similar results to CVI 1.0 for most players in the other major leagues but also accommodates the Negro Leagues.

METHODS

While CVI 1.0 evaluates WAR against a threshold (the AST) that is defined season by season, CVI 2.0 evaluates WAR against a threshold that is calibrated to plate appearances (PA) for position players and batters faced (BF) for pitchers. This calibration of AST to PA and BF makes it possible to automate the CVI calculation rather than customize it one season at a time. CVI 2.0 uses a "standard" season of 650 PA for hitters and 1000 BF for pitchers to define the AST as 5*PA/650 for position players and 5*BF/1000 for pitchers. The general formula for CVI *for any season* is the sum of CVI_H and CVI_P, where

 $CVI_H=0.8*((WAR_H+IF (WAR_H>AST_H, 2*(WAR_H-AST_H), 0)))$ $CVI_P=0.8*((WAR_P+IF (WAR_P>AST_P, 2*(WAR_P-AST_P), 0)))$

The subscripts H and P in these equations refer respectively to the hitting and pitching components of CVI, WAR and AST. As in CVI 1.0, all negative WAR values are rounded up to zero. In CVI 2.0, AST = 5.0 (the default threshold for 1924-67 in CVI 1.0) for all hitters with 650 PA and all pitchers with 1000 BF, no matter which league or which season. The 650 PA standard for position players corresponds to the workload of a typical, everyday, middle-of-the-order hitter and has been stable for more than a century (excepting work stoppages and pandemics). In 2022, for example, Paul Goldschmidt, Josh Bell, Anthony Santander, Randy Arozarena, and Nathaniel Lowe all had 645-655 PA; 27 players, mostly durable top-of-the-order types, led by Marcus Semien's 724 PA, had ≥655 PA. The 1000 BF standard corresponds to a typical workload for AL and NL starting pitchers between (roughly) 1909 and 1988. Some examples of pitchers with 996-1004 BF are Red Faber (1917), Burleigh Grimes (1929), Whitlow Wyatt (1940), Allie Reynolds (1952), Whitey Ford (1965), Ed Figueroa (1977), and Rick Reuschel (1988). In 1871 through 1908, BF totals above 1500 were common and approached 3000 in 1879-92. Since 1989, BF totals ≥1000 have become increasingly rare; the last pitcher to attain this milestone was David Price (1009) in 2014. In 2022, Sandy Alcantara led MLB with 886 BF.

I will illustrate the calculation of CVI using Shohei Ohtani's 2022 stats as an example. In 2022, Ohtani accrued 3.4 WAR in 666 PA as a hitter and 6.1 WAR in 660 BF as a pitcher. To calculate Ohtani's CVI as a hitter, we first calculate that his $AST_H = 5*666/650 = 5.12$. Since his WAR_H was only 3.4 (i.e., less than his AST_H), he gets no bonus, and his $CVI_H = 0.8*3.4 = 2.72$. To calculate Ohtani's CVI as a pitcher, we first calculate that his $AST_P = 5*660/1000 = 3.3$. Since his WAR_P exceeded his AST_P by 2.8 he gets a bonus of 5.6. His CVI_P is therefore 0.8*(6.1+5.6) = 0.8*11.7 = 9.36. Adding his CVI_H and his CVI_P gives Ohtani a total CVI_P of 12.08 for the 2022 season.

All non-Negro League data in this article come from Baseball-Reference.com.⁸ For the Negro Leagues, I have used PA, BF, and WAR data from the Seamheads.com database, which includes data from leagues that have not been officially recognized by MLB and may include some games against lesser competition.⁹ For those Negro League seasons where BF data are unavailable, I have approximated BF as 0.98*(3*IP + H + BB + HBP). The empirically derived 0.98 factor adjusts for the fact that the expression in parentheses does not include players who reach base on error, catchers interference, etc. and double counts double plays, triple plays, and baserunning outs. Also, the WAR calculation formulas

in Seamheads may not match those used in Baseball-Reference. Nevertheless, I have erred on the side of inclusiveness, since restricting my consideration to officially recognized leagues would grossly undervalue the careers of many Negro Leaguers, especially those who played before 1920.

Note that Negro League statistics are a work in progress and that new data are periodically being added to both databases as research uncovers previously untallied box scores and game articles. Even the statistics of the AL and NL are not written in stone since Baseball-Reference tweaks its WAR formula at least once a year. Thus, the WAR and CVI calculations in this article, which are complete and accurate through October 24, 2022, will undoubtedly change—perhaps even before this article is published.

I have retained two secondary adjustments from CVI 1.0: 1) the PED adjustment, which applies a 20% WAR penalty for hitters and a 10% penalty for pitchers for seasons with sufficient evidence of PED use, and 2) a modified positional adjustment for catchers, in which their WAR for each season is multiplied

by a factor of 1 + .001*games caught. Of so, for example, the WAR of a player who appeared in 100 games as a catcher that season is multiplied by 1.1. This correction puts catchers (who suffer greater wear and tear and whose game calling and other intangibles are not captured by WAR) on a more level playing field with other positions. The other secondary adjustments in CVI 1.0 have been dropped, since they rely on projection and cannot be automated.

EXAMPLES OF CVI CALCULATION

I have selected three examples of position players with similar WAR $_{\rm H}$ (Table 1) and three examples of pitchers with similar WAR $_{\rm P}$ (Table 2) to illustrate how CVI elevates superstars with abbreviated careers (DiMaggio and Koufax) over compilers (Rose and Sutton) with lesser peak value and how it compensates for opportunity inequity. Table 1 features Pete Rose, Joe DiMaggio, and Oscar Charleston, while Table 2 features Satchel Paige, Sandy Koufax, and Don Sutton.

Note that Charleston's age 19, 20, 24, and 27 seasons include his winter (as well as summer) league

Table 1. Rose, DiMaggio, Charleston

-		Ros	e (1963	-86)			DiMaggio (1936-51)				Charleston (1915-41)				
Age	WAR	PA	AST*	Bonus	CVI	WAR	PA	AST*	Bonus	CVI	WAR	PA	AST*	Bonus	CVI
18											0.9	241	1.9	0.0	0.7
19						l					0.6	218	1.7	0.0	0.5
20						l					1.5	250	1.9	0.0	1.2
21						4.8	668	5.1	0.0	3.8	2.4	171	1.3	2.2	3.7
22	2.4	696	5.4	0.0	1.9	8.3	692	5.3	6.0	11.4	4.7	206	1.6	6.2	8.7
23	1.3	558	4.3	0.0	1.0	5.7	660	5.1	1.2	5.6	6.9	416	3.2	7.4	11.4
24	5.6	757	5.8	0.0	4.5	8.3	524	4.0	8.5	13.5	7.7	424	3.3	8.9	13.3
25	4.1	701	5.4	0.0	3.3	7.1	572	4.4	5.4	10.0	6.8	467	3.6	6.4	10.6
26	4.8	650	5.0	0.0	3.8	9.4	622	4.8	9.2	14.9	6.9	483	3.7	6.4	10.6
27	5.5	692	5.3	0.4	4.7	6.4	680	5.2	2.3	7.0	9.6	518	4.0	11.2	16.7
28	6.6	731	5.6	2.0	6.8	l					5.0	321	2.5	5.1	8.0
29	4.8	730	5.6	0.0	3.8	l					1.5	258	2.0	0.0	1.2
30	5.1	709	5.5	0.0	4.1	l					4.9	305	2.3	5.1	8.0
31	6.1	731	5.6	1.0	5.6	5.2	567	4.4	1.7	5.5	4.3	406	3.1	2.4	5.3
32	8.3	752	5.8	5.0	10.7	4.7	601	4.6	0.2	3.9	3.1	360	2.8	0.7	3.0
33	5.9	771	5.9	0.0	4.7	6.9	669	5.1	3.5	8.3	1.7	247	1.9	0.0	1.4
34	4.1	764	5.9	0.0	3.3	4.3	329	2.5	3.5	6.3	2.7	215	1.7	2.1	3.8
35	7.0	759	5.8	2.3	7.5	5.2	606	4.7	1.1	5.0	1.7	308	2.4	0.0	1.4
36	2.9	732	5.6	0.0	2.3	2.9	482	3.7	0.0	2.3	2.9	291	2.2	1.3	3.4
37	3.4	731	5.6	0.0	2.7	l					1.7	236	1.8	0.0	1.4
38	3.1	732	5.6	0.0	2.5	l					0.6	209	1.6	0.0	0.5
39	-0.4	739	5.7	0.0	0.0	l					1.3	134	1.0	0.5	1.5
40	1.7	486	3.7	0.0	1.4	l					-0.3	45	0.3	0.0	0.0
41	-1.1	720	5.5	0.0	0.0	l					0.0	1	0.0	0.0	0.0
42	-2.1	555	4.3	0.0	0.0	l					0.2	53	0.4	0.0	0.2
43	1.0	421	3.2	0.0	8.0	l					0.2	16	0.1	0.2	0.3
44	0.6	501	3.9	0.0	0.5	l					0.0	3	0.0	0.0	0.0
45	-0.9	272	2.1	0.0	0.0										
Total	79.6	15890	122.2	10.6	75.9	79.2	7672	59.0	42.7	97.5	79.5	6802	52.3	66.0	116.6

^{*} PA-calibrated all-star threshold, 5*PA/650.

Table 2. CVI Calculation for Three Pitchers

		Sutt	on (196	6-88)			Kout	fax (195	5-66)			Pai	ge (1927	-65)	
Age	WAR	BF	AST*	Bonus	CVI	WAR	BF	AST*	Bonus	CVI	WAR	BF	AST*	Bonus	CVI
19						0.9	183	0.9	0.0	0.7					
20						-0.3	261	1.3	0.0	0.0	2.7	435	2.2	1.0	3.0
21	3.5	916	4.6	0.0	2.8	1.3	444	2.2	0.0	1.0	4.5	532	2.7	3.7	6.5
22	1.1	962	4.8	0.0	0.9	1.2	714	3.6	0.0	1.0	2.8	774	3.9	0.0	2.2
23	3.2	847	4.2	0.0	2.6	2.2	679	3.4	0.0	1.8	3.5	403	2.0	3.0	5.2
24	2.0	1226	6.1	0.0	1.6	1.5	753	3.8	0.0	1.2	2.6	219	1.1	3.0	4.5
25	1.1	1109	5.5	0.0	0.9	5.7	1068	5.3	0.7	5.1	4.5	574	2.9	3.3	6.2
26	4.6	1059	5.3	0.0	3.7	4.5	744	3.7	1.6	4.8	3.2	300	1.5	3.4	5.3
27	6.6	1061	5.3	2.6	7.4	10.7	1210	6.1	9.3	16.0	7.4	575	2.9	9.1	13.2
28	5.4	1006	5.0	0.7	4.9	7.3	870	4.4	5.9	10.6	2.4	148	0.7	3.3	4.6
29	2.5	1148	5.7	0.0	2.0	8.1	1297	6.5	3.2	9.1	2.9	380	1.9	2.0	3.9
30	3.5	1031	5.2	0.0	2.8	10.3	1274	6.4	7.9	14.5	0.1	90	0.5	0.0	0.1
31	3.1	1093	5.5	0.0	2.5										
32	4.5	979	4.9	0.0	3.6										
33	1.4	990	5.0	0.0	1.1										
34	2.0	927	4.6	0.0	1.6						1.9	233	1.2	1.5	2.7
35	6.3	833	4.2	4.3	8.5						2.9	363	1.8	2.2	4.1
36	2.8	624	3.1	0.0	2.2						2.7	542	2.7	0.0	2.2
37	3.5	1012	5.1	0.0	2.8						4.3	406	2.0	4.5	7.1
38	1.6	925	4.6	0.0	1.3						0.0	184	0.9	0.0	0.0
39	2.7	912	4.6	0.0	2.2						2.0	278	1.4	1.2	2.6
40	3.1	943	4.7	0.0	2.5						0.6	74	0.4	0.5	0.8
41	2.4	853	4.3	0.0	1.9						1.6	295	1.5	0.3	1.5
42	1.7	795	4.0	0.0	1.4						1.7	348	1.7	0.0	1.4
43	-0.1	380	1.9	0.0	0.0										
44											0.3	278	1.4	0.0	0.2
45											3.5	582	2.9	1.2	3.7
46											3.0	489	2.4	1.1	3.3
58											0.2	10	0.1	0.3	0.4
Total	68.3	21631	108.2	7.6	61.0	53.1	9497	47.5	28.6	65.8	61.3	8512	42.6	44.4	84.6

^{*} BF-calibrated all-star threshold, 5*BF/1000.

stats for those years. Tables 1 and 2 do not include the small pitching contribution of Charleston (-0.8 WAR, 1.1 CVI) or the small hitting contributions of Sutton (-1.6 WAR, 1.2 CVI), Koufax (-4.2 WAR, 0.4 CVI), or Paige (-1.8 WAR, 1.0 CVI).

Rose played for nine years longer than DiMaggio (who was injured frequently and missed three years in World War II) and amassed more than twice as many PA. But DiMaggio's WAR exceeded his AST in 13 of his 15 seasons, while Rose exceeded this threshold only five times in 24 seasons. Rose won an MVP and two World Series championships, but DiMaggio far surpassed Rose with three MVP awards and nine World Series championships. Thus, while Rose had a slightly higher WAR, CVI recognizes the superiority of DiMaggio. Similarly, CVI recognizes Koufax, whose WAR exceeded his AST threshold in each of his last six seasons as a greater star than Sutton, who had 15 more WARP than Koufax but faced more than twice as many batters (Table 2). CVI also recognizes the superiority of Charleston (who attained 79.5 WAR in only 6802 PA) over Rose and DiMaggio and the superiority of Paige (who attained 61.3 WAR in only 8512 BF) over Sutton and Koufax.

While CVI 2.0 is designed to reward quality of performance, it reflects volume as well. This is in contrast to metrics like OPS + , ERA + , and WAR per 162 games, which focus solely on quality. CVI 2.0 compensates for opportunity inequity not by projecting the WAR a player actually accrued to 650 PA or 1000 BF, but by adjusting the standard to which that player's actual WAR is compared (i.e., the AST); no projections or extrapolations are made. For example, in Table 1, Oscar Charleston at age 23 (1920) and Joe DiMaggio at age 33 (1948) each had seasons of identical "volume"—i.e., 6.9 WAR—but Charleston had the higher quality, accruing his 6.9 WAR in 416 PA versus 669 PA for DiMaggio. So, Charleston scores higher in CVI, 11.4 to 8.3.

In another example, Sandy Koufax at age 27 (1963) and Satchel Paige at age 23 (1930) had seasons of near identical quality as measured by WAR/AST (1.77 for

Koufax versus 1.74 for Paige), but Koufax had three times the volume (10.7 WAR in 1210 BF versus 3.5 WAR in 403 BF). Although their seasons were of similar quality, Koufax's quantitative superiority translates to a 16.0 to 5.2 advantage in CVI for those seasons.

Moving from the particular to the general, Figure 1 illustrates how CVI increases with both volume of performance (as measured by WAR) and quality of performance (as measured by WAR/AST). At each quality level, CVI increases linearly with WAR. When WAR/AST≤1, there is no bonus and CVI=0.8*WAR (or zero if WAR<0). When WAR/AST=1.33 (e.g., DiMaggio's 1948 season), the slope increases to 1.2. When WAR/AST=2.0, which often translates to MVP or Cy Young level performance over a full season (e.g., DiMaggio's 9.4-WAR 1941 season), the slope increases to 1.6.

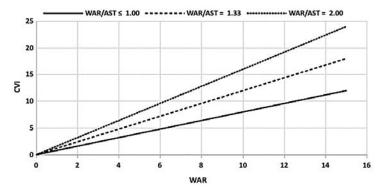
Only 34 seasons with unadjusted WAR/AST≥2.2 over at least 750 BF or 500 PA have been recorded. Aaron Judge's 10.6 WAR in 696 PA in 2022 translates to WAR/AST 1.98—outstanding, but not one of the 34. The 34 are:

WAR/AST ≥ **2.4**: Babe Ruth (2.64 in 1923, 2.51 in 1920, 2.42 in 1921), Pedro Martinez (2.86 in 2000), Rogers Hornsby (2.49 in 1924), Barry Bonds (2.49 in 2002), Greg OMaddux (2.47 in 1995), Oscar Charleston (2.43 in 1924).

2.3 ≤ WAR/AST < 2.4: Babe Ruth (1926, 1927), Barry Bonds (2001), George Brett (1980), Walter Johnson (1913), Mickey Mantle (1957), Pedro Martinez (1999), Honus Wagner (1908), Ted Williams (1957), Carl Yastrzemski (1967).

2.2 ≤ WAR/AST < 2.3: Roger Clemens (1990, 1997), Mookie Betts (2018), Barry Bonds (2004), Ty Cobb (1910), Dwight Gooden (1985), Zack Greinke (2009), Jacob deGrom (2018), Rogers Hornsby (1925), Hubert "Dutch" Leonard (1914), Mickey Mantle (1956), Willie Mays (1965), Joe Morgan (1975), Babe Ruth (1924), Ted Williams (1941).

Figure 1. CVI vs WAR for Three Quality Levels



PLAYER RANKINGS

We will now see how CVI plays out over the full range of potential HOF candidates over 152 years of baseball history and where the Negro Leaguers fit in. We will begin with the CVI results for infielders (Table 3). All infielders with CVI≥57.0 are listed in the upper (unshaded) portion of the table. Hall of Famers with CVI < 57.0 are listed in the lower (shaded portion). Designated hitters are listed at the field position they played most often. In this and subsequent tables, Hall of Famers are shown in boldface type. Negro League players are shown in Italics. Players with CVI < 30 who were elected to the HOF as "pioneers" or for their contributions as managers, executives, etc.—including Negro Leaguers Rube Foster, Buck O'Neil, Frank Grant, and Bud Fowler-are not listed. Four confirmed PED users with unadjusted CVI > 57.0—Robinson Cano (76.3 to 49.4), Mark McGwire (70.0 to 47.8), Rafael Palmeiro (63.9 to 50.4), and Jason Giambi (57.3 to 40.1)—fall out of Table 3 after the PED adjustment. The PED adjustment also drops Rodriguez from second (152.1) to third at SS. Three Negro League infield Hall of Famers-Wells, Lloyd, and Wilson-achieved CVI≥57, despite the shorter seasons they played and the gaps in their statistical records.

As a rule of thumb, a CVI in the neighborhood of 60 or more makes a player a credible HOF candidate; CVI between 57 and 63 is a "borderline" region. A CVI > 75 practically guarantees election—absent steroids or "character" issues; Bobby Grich is the only exception in this table. Altogether, eleven eligible infielders with CVI≥63 are not yet in the HOF—Grich, Rolen, Dahlen, Glasscock, Whitaker, Allen, Boyer, Bell, Helton, Nettles, and Bando. Rolen and Helton are still on the BBWAA ballot, and Allen fell just one vote short of election on the Era Committee ballot for the class of 2022. But Grich, Dahlen, Glasscock, Whitaker, Boyer, Bell, Nettles, and Bando have been off the radar and deserve a fresh look.

On the other side of the coin, 32 non-Negro League infielders have been elected to the HOF despite CVI < 57, including 22 with CVI < 50. All but Perez, Ortiz, Aparicio, Maranville, Killebrew, and Traynor were elected by the Veterans and Era Committees. One can cut them some slack for the five Negro Leaguers in this group (Leonard, Taylor, Suttles, Johnson, Dandridge), whose statistical records are incomplete, and for Gil Hodges, whose managerial success factored into his election. But many of their selections, especially of players from the 1920s and 1930s, were heavy influenced by

the inflated batting averages of that era and by the cronyism, which reached its apex during Frankie Frisch's tenure on the committee in 1967–73. Infielders Bancroft and Kelly (Table 3), outfielders Hafey, L. Waner, and Youngs (Table 4, page 120), and pitcher Jesse Haines (Table 5, page 120), all of whom played with or for Frisch and were elected in 1967–73, are prime examples.

In Table 4, the CVI results for outfielders and catchers are presented in the same format used in Table 3.

Two confirmed PED users with unadjusted CVI > 57.0—Manny Ramirez (67.8 to 56.4) and Sammy Sosa (61.9 to 43.4)—fell below 57.0 after the PED adjustment. The PED adjustment also drops Bonds from second (236.6) to third and Sheffield (58.3) from 56 to 57 among OF. The positional adjustment for catchers raises Campanella (54.2), Hartnett (54.3), Cochrane (52.2), Torre (53.2), Ewing (55.4), Simmons (47.0),

Schang (50.2), Munson (46.6), and Tenace (49.4) above 57.0 CVI. The CVI for Bench (86.0), Carter (83.0), Gibson (88.3), Fisk (72.9), Rodriguez (69.5), Piazza (66.9), Dickey (58.8), Berra (57.0), and Mauer (58.0) were already above 57.0 before the adjustment.

Again, this time without exception, every retired outfielder and every catcher with CVI≥75 and no steroid or "character" issues is in the HOF. Lofton, Jones, Edmonds, Evans and Reggie Smith are the only such OF with CVI≥63 who have not yet been elected; Jones is still on the BBWAA ballot, while Lofton, Edmonds, and Smith have not yet made the list of Era Committee finalists. Dwight Evans (63.1 CVI) came close to election by the 2019 Modern Era Committee. For the record, recently retired Buster Posey's adjusted CVI is 55.6, and Yadier Molina's is 49.2.

Negro Leaguers—and players of color in general—feature very prominently in Table 4. Indeed, more than

Table 3. CVI for Infielders

	1B	CVI	2B	CVI	SS	CVI	3B	CVI
1	Gehrig, Lou	157.5	Hornsby, Rogers	194.1	Wagner, Honus	180.9	Schmidt, Mike	141.4
2	Pujols, Albert	130.4	Collins, Eddie	157.1	Ripken, Cal	107.3	Mathews, Eddie	116.6
3	Foxx, Jimmie	119.0	Lajoie, Nap	146.7	Rodriguez, Alex	101.9	Boggs, Wade	107.9
4	Anson, Cap	107.2	Morgan, Joe 121.5 Va		Vaughan, Arky	96.3	Brett, George	103.3
5	Brouthers, Dan	102.5	Gehringer, Charlie	93.9	Davis, George	95.3	Beltre, Adrian	101.9
6	Connor, Roger	101.9	Carew, Rod	90.7	Banks, Ernie	83.9	Jones, Chipper	88.9
7	Mize, Johnny	87.0	Robinson, Jackie	83.6	Yount, Robin	83.5	Santo, Ron	85.9
8	Bagwell, Jeff	85.6	Grich, Bobby	81.5	Wallace, Bobby	80.6	Robinson, Brooks	80.7
9	Thomas, Frank	77.1	Utley, Chase	77.6	Appling, Luke	80.0	Rolen, Scott	74.6
10	McCovey, Willie	74.9	Frisch, Frankie	73.5	Trammell, Alan	78.4	Baker, Home Run	72.3
11	Thome, Jim	74.0	Sandberg, Ryne	72.0	Smith, Ozzie	78.2	Martinez, Edgar	72.2
12	Cabrera, Miguel	71.5	Whitaker, Lou	71.5	Larkin, Barry	78.1	Boyer, Ken	68.2
13	Sisler, George	71.5	Biggio, Craig	65.7	Wells, Willie	78.0	Bell, Buddy	68.0
14	Votto, Joey	71.0	Alomar, Roberto	65.1	Boudreau, Lou	74.7	Nettles, Graig	66.5
15	Allen, Dick	68.6	Randolph, Willie	60.9	Dahlen, Bill	74.4	Molitor, Paul	65.8
16	Helton, Todd	67.3	Gordon, Joe	60.6	Glasscock, Jack	74.2	Bando, Sal	65.3
17	Murray, Eddie	63.6			Lloyd, John Henry	71.5	Wilson, Jud	62.1
18	Greenberg, Hank	63.0			Jeter, Derek	67.7	Longoria, Evan	61.1
19	Goldschmidt, Paul	62.8			Cronin, Joe	67.6	Arenado, Nolan	57.4
20	Hernandez, Keith	59.9			Reese, Pee Wee	65.9	Evans, Darrell	57.1
21	Clark, Will	59.1						
22	Terry, Bill	57.9						
1	Killebrew, Harmon	55.8	Herman, Billy	54.1	Jennings, Hughie	54.5	McGraw, John	55.0
2	Chance, Frank	53.6	Doerr, Bobby	48.5	Ward, John	53.6	Collins, Jimmy	53.3
3	Beckley, Jake	50.8	Lazzeri, Tony	46.5	Tinker, Joe	49.6	White, Deacon	50.8
4	Perez, Tony	50.5	Evers, Johnny	45.2	Sewell, Joe	49.0	Traynor, Pie	31.8
5	Ortiz, David	48.7	Fox, Nellie	45.0	Bancroft, Dave	48.6	Kell, George	30.4
6	Cepeda, Orlando	46.3	McPhee, Bid	43.0	Aparicio, Luis	46.1	Lindstrom, Freddie	26.5
7	Leonard, Buck	46.3	Schoendienst, Red	39.4	Jackson, Travis	45.6	Johnson, Judy	20.5
8	Suttles, Mule	43.1	Mazeroski, Bill	30.9	Rizzuto, Phil	38.7	Dandridge, Ray	20.1
9	Taylor, Ben	40.9			Maranville, Rabbit	37.4		
10	Hodges, Gil	39.0						
11	Bottomley, Jim	30.8						
12	Kelly, High Pockets	23.1						<u> </u>

Table 4. Outfielders and Catchers

OF	CVI	OF	CVI	OF	CVI	С	CVI
1 Ruth, Babe	282.4	Delahanty, Ed	86.7	Hamilton, Billy	67.1	Bench, Johnny	107.9
2 Mays, Willie	226.1	Jackson, Reggie	83.6	Edmonds, Jim	66.9	Carter, Gary	103.7
3 Bonds, Barry	208.9	Walker, Larry	82.9	Doby, Larry	66.1	Gibson, Josh	95.2
4 Cobb, Ty	208.7	Jackson, Shoeless Joe	82.0	Ashburn, Richie	64.3	Fisk, Carlton	89.1
5 Aaron, Henry	187.4	Heilmann, Harry	80.9	Smith, Reggie	64.3	Rodriguez, Ivan	86.1
6 Speaker, Tris	180.9	Simmons, Al	77.7	Hill, Pete	64.1	Piazza, Mike	83.6
7 Williams, Ted	177.3	Snider, Duke	77.1	Evans, Dwight	63.1	Dickey, Bill	71.7
8 Musial, Stan	162.7	Rose, Pete	75.9	Clarke, Fred	62.2	Berra, Yogi	71.5
9 Mantle, Mickey	150.8	Betts, Mookie	73.3	Williams, Billy	60.1	Mauer, Joe	67.7
.0 Henderson, Rickey	139.9	Beltran, Carlos	73.2	Winfield, Dave	59.8	Campanella, Roy	65.7
1 Ott, Mel	133.8	Lofton, Kenny	71.5	Wynn, Jim	59.5	Hartnett, Gabby	65.7
2 Trout, Mike	122.7	Waner, Paul	70.7	Stargell, Willie	58.8	Cochrane, Mickey	64.4
3 Robinson, Frank	120.8	Dawson, Andre	70.6	Lemon, Chet	58.6	Torre, Joe	61.5
4 Clemente, Roberto	119.4	Crawford, Sam	69.4	Suzuki, Ichiro	58.3	Ewing, Buck	61.2
5 Charleston, Oscar	117.8	Raines, Tim	69.1	Abreu, Bobby	58.0	Simmons, Ted	58.9
6 Yastrzemski, Carl	109.5	Stearnes, Turkey	68.9	Guerrero, Vladimir	57.9	Schang, Wally	58.4
7 Kaline, Al	104.2	Jones, Andruw	68.0	Cedeno, Cesar	57.6	Munson, Thurman	58.2
8 Griffey, Ken	102.0	Gwynn, Tony	67.9	Davis, Willie	57.6	Tenace, Gene	57.8
9 DiMaggio, Joe	97.5	Goslin, Goose	67.7	Sheffield, Gary	57.5	10000 - 1000000 000 4000000000	
Torriente, Cristobal	94.7	752		200 - 200			
1 Burkett, Jesse	56.6	Puckett, Kirby	48.0	Thompson, Sam	42.7	Bresnahan, Roger	54.6
2 Minoso, Minnie	55.6	Brown, Willard	46.3	Roush, Edd	41.4	Lombardi, Ernie	40.1
3 Flick, Elmer	54.3	Carey, Max	45.8	Wilson, Hack	40.3	Mackey, Biz	35.6
4 Kiner, Ralph	54.1	O'Rourke, Jim	45.6	Brock, Lou	40.1	Schalk, Ray	35.3
5 Wheat, Zack	53.8	Hooper, Harry	45.3	Combs, Earle	39.5	Ferrell, Rick	28.8
6 Medwick, Joe	53.6	Manush, Heinie	44.8	Duffy, Hugh	38.1	Santop, Louis	21.9
7 Kelly, King	53.0	Rice, Jim	44.6	Baines, Harold	32.9	250	
8 Slaughter, Enos	52.8	Irvin, Monte	44.5	Youngs, Ross	30.5		
9 Keeler, Willie	50.7	Cuyler, Kiki	44.0	Hafey, Chick	29.1		
O Averill, Earl	50.0	Rice, Sam	44.0	Waner, Lloyd	24.9		
1 Kelley, Joe	49.6	Oliva, Tony	43.3	McCarthy, Tommy	15.9		
2 Klein, Chuck	48.1	Bell, Cool Papa	43.2				

Table 5. CVI for Pitchers

13	Name	CVI	Name	CVI	Name	CVI	Name	CVI
1	Johnson, Walter	207.0	Perry, Gaylord	92.0	Eckersley, Dennis	71.5	Gossage, Rich	64.1
2	Young, Cy	186.6	Greinke, Zack	90.6	Reuschel, Rick	71.3	Drysdale, Don	63.8
3	Clemens, Roger	171.8	Roberts, Robin	89.9	Smoltz, John	71.0	Brown, Mordecai	63.8
4	Grove, Lefty	153.9	Halladay, Roy	88.8	Hubbell, Carl	70.8	Adams, Babe	63.0
5	Johnson, Randy	139.0	Paige, Satchel	85.8	Newhouser, Hal	70.4	McGinnity, Joe	62.9
6	Alexander, Grover	129.5	Plank, Eddie	85.5	Waddell, Rube	70.1	Ferrell, Wes	62.2
7	Mathewson, Christy	129.0	Clarkson, John	82.4	Buffinton, Charlie	69.6	Sutton, Don	62.2
8	Maddux, Greg	126.2	Jenkins, Fergie	82.3	McCormick, Jim	69.0	Sabathia, CC	61.7
9	Martinez, Pedro	125.9	Ryan, Nolan	80.1	Faber, Red	68.6	Wynn, Early	61.1
10	Nichols, Kid	124.9	Galvin, Pud	80.0	Bunning, Jim	67.9	Pettitte, Andy	61.1
1	Seaver, Tom	122.1	Glavine, Tom	77.7	Willis, Vic	67.4	Stieb, Dave	60.9
2	Schilling, Curt	101.8	Dihigo, Martin	76.9	Mendez, Jose	67.0	Hudson, Tim	59.6
13	Blyleven, Bert	100.8	Walsh, Ed	75.7	Appier, Kevin	66.6	deGrom, Jacob	59.6
4	Kershaw, Clayton	100.0	Tiant, Luis	75.7	Williams, Joe	66.4	Wood, Wilbur	59.3
15	Spahn, Warren	98.9	Coveleski, Stan	74.2	Brown, Kevin	66.2	Sale, Chris	59.0
6	Gibson, Bob	98.3	Rogan, Bullet	74.1	Cicotte, Eddie	66.0	Hamels, Cole	58.9
17	Carlton, Steve	97.7	Vance, Dazzy	73.8	Koufax, Sandy	66.0	Hershiser, Orel	58.6
8	Verlander, Justin	97.2	Bond, Tommy	72.9	Santana, Johan	65.4	Oswalt, Roy	58.6
9	Rivera, Mariano	96.9	Cone, David	72.9	Griffith, Clark	65.4	Wilhelm, Hoyt	58.4
20	Niekro, Phil	95.6	Radbourn, Old Hoss	72.4	Lyons, Ted	65.3	Gooden, Dwight	58.3
21	Scherzer, Max	94.6	Feller, Bob	72.4	Ruffing, Red	65.1	Tanana, Frank	57.8
22	Mussina, Mike	93.9	Saberhagen, Bret	72.0	Rusie, Amos	64.2	Uhle, George	57.3
23	Keefe, Tim	93.1	Marichal, Juan	71.8	Palmer, Jim	64.2	30200000000000000000000000000000000000	-0.0000
1	Welch, Mickey	56.4	Kaat, Jim	50.2	Foster, Willie	42.5	Smith, Hilton	37.6
2	Brown, Ray	54.2	Bender, Charles	49.8	Chesbro, Jack	41.2	Smith, Lee	36.7
	Spalding, Al	54.5	Joss, Addie	48.4	Hoffman, Trevor	41.1	Marquard, Rube	34.3
	Rixey, Eppa	52.5	Hoyt, Waite	48.4	Sutter, Bruce	39.6	Fingers, Rollie	32.2
	Ford, Whitey	51.5	Gomez, Lefty	47.0	Hunter, Catfish	39.2	Day, Leon	30.7
6	Pennock, Herb	50.8	Dean, Dizzy	46.4	Morris, Jack	39.1	Cooper, Andy	29.3
7	Grimes, Burleigh	50.5	Lemon, Bob	44.3	Cummings, Candy	38.0	Haines, Jesse	28.7

half (31/58) of the OF with CVI > 57 would have been excluded from MLB before 1947. Josh Gibson ranks third among catchers, and Oscar Charleston and Cristobal Torriente rank among the top 20 OF. In particular, Charleston and Gibson clearly belong on the short list of the best players of all time. Negro Leaguers Turkey Stearnes and Pete Hill and Larry Doby and Roy Campanella (who each began their careers in the Negro Leagues) also fared very well in Table 4. Minnie Miñoso, Monte Irvin, Cool Papa Bell, Willard Brown, Biz Mackey, and Luis Santop had CVI < 57, but would undoubtedly have fared better if the major leagues had not been segregated. Note that CVI also undervalues the career of Ichiro Suzuki, whose many productive years in Japan are not counted.

As with infielders, too many non-Negro Leaguers—22 OF and 3 C—have been elected despite CVI < 50 (even after the catcher adjustment). All but Puckett, Jim Rice, and Brock were elected to the HOF by the Veterans and Era Committees and again often reflect the inflated batting averages of the 1920s and 1930s and rampant cronyism.

The CVI results for pitchers are presented in the same format in Table 5. Rube Foster, who had CVI = 17.7 as a pitcher but was elected primarily as the architect of the first Negro National League and longtime manager of the iconic Chicago American Giants, is not listed. The PED adjustment affects only three pitchers with unadjusted CVI > 57—Roger Clemens (179.2 to 171.8), Kevin Brown (74.0 to 66.2), and Andy Pettitte (61.6 to 61.1). No pitcher fell below the 57.0 threshold for inclusion in Table 5 because of this adjustment.

Once again, a CVI≥75 is nearly a guaranteed ticket to the HOF, unless there are PED or "character" issues. Luis Tiant (75.7) is the lone exception among eligible pitchers. However, eight eligible pitchers with CVI between 63 and 75 and no steroid or character issues—Bond, Cone, Saberhagen, Reuschel, Buffinton, McCormick, Appier, Santana, and Adams—have not yet been elected. Most of them were noted for a small number of brilliant seasons rather than extended excellence. While it is debatable whether all these pitchers belong in the HOF, they deserve a second look.

Most relief pitchers fare poorly in CVI due to their limited workloads. The indomitable Mariano Rivera (96.9 CVI) is a glaring exception, ranking 19th among all pitchers despite facing only 5103 batters in his 19-year career. And that doesn't count his even more impressive postseason stats! Only five other pitchers with significant relief experience—Eckersley, Smoltz, Gossage, Wood, and Wilhelm—had CVI≥57, and Eckersley, Smoltz, and Wood accrued much of their CVI as

starters. No other reliever has CVI≥45. On the 2022 BBWAA ballot, Billy Wagner's and Joe Nathan's CVI are both 40.2, and Jonathan Papelbon's is 35.5.

Five Negro League pitchers—Satchel Paige, Martin Dihigo, Bullet Rogan, Smokey Joe Williams, and Jose Mendez—have CVI > 60 and clearly deserve their place among baseball's all-time greats. Dihigo and Rogan were two-way players, whose offense contributed 38.7 and 36.2, respectively, to their CVI totals. Ray Brown also has a very respectable 54.2 CVI. The credentials of Willie Foster, Hilton Smith, Leon Day, and Andy Cooper are less impressive, but we don't know how much of their statistical record is missing.

Sixteen non-Negro League pitchers with CVI < 50 have been elected to the HOF. Four of these 16 pitchers were relievers, and one (Candy Cummings) was elected as a baseball "pioneer" and executive, rather than for his playing career *per se*. Three of the remaining 11 pitchers (Dean, Lemon, and Hunter) were elected by the BBWAA; the remaining eight were elected by the Veterans and Era Committees.

Table 6 (page 122) compares Negro League CVI results based on the Baseball-Reference (BR) and Seamheads (SH) databases. I have included only Hall of Famers in this table; the highest CVI I could find for Negro League players not in the HOF is 55.0 for SS Dobie Moore, who played for the Kansas City Monarchs in 1920–26. For most players in this table especially those who played much of their careers before 1920 (Torriente, Lloyd, Williams, Mendez, Hill, Taylor, Santop, Rube Foster) and players who played much of their careers in Cuban and Mexican leagues (Dihigo, Torriente, Mendez)—the SH database (which includes data from non-MLB-certified leagues) yields substantially higher CVI values than the BR database. For those who played in the newly integrated major leagues in the 1940s and 1950s (Robinson, Doby, Miñoso, Campanella, Irvin, Willard Brown) and others whose careers began after 1920, the difference is relatively small. Oddly, Willie Foster (Rube's less renowned younger brother), who pitched 1923-37, fared far better in BR than SH. Note that Rube Foster and Buck O'Neil, whose HOF elections were largely predicated on what they accomplished after their playing careers, and nineteenth century "pioneers" Frank Grant and Bud Fowler, for whom statistical records are virtually non-existent, do not fare well in either BR- or SHderived CVI.

DISCUSSION

While standards for the Hall of Fame will (and should) always have a subjective element, CVI provides an

Table 6. Negro League Hall of Famers

Dlaver	Dane	C	:VI	Discour	D	С	CVI	
Player	Posn	BR	SH	Player	Posn	BR	SH	
1 Charleston, Oscar	CF	72.2	118.0	19 Leonard, Buck	1B	38.5	44.7	
2 Torriente, Cristobal	CF	35.7	94.7	20 Irvin, Monte	LF	35.6	44.0	
3 Gibson, Josh	С	61.8	89.7	21 Brown, Willard	CF	23.8	44.0	
4 Paige, Satchell	SP	62.7	87.4	22 Bell, Cool Papa	CF	31.4	43.6	
5 Robinson, Jackie	2B	82.9	83.6	23 Suttles, Mule	1B	49.1	43.1	
6 Wells, Willie	SS	72.7	77.7	24 Foster, Willie	SP	63.4	42.3	
7 Dihigo, Martin	P/IF/OF	28.0	77.0	25 Taylor, Ben	1B	20.1	41.9	
8 Rogan, Bullet	P/CF	71.0	73.0	26 Smith, Hilton	SP	34.6	38.2	
9 Lloyd, John Henry	SS	14.7	71.6	27 Mackey, Biz	С	28.8	32.6	
10 Stearnes, Turkey	CF	68.9	68.7	28 Day, Leon	SP	22.2	30.5	
11 Williams, Joe	SP	8.1	66.4	29 Cooper, Andy	SP	27.2	29.2	
12 Doby, Larry	CF	59.3	66.1	30 Santop, Louis	С	2.7	20.9	
13 Mendez, Jose	SP	5.6	65.7	31 Johnson, Judy	3B	15.3	20.5	
14 Hill, Pete	CF	4.8	64.1	32 Foster, Rube	SP		17.7	
15 Wilson, Jud	3B	44.6	60.1	33 Dandridge, Ray	3B	7.1	12.9	
16 Minoso, Minnie	LF	54.7	56.1	34 O'Neil, Buck	1B	1.7	4.6	
17 Campanella, Roy	С	50.3	54.6	35 Grant, Frank	2B		2.6	
18 Brown, Ray	SP	45.3	54.5	36 Fowler, Bud	IF/P		0.0	

objective framework for more nuanced judgments. Every player with CVI near or above 60 is worthy of serious HOF consideration, although not every such player should necessarily be elected. Any player with CVI > 70 should be a presumptive Hall of Famer, unless there is a compelling reason for exclusion (cheating, gambling, criminal behavior, etc.). Conversely, players with CVI < 50 should rarely be considered for the HOF, unless there is a compelling reason for inclusion (an extraordinary postseason record, a distinguished career as a manager or executive, historical significance, etc.). For example, I consider David Ortiz (48.7 CVI) a legitimate Hall of Famer because of his leadership qualities and surreal .455/.576/.795 slash line in three Red Sox World Series victories. (Also, I believe that WAR over-penalizes designated hitters for their lack of defensive value.) However, the HOF debate should mostly focus on players with CVI between 50 and 70; most players with CVI in the upper 60s should get in, while most in the lower 50s should not.

While critiques of the HOF credentials of specific players are beyond the scope of this short article, it is unfortunate that HOF voters apparently continue to give undue weight to pitcher wins, despite the fact that modern trends in pitcher usage (particularly the extensive use of relief pitchers and the near extinction of the complete game) have greatly diminished the relevance of this statistic, which typically signifies nothing more than the pitcher who happened to be in the game when his team took the lead. Thus, pitchers like Luis Tiant (229 W, 114 ERA+), Dave Stieb (176 W, 122 ERA+), David Cone (194 W, 121 ERA+), Kevin Appier (169 W, 121 ERA+), Bret Saberhagen (167 W, 126 ERA+), and

Johan Santana (139 W, 136 ERA+) are dismissed without a second thought, while lesser pitchers of the post-integration era like Don Sutton (324 W, 108 ERA +), Early Wynn (300 W, 107 ERA +), Jim Kaat (283 W, 108 ERA +), Jack Morris (254 W, 105 ERA +), and Catfish Hunter (224 W, 104 ERA+) are all in the HOF. All of the first group had an ERA 14% or better than the league average; none of the latter group had an ERA as much as 10% better than the league average. I am not saying that all the pitchers in the latter group are undeserving; I would have voted for Sutton and perhaps Wynn. However, the pitchers in the former group were clearly superior to those in the latter group; Tiant at least should have been a shoo-in for the HOF. Wins are the ultimate yardstick of team success, and teams-NOT individual pitcherswin games.

It is useful to frame the Hall of Fame debate in the context of percentiles. A total of 17,821 NABBP and major league players debuted before the debut of MLB's most senior active player in 2022, Albert Pujols, on April 2, 2001.12 The 268 men who have been elected to the HOF primarily as players, all of whom debuted before Pujols, represent 1.5% of the pre-Pujols cohort. (The 5040 players who have debuted since Pujols, 1495 of whom appeared in an MLB game in 2022, are irrelevant; none are in the HOF, and few have even been on the ballot.^{13,14}) The threshold for the top 1.5% of the pre-Pujols cohort ranked by CVI is 51.0. By contrast, the 60.0 ± 3.0 CVI threshold I proposed represents the top 1.02 to 1.23% of the pre-Pujols cohort. While there is no objectively "correct" percentage of players who belong in the HOF, I prefer the more exclusive 60.0 ± 3.0 CVI to the 51.0 cutoff, although there will of course be exceptions in both directions.

In the period 1971–2006, during which the HOF enshrined 35 Negro League players and executives, the Negro Leagues were rich in legend but thin in documented statistical records. Josh Gibson's HOF plaque tells us that he hit almost 800 HR, but only 165 HR are currently documented in Baseball-Reference.com. ¹⁵ Satchel Paige claimed Cool Papa Bell was so fast he could turn off the light switch and be in bed before it got dark (true, but the light switch in question had a short), but Baseball-Reference.com credits him with only 285 SB. ¹⁶ Paige's HOF plaque says he won "hundreds of games," but only 121 wins (including 28 AL wins) are documented in Baseball-Reference.com. ¹⁷ Even if we turn to the Seamheads database to capture stats from uncertified leagues and non-league play. ¹⁸

Now, in 2022, some of the gaps in the historical records have been filled, and we can better separate fact from myth. By standardizing for PA and BF to adjust for opportunity inequity, CVI now allows the statistical records of the Negro Leagues to be viewed alongside the American and National Leagues. Negro League players are still at a disadvantage because they played shorter official seasons and their records remain incomplete. But now we have more hard numbers, not just stories, to support the lofty status of Negro League stars like Charleston, Gibson, Paige, Torriente, Wells, Dihigo, Rogan, Lloyd, et al in the baseball pantheon. The hard numbers are less favorable for some other Negro League Hall of Famers, like Bell, Leonard, Mackey, Dandridge, et al, but this may change as additional records are unearthed, although we will probably never have more than sketchy records for the earliest stars of Negro baseball. Given the limitations of the Negro League records, no statistical construct can do full justice to all the great players whose careers were irreparably damaged by segregation. However, CVI effectively uses the data we do have to allow the Negro Leagues to be considered as an integral part of baseball history, not just as a colorful historical sidebar. ■

Notes

- Baseball-Reference.com, WAR Explained, https://www.baseball-reference.com/about/war explained.shtml.
- 2. Piper Slowinski, What is WAR? FanGraphs 2010, https://library.fangraphs.com/misc/war.
- David Gordon, Baseball Generations (South Orange, NJ: Summer Game Books, 2021), 3–16.
- 4. Baseball Generations, Table 2.2, 11.
- Jay Jaffe, Cooperstown Casebook, (New York: St. Martin's Press, 2017), 22–27.
- Baseball-Reference.com, Starting Pitchers JAWS Leaders, https://www.baseball-reference.com/leaders/jaws_P.shtml.
- Society for American Baseball Research and Sports Reference LLC, Sean Forman and Cecilia Tan, editors, The Negro Leagues are Major Leagues: Essays and Research for Overdue Recognition (Phoenix, AZ: SABR, Inc..) 2021.
- 8. Baseball-Reference.com, https://www.baseball-reference.com.
- 9. Seamheads.com. https://www.seamheads.com/NegroLgs/index.php.
- 10. Full details on the PED adjustment can be found in the book Baseball Generations. In brief, we accepted any evidence from failed drug tests, the Mitchell report, investigations, credible testimony, but not from unconfirmed leaks of supposedly "anonymous" testing. See David Gordon, Baseball Generations, Summer Game Books, South Orange, NJ 2021. Table, A2.3, 339.
- 11 .Jaffe, Cooperstown Casebook, 48-61.
- Baseball-Reference.com page for Albert Pujols, https://www.baseball-reference.com/players/p/pujolal01.shtml.
- Baseball-Reference.com page for Simeon Woods Richardson, https://www.baseball-reference.com/players/w/woodssi01.shtml.
- Baseball-Reference.com, 2022 Major League Baseball Appearances, https://www.baseball-reference.com/leagues/majors/2022appearances-fielding.shtml.
- 15. A note on the seeming discrepancy between Josh Gibson's home run total on Baseball-Reference.com being 165, and his Hall of Fame plaque stating he hit "almost 800." The total home run number at Baseball Reference reflects only the home runs hit during "league" games, but Gibson's teams may have played 2–3 times as many games in exhibitions and "non-league" play that are not included. See the Introduction to The Negro Leagues are Major Leagues: https://www.baseball-reference.com/negro-leagues-are-major-leagues.shtml; Hall of Fame Website: Josh Gibson, https://baseballhall.org/hall-of-famers/gibson-josh.
- Hall of Fame Website: Cool Papa Bell, https://baseballhall.org/ hall-of-famers/bell-cool-papa.
- Hall of Fame Website: Satchel Paige, https://baseballhall.org/ hall-of-famers/paige-satchel.
- 18. Seamheads.com. https://www.seamheads.com/NegroLgs/index.php.

The Use of Over-30 Lineups in Major League Baseball

Douglas Jordan

In February 2021, SABR member Rich Campbell observed that the San Francisco Giants might utilize a lineup during the 2021 baseball season where all of the players on the field were over 30 years old. This observation prompted Ben Lindbergh, the cohost of Effectively Wild (the Baseball Prospectus podcast), to explore the over-30 lineup question in more detail during an episode. Lindbergh used Retrosheet data on over-30 lineups generated by his Stat Blast consultant, Adam Ott, to discuss the question. He noted that the only team to use an over-30 lineup since 2016 was the 2018 Giants, and he pointed out a few other aspects of the data.

But given the limitations of a podcast format, Lindbergh was not able to do a comprehensive analysis of the data generated by Ott. The purpose of this paper is to closely examine Ott's data trove in order to learn about the history of the use of over-30 lineups in baseball, and to examine the success of the teams that have utilized older lineups. The team finishes cited in the performance section of the article were obtained from Baseball Reference.

Two aspects of Ott's data must be clarified. First, the data utilize the actual age of a player on the date a game was played. This is in contrast to how Baseball-Reference uses June 30 to calculate a player's age for a given season. Second, the data use the first nine players listed in the starting lineup as the basis for the over-30 calculations. In the National League, and the American League prior to 1973, the pitcher is also required to be over 30.

Designated hitters are listed in the starting lineup before pitchers on Retrosheet. This means that to qualify in the American League since the introduction of the designated hitter in 1973, the lineup must have eight non-pitchers and one designated hitter, all of whom are over 30. The pitcher on these teams is not required to be over 30. Therefore, the American League results beginning in 1973 are slightly different from the results for the rest of the data.

DISCUSSION OF THE RAW DATA

The first use of an over-30 lineup in the American or National Leagues occurred in 1925. Since then, those two leagues have played about 170,000 games. In just 484 (0.28 percent) of those games did a team use an over-30 lineup. This means that an over-30 lineup has been used 28 times out of every 10,000 games played since that first time; the use of an over-30 lineup is rare. These lineups are so unusual that only 14 franchises have ever utilized such a lineup. These franchises, and the number of times they fielded an over-30 lineup, are shown in Table 1.

Table 1. Franchise Uses of an Over-30 Lineup

Franchise	Number of Uses	Seasons Used	Seasons (uses in Season)
ARI	40	2	2000 (3), 2001 (37)
BAL	101	7	1957 (1), 1995 (1), 1996 (2), 1997 (14), 1998 (65), 1999 (3),2000 (15)
BOS_A	5	1	2010 (5)
BRO/LAN	8	4	1925 (2), 1926 (2), 1979 (3), 1980 (1)
CAL	108	2	1982 (102), 1983 (6)
СНА	14	4	1938 (3), 1939 (4), 1944 (3), 1945 (4)
CHN	12	1	2001 (12)
CLE	5	1	2001 (5)
DET	45	3	1945 (18), 1972 (1), 1998 (26)
NYA	60	8	1994 (1), 2000 (1), 2004 (5), 2005 (2), 2006 (1), 2013 (8), 2014 (39), 2015 (3)
NYN	1	1	1993 (1)
PHI_N	26	5	1981 (7), 1983 (15), 2010 (1), 2011 (2), 2012 (1)
SEA	11	1	2004 (11)
SFN	48	7	1996 (7), 1998 (5), 2002 (3), 2005 (7), 2006 (15),
	404	4-7	2007 (10), 2018 (1)
Totals	484	47	

Table 1 shows that only two franchises, the California Angels (108 uses in two seasons) and the Baltimore Orioles (101 uses over seven seasons), have deployed an over-30 lineup more than 100 times. These two teams are discussed in more detail below. Seven teams have used an over-30 lineup more than 20 times, and four teams have used the lineup fewer than ten times. The Yankees have a total of 60 uses spread out over eight seasons while the Giants have 48 uses in seven seasons. Five teams, the Red Sox, Cubs, Indians, Mets, and Mariners have used an over-30 lineup in just one season.

A natural question to ask is; which of these 484 teams used the oldest lineup? The answer is the 1998 Baltimore Orioles. Twice that year, every man deployed in the lineup was at least 33 years old. The oldest player in those lineups was 38-year-old Joe Carter. He was joined by Cal Ripken (37), Eric Davis (36), Brady Anderson (34), Jeff Reboulet (34), Rafael Palmeiro (33), B. J. Surhoff (33), and Lenny Webster (33). As it happened, the pitchers for these two lineups were Doug Drabek (35, and who turned 36 two days after his start with the lineup) and Scott Erickson, who was 30.

The 2007 San Francisco Giants employed the next oldest lineup. Eight times that season every player sent out there was at least 32 years old. Led by 42-year-old Barry Bonds, the team also employed Omar Visquel (40), Ryan Klesko (36), Dave Roberts (35), Ray Durham (35), and Matt Morris (32) as the pitcher. There were a total of 22 uses (4.6 percent) of an all over-32 lineup, 62 uses (12.8 percent) of an all over-31 lineup, and (again, not surprisingly) the vast majority of the uses of the lineup occurred when the youngest player was 30 years old. This happened in 398 (82.2 percent) lineups.

USES PER SEASON

The first question to be addressed is the use of over-30 lineups through time. Has the frequency of use of older lineups increased or decreased since the initial example in 1925? The answer is revealed in Figure 1.

Figure 1 shows that the first use of an over-30 lineup in the American or National Leagues was by the Brooklyn Dodgers in 1925. The Dodgers used an over-30 lineup twice in 1925 and twice again in 1926. Then, with the exception of 1945, over-30 lineups were used

infrequently until about 1980. In 1945 the Detroit Tigers used an over-30 lineup 18 times and the White Sox had four uses. That Tigers team won the World Series and featured 34-year-old Hank Greenberg, Paul Richards (36), Eddie Mayo (35), and 40-year-old Doc Cramer. There are only two instances of over-30 lineup use between 1946 and 1978. In total, over-30 lineups were used in only eight years prior to 1979.

The frequency of use of over-30 lineups increased starting in the 1980s. The 1979 and 1980 Dodgers used veteran-laden lineups four times. Those teams featured Davey Lopes (34), Steve Yeager (30), Steve Garvey (30), Dusty Baker (30), with Don Sutton as the 34-year-old pitcher. Neither of those teams made the playoffs. But the 1981 Dodger team, which never used a complete over-30 lineup, yet did retain the core of veterans from the previous two years, won the World Series. A similar dynamic occurred with the Phillies. The 1980 Phillies won the World Series with a veteranheavy lineup, but never used an over-30 lineup that year. However, as the team aged, the Phillies did use an over-30 lineup seven times in 1981 and fifteen times in 1983 (the Angels account for the other six uses during 1983) when the Philadelphians advanced to the World Series but lost to Baltimore.

Over one-fifth of the over-30 lineup uses occurred in 1982. The California Angels used an over-30 lineup 102 times that year. Led by two 36-year-olds, Reggie Jackson and Rod Carew, the team also included veterans Don Baylor (32), Fred Lynn (30), Bob Boone (34), and Bobby Grich (33). That Angels team won 93 games and finished first in the AL West before falling to the Brewers in five games in the ALCS. The last use of an over-30 lineup in the 1980s occurred in 1988 when the Tigers used an over-30 lineup 26 times. The team featured 41-year-old Darrell Evans, along with Ray

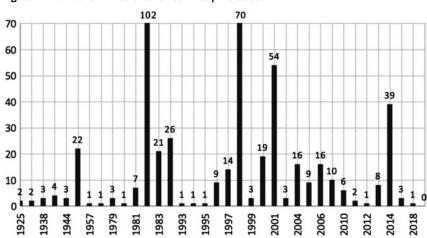


Figure 1. Number of Times an Over-30 Lineup Was Used

Knight (35), and Lou Whitaker (31). The pitching staff included 37-year-old Doyle Alexander and Jack Morris (33). Those Tigers won 88 games and finished one game behind Boston in the AL East.

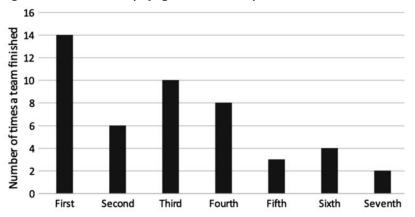
The Baltimore Orioles account for about another fifth of all uses of over-30 lineups. The Orioles used an over-30 lineup at least once every year starting in 1995 and ending in 2000, with 100 total uses over that time span. In 1998 the team featured 39-year-old Harold Baines and 37-year-old Cal Ripken, with 65 uses of an over-30 lineup. This is the second highest usage for a single team in one season behind the 1982 Angels (102 uses). The franchise had the most success during the early portion of the over-30 use period. The Orioles finished second in the division in 1996 and then won the AL East in 1997, but fell to the Indians in the ALCS.

It's evident from Figure 1 that over-30 lineups have been used more frequently over the last thirty years than before 1980. Except for five years with no uses, an over-30 lineup was used each year during the 26 years from 1993 to 2018. This period included the third highest use of an over-30 lineup by the Yankees in 2014 (39 uses), and the fourth highest use (37 uses) by the 2001 Diamondbacks. The 2014 Yankees team failed to make the playoffs, but the 2001 Diamondbacks, who featured 37-year-old Randy Johnson and 34-year-old Curt Schilling, won a memorable, thrilling World Series in seven games over the Yankees. No team employed an over-30 lineup in 2019 or 2020.

OVERALL PERFORMANCE OF TEAMS WITH OVER-30 LINEUPS

The previous section of the paper contained a few comments on how well some of the teams that used an over-30 lineup performed in the year they employed the lineup. This section looks at the performance of all of the teams that used an over-30 lineup. A total of 47 teams used an over-30 lineup at least once during

Figure 2. Where Teams Employing an Over-30 Lineup Finished



a season. The question is; how well did those teams fare in the year that they used an over-30 lineup? The results are shown in Figure 2.

Figure 2 shows that 14 of the 47 teams that used an over-30 lineup finished first in their league or division. Of those 14 teams, two of them won the World Series, and were in the top six teams with the most uses. Those two teams were the 37-use Diamondbacks in 2001, and the 18-use Tigers in 1945. The Yankees used an over-30 lineup once on their way to the championship in 2000. The 1983 Phillies used an over-30 lineup 15 times, and made it to the World Series, but lost that Series to the Orioles.

Five other first place teams that used an over-30 lineup lost in the League Championship Series (1972 Tigers, 1982 Angels, 1997 Orioles, 2004 Yankees, 2010 Phillies) and four first place teams that used the lineup lost in the Division Series (2001 Indians, 2005 Yankees, 2006 Yankees, 2011 Phillies). The fourteenth team to use an over-30 lineup and finish first was the 1994 Yankees. There were no playoff games that year because of a strike by the players. Overall, in terms of numbers of uses of over-30 lineups, five of the top ten teams in terms of uses came in first. Three of those teams made it to the World Series (two won it) and the other two lost in the LCS.

Prior to 1995, teams that came in second missed out on the playoffs. But with the advent of the wild card in 1995, it became possible for a second-place team to make the playoffs. Six of the teams that used an over-30 lineup came in second. Two of those teams, the 2014 Yankees (third highest number of uses, 39) and the 1988 Tigers (fifth highest number of uses, 26) were in the top five in terms of the number of uses of an over-30 lineup.

Four of the six second place teams that used an over-30 lineup did so after 1995. But only two of those four teams qualified as a wild card team. In 1996, the

second-place Orioles used an over-30 lineup twice during the season and earned the wild card. That team beat Cleveland in the division series before falling to the Yankees in the ALCS. The 2015 Yankees used an over-30 lineup three times on the way to a second-place finish. The Yanks lost to the Astros in the wild card game.

MOST USAGES OF AN OVER-30 LINEUP, AND FOLLOW ON PERFORMANCE

Only 13 out of the 47 teams that used an over-30 lineup did so ten or more

times during the season. We will now examine how those 13 teams fared in the season they used the over-30 lineup, and in the subsequent five seasons. The interesting question is; does the use of an older lineup in a season negatively impact team performance in following seasons? Intuition suggests that subsequent performance will be negatively impacted for a couple of reasons. First, the use of veterans means that younger players will get less playing time. This could slow their development. And second, the veterans' performance is likely to decline with each subsequent year, which could also negatively impact the team's results. The data in Table 2 allow this question to be investigated.

The 13 teams shown in Table 2 used an over-30 lineup a total of 379 times. This represents 78 percent of the total uses of an over-30 lineup. It shows that the relatively few teams that used an over-30 lineup multiple times account for the majority of the uses. In terms of performance in the year of use, Table 2 shows that five of the 13 teams came in first and two others came in second. So more than half (7 out of 13) of the teams that used an over-30 lineup the most times finished first or second. Of the five teams that came in first, two of them (the 2001 Diamondbacks and the 1945 Tigers) won the World Series, and one of them (the 1983 Phillies) lost the World Series. The other two first place finishers (the 1982 Angels and the 1997 Orioles) lost in the LCS.

But what happens in subsequent years? Regular use of an older lineup means that development of

younger players will be hindered. Does this result in poor performance in following years? To look at this question, Table 2 shows the finish for these 13 teams in the following five years. In order to avoid double counting, the data for the 1998 and 2000 Orioles, as well as the 2007 Giants, will not be used for the subsequent year analysis since those same data show up in the 1997 Orioles and 2006 Giants data respectively.

This leaves ten teams for the subsequent year analysis. Just two teams finished first in either of the next two seasons and only four other teams came in second. So, over the following two seasons, six out of 20 (30 percent) of the teams that used an over-30 lineup the most came in first or second and none of those teams made it to the World Series. Table 2 suggests that performance in the next two years is negatively impacted by regular use of an over-30 lineup.

However, team performance improved in out years three to five. Three of those 30 teams came in first. One of those first-place teams—the 2010 Giants—won the World Series and the other two lost in the LCS. Nine of those teams came in second, so a total of 12 out of 30 teams (40 percent) came in first or second in subsequent years three to five. This is an improvement over the results for the immediately following two years.

But we shouldn't read too much into this result. Three to five years is a long time. Rosters can change dramatically over that time frame, so it is possible that there is little to no correlation between the later year results and the year of use of an over-30 lineup in a particular season.

Table 2. Most Uses and Performance of Over-30 Lineup

		Number of Times an Over-30	Finish Year in Second	Finish Year in Second				
Count	Year/Team	Lineup Used	Column	Column +1 Year	Column +2	Column +3	Column +4	Column +5
1	1982/CA	102	1(llcs)	5	2	2	1(llcs)	6
2	1998/BA	65	4	4	4	4	4	4
3	2014/NY	39	2	2(lwc)	4	2(Ilcs)	2(lds)	1 (Ilcs)
4	2001/ARI	37	1	1(lds)	3	5	2	4
5	1988/DET	26	2	7	3	2	6	3
6	1945/DET	18	1	2	2	5	4	2
7	2000/BAL	15	4	4	4	4	3	4
8	2006/SFN	15	3	5	4	3	1(wws)	2
9	1983/PHI	15	1(lws)	4	5	2	4	6
10	1997/BAL	14	1(IIcs)	4	4	4	4	4
11	2001/CH	12	3	5	1(IIcs)	3	4	6
12	2004/SEA	11	4	4	4	2	4	3
13	2007/SFN	10	5	4	3	1(wws)	2	1(wws)
		379	Sum of top 13					
		78.1%	Percent of total					

wws=Won World Series, lws=Lost World Series, llcs=Lost LCS, lds=Lost Division Series, lwc=Lost Wild Card

TOPICS FOR FURTHER RESEARCH

The purpose of this paper is to explore the data set on over-30 lineups provided by Adam Ott in order to better understand the use of those lineups historically. In addition, the article looks at how well those teams have performed in terms of league, or division, finishes. Both of these endeavors are primarily descriptive. The different sections of this paper simply describe what happened historically.

The historical facts are interesting, but additional analysis could provide deeper insight into the use of veteran-heavy lineups. Areas for further research could include an analysis of the decision makers who are responsible for constructing these lineups, i.e. the manager and general manager, and the winning percentage of a team when playing with an over-30 lineup compared to without an over-30 lineup during a particular season.

It would also be interesting to know if big-market teams are more likely to employ an over-30 lineup than small-market teams. A team's payroll restrictions, or lack thereof, are likely to have an impact on the team's use of high-priced veterans. This analysis could also be extended to explore the question what mixture of younger and older players gives a team the best chance of winning a championship.

CONCLUSION

This article looks at major league baseball teams that used a lineup where every player is at least 30 years old. How often has that happened? The data show that fourteen franchises (comprising 47 team seasons) have used

an over-30 lineup 484 times since 1925. Use of these older lineups was rare prior to 1980 but has become more common since then. The team with the most uses of an over-30 lineup in a single season was the California Angels. In 1982 the Angels used an over-30 lineup 102 times. Led by Reggie Jackson and Rod Carew, that team won their division, but lost in the ALCS.

In addition to describing the raw data, the paper also examines the performance of teams that used an over-30 lineup in order to better understand how those teams fared during that and subsequent seasons. These data show that 47 teams utilized an over-30 lineup at least once during a season. Fourteen of those teams finished in first place and six teams finished second for a combined 20/47 (42.6 percent) that won their division (or league) or came in second. In other words, history suggests that about four of ten teams that utilize an over-30 lineup have a good chance of making the playoffs.

Acknowledgments

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Notes

- Lindbergh's podcast is titled "Effectively Wild Episode 1659: Rotten Mather." It is dated February 24, 2021 and the portion concerning over-30 lineups runs from minute 14 to minute 20. The URL is https://blogs.fangraphs.com/effectively-wild-episode-1659-rotten-mather.
- The over-30 lineup data generated by Adam Ott can be found at https://docs.google.com/spreadsheets/d/1xyq9hVatiF9qXWqjAt6xJbd0J1tTFdvATj-2G_X1IM/edit#gid=1108050359.

Contributors

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HERM KRABBENHOFT is a retired organic chemist. He has been a SABR member since 1981. His baseball research efforts have included ascertaining the complete details of major league triple plays (in collaboration with Jim Smith and Steve Boren), ultimate grand slam homers, minor league doubleduty diamondeers, quasi cycles, determining accurate RBI records for Lou Gehrig, Babe Ruth, and Hank Greenberg, and ascertaining the uniform numbers for Detroit Tigers players. Herm's baseball articles have been published in several SABR committee newsletters, including *The Inside Game, 19th Century Notes*, and *By The Numbers*. He is the author of *Lead-off Batters* (published by McFarland in 2001). Krabbenhoft has been the recipient of thee SABR Baseball Research Awards (1992, 1996, and 2013).

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JERRY NECHAL is a retired former administrator at Wayne State University, residing in Sylvan Lake, Michigan. He has previously written about "The Worst Team Ever" in the Baseball Research Journal as well as making several contributions to both the SABR Biography Project and the Games Project. Other interests include hiking, architecture, theater and gardening. He still longs for a bleacher seat in old Tiger Stadium.

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ROBERT D. WARRINGTON is a native Philadelphian who writes about the city's baseball past.



The First Negro League Champion: The 1920 Chicago American Giants

Edited by Frederick C. Bush and Bill Nowlin

Paperback \$29.95 244 pages Ebook \$9.99

This book chronicles the team which won the title of champion in the Negro National League's inaugural season. Rube Foster, a Hall of Famer, and his White business partner John Schorling are featured along with biographies of every player on the team include Cristóbal Torriente, a member of both the National Baseball Hall of Fame and the Cuban Baseball Hall of Fame, as well as early Blackball stalwarts Dave "Lefty" Brown, Bingo DeMoss, Judy Gans, Dave Malarcher, Frank Warfield, and Frank Wickware. A comprehensive timeline of the 1920 season and a history of the founding of the Negro National League are included.

We Are, We Can, We Will: The 1992 World Champion Toronto Blue Jays

Edited by Adrian Fung and Bill Nowlin

Forewords by Buck Martinez and Dave Winfield

Paperback US \$34.95/Canada \$41.95 394 pages • Ebook \$9.99

The 1992 Toronto Blue Jays will always be remembered as the first World Series-winning club from Canada. After a near miss in 1991, the 1992 club confidently adopted "We Are, We Can, We Will" as their team motto. This book features biographies of every player who played for the 1992 Toronto Blue Jays including Hall of Famers Dave Winfield, Jack Morris, and Roberto Alomar. Manager Cito Gaston, Hall of Fame general manager Pat Gillick, and radio broadcaster Tom Cheek are also included, as well as a "ballpark biography" of SkyDome. Ten reports describe significant games from the 1992 season illustrating Toronto's championship journey from Opening Day to the last game of the World Series.

From Shibe Park to Connie Mack Stadium: Great Games in Philadelphia's Lost Ballpark

Edited by Gregory H. Wolf

Paperback \$39.95 398 pages Ebook \$9.99

This collection evokes memories and the exciting history of the celebrated ballpark through stories of 100 games played there and several feature essays. The games included in this volume reflect every decade in the ballpark's history, from the inaugural game in 1909, to the last in 1970.

Shibe Park was the home of the Philadelphia A's from 1909 until their relocation to Kansas City and the Philadelphia Phillies from 1938 until the ballpark's closure at the end 1970. In 1953 it was renamed Connie Mack Stadium. The ballpark hosted big-league baseball for 62 seasons and more than 6,000 games—over 3,500 games by the A's and 2,500 by the Phillies—and was home to Frank Baker, Del Ennis, Chief Bender, and Robin Roberts.

¡Arriba!: The Heroic Life of Roberto Clemente

edited by Bill Nowlin and Glen Sparks

Paperback \$34.95 338 pages Ebook \$9.99

2022 marks the 50th anniversary year of Roberto Clemente's passing. This book celebrates his life and baseball career. Named to 15 All-Star Game squads, Clemente won 12 Gold Gloves, four batting titles, and was the National League's Most Valuable Player in 1966. The first Latino inducted into the National Baseball Hall of Fame, Clemente played 18 seasons for the Pittsburgh Pirates and became the 11th player to reach the 3,000-hit milestone, hitting number 3000 on the season's last day. At the time no one knew he would never play baseball again. Clemente was known for his charitable work. He lost his life on the final day of 1972 while working to provide relief for victims of an earthquake in Nicaragua.

SABR publishes up to a dozen new books per year on baseball history and culture. Researched and written by SABR members, these collaborative projects cover some of the game's greatest players, classic ballparks, and teams.

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