USA TODAY SPORTS

RON SHANDLER'S 2023

BASEBALL FORECASTER

AND ENCYCLOPEDIA OF FANALYTICS

The Industry's Longest-Running Publication for Baseball Analysts & Fantasy Leaguers • Est. 1986

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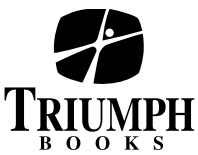

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Ron Shandler's
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We are just as grateful to the rest of the BaseballHQ.com staff, who do the yeoman's work in populating the website with 12 months of incredible content: Dave Adler, Sarah Allan, Andy Andres, Matt Beagle, Alex Beckey, Bob Berger, Derrick Boyd, Brian Brickley, Tim Cavanaugh, Brant Chesser, Jake Crumpler, Patrick Davitt, Alan Davison, Doug Dennis, Brian Entrekin, Jim Ferretti, Greg Fishwick, Neil FitzGerald, Arik Florimonte, Rick Green, Phil Hertz, Ed Hubbard, Greg Jewett, Brad Johnson, Tom Kephart, Zach Larson, Chris Lee, David Martin, Bill McKnight, Landon Moblad, Matthew Mougalian, Harold Nichols, Doug Otto, Josh Paley, Nick Richards, Peter Sheridan, Adam Sloate, Tanner Smith, Skip Snow, Matthew St-Germain, Jeffrey Tomich, Shelly Verougstraete, Michael Weddell, Ryan Williams and Michael Yachera.

Thank you to all our industry colleagues—you are technically competitors, but also comrades working to grow this industry. That is never more evident than at our First Pitch Forum live events. Hope to see many of you again in person in either Florida or Arizona in 2023.

Thank you to Ryan Bonini and the team at USA Today Sports Media Group, as well as all the support from the folks at Triumph Books and Action Printing.

And of course, thank *you*, readers, for your interest in what we all have to say. Your kind words, support and (respectful) criticism move us forward on the fanalytic continuum more than you know. We are grateful for your readership.

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From Brent Hershey The pressure of putting together this volume seemed especially acute this year, as the extended season (thank youuuuu, lockout!) tightened the screws on our already-fragile production timeline. All the folks in the box to the left came through and we once again take pride in the final product. Specific shout-outs are due to Brandon and Ryan; every reader benefits from your multi-layered expertise. Thanks to Ron for shepherding this flock each year. And Ray: We've somehow done it again—succinctly capping the past baseball season while providing readers with tools and insights for the next one, all in one entertaining, 288-page package. Thanks for your thoughtful partnership throughout. For Lorie, Dillon and Eden, thanks for supporting me as always during this six-week frenzy. You, more than anyone, can understand my Pete Alonso-like outburst upon finishing this year's book. Love to you all.

From Ray Murphy Due to a major hiring cycle, the list of BaseballHQ.com staff above is a lot longer than last year. New voices and perspectives are invigorating, and I am definitely feeling those positive effects. I'm also filled with gratitude to the staff veterans who carried a significant workload through pandemic- and lockout-created uncertainty of these past few years. Knock on wood, the horizon looks clear, and teaming up with Ron and Brent to meet that future is a prospect as exciting as Julio Rodríguez.

My home life has also overlapped with this space more this year, as now-11-year-olds Bridget and Grace have become avid softball players. They are a developing pitcher/catcher combo, though we haven't assigned prospect ratings to them just yet. As always, my wife Jennifer is the one who makes all of these endeavors possible, and worthwhile.

From Ron Shandler The first edition of this book was published a few weeks before my 28th birthday. Since then, nearly a million of you have read my words and numbers, and I have tracked the years with your league championships. I am honored to have Ray, Brent, Brandon and Ryan, and a group of amazing analysts build upon my early work and create something that keeps you coming back each year.

I have also marked time with a historical work that tracks the beginnings of the fantasy baseball industry and the writers who became its first "experts." Thanks to the folks at Triumph Sports for helping me tell this story. ETA Fall 2023.

And as always, my undying gratitude to Sue, Darielle and Justina who still get excited for the release of each book. And thank you to every cherished reader; there are no words. The idea for this book appeared to me over Thanksgiving dinner in 1985 and I am thrilled that so many of you get to read each year's edition between string bean casserole and pumpkin pie after 37 years.

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Phoenix

by Ron Shandler

In early November, a couple hundred fantasy leaguers descended upon a hotel in Mesa, Arizona for the 27th First Pitch Arizona conference. Many see this annual sojourn as marking the official beginning of the Fantasy Hot Stove season (hence, "first pitch"), and look forward to a long weekend of sun, scouting and socializing.

This year's conference was the first since 2019 that looked ahead to an off-season mostly unaffected by pandemic or labor strife. That alone should have given the event an air of optimism. Instead, there was an undercurrent of uncertainty in the conference program. There was a session that provided a post-mortem analysis of 2022's post-pandemic changes. Other sessions were devoted to projecting the potential impact of the new MLB rules. And dozens participated in fantasy drafts, all facing questions about the future of our cherished statistics. Would they even be recognizable next September?

At the same time, there was also a tempered excitement at the challenge of deconstructing the chaos. Some folks dug in their heels on what would or would not happen. Some conjectured within a wide range of possible outcomes. Some even reveled in the randomness. I love that we're such diehard stat geeks.

So, while we are potentially facing a season of statistical shambles, the best we can do is hunker down and try to figure it all out. This game's foundation is all about gathering and analyzing information, making the best decisions, reviewing the outcomes and repeating the cycle. That's nothing new, but the process becomes more difficult with each new variable added to the equation.

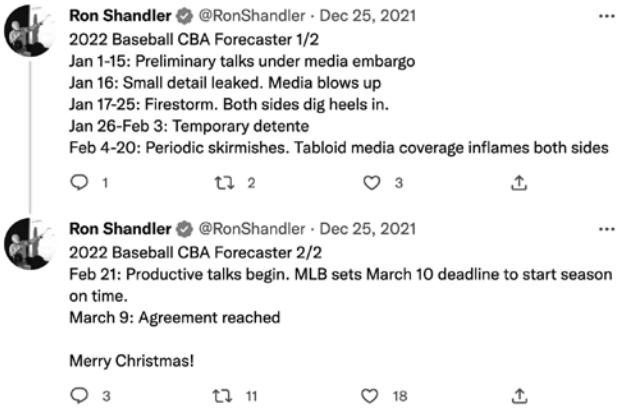
This year presents a different set of challenges. Here are a few we faced in 2022 and the new ones we'll have to deal with in 2023.

Anchored to uncertainty

For over three months last winter, we were flying blind. Baseball owners locked out the players on December 2, 2021, and all MLB roster activity ceased. There were no free agent signings, no trades and no pipeline to the critical news we needed to plan for our 2022 drafts.

There was also no decline in daily talk and speculation. Even though we were sitting blindfolded in dark rooms, tossing darts at targets that were months away, we still drafted teams. In December and January, baseball stopped, but we didn't. We compiled Average Draft Position rankings from that activity, which became source material for subsequent drafts in February into March. And it was all driven by incomplete, perhaps faulty information.

For the record, one certainty was accurately predicted:



Just wanted to put that out there.

Anyway, when the lockout lifted on March 10 (okay, I was off by a day), we were bombarded with a news deluge. We found out what players had been doing during the winter. Some had spent their downtime in workout rooms; others on buffet lines. We got a first look at some prospects who might have a chance to crack a major league roster. We finally got to see some on-field play. And we started funneling 500 pounds of potential playing time into 162-game bags.

This was sparkling, fresh information. A good deal of it validated what we already assumed, but a fair chunk didn't. One would think this input might have a significant impact on our drafting tendencies. After all, we had spent three months drafting off bad information; now we could see the light. Perhaps it even merited a full reset.

Well, that wasn't the case. Three months of fuzzy information became a firm reference point for all subsequent drafting activity. Was that a good path or a bad path? If nothing else, reliance on the winter ADPs carved an *easier* path.

I looked at the National Fantasy Baseball Championship (NFBC) ADPs of the Top 100 players compiled before March 10 and compared them to those from drafts after March 17 (allowing for a week for the news to filter into the draft results). With few exceptions, drafters dug in their heels on their winter expectations. While most players moved a few spots due to random volatility, virtually none of those shifts reflected any real change in perceived value. There was just a handful who moved by a round or more in the rankings.

As you might expect, six injured players dropped significantly, some out of the Top 100 completely: Fernando Tatis (-79 spots), Jacob deGrom (-60), Chris Sale (-110), Lance Lynn (-41), Jack Flaherty (-124) and Luis Castillo (-44). Zack Wheeler dropped

by a little (-10) as a hedge against a balky spring shoulder. No surprises here; we would have expected this, lockout or no lockout. Still, questions remain:

- Would these drops have been deeper had we known about the health issues earlier?
- Or were these drops excessive knee-jerk reactions to the late news? Had we known earlier, perhaps they would have been tempered.

The most significant non-injury drops shifted players by only a round, and there were only two—Cody Bellinger (-12) and Tommy Edman (-17). Bellinger batted .139 in 36 spring training at bats. Edman batted just .083 in 24 AB. Drafters batted .500 on that pair of small-sample overreactions.

Among all the players in or near the Top 100, only seven improved their ADP by a round or more once the lockout ended.

Kenley Jansen's signing to be the Braves' closer netted him one round in the ADPs, moving from 93 to 79. Despite holding the role all year with decent success, he'd finish outside the Top 130.

Jordan Romano's increasing grasp of Toronto's closer role bumped him from 104 to 87. In what could be considered an amazing feat of forecasting fortune, Romano finished at exactly No. 87 in roto earnings.

Byron Buxton once again looked healthy in camp—.469 with 5 HR—netting him a 19-spot bump in the ADPs, from 54 to 35. Despite following up with a career-high 28 HR, he once again finished with fewer than 350 AB and ranked outside the Top 150.

Carlos Rodón jumped 28 spots, from 123 to 95, likely due to his March 11 signing by the 107-win Giants. His 6 spring innings with a 1.35 ERA didn't hurt either. He'd earn it back and more, finishing just inside the Top 50.

Bobby Witt, Jr.'s .406 spring average boosted his chances of making the team, which bought him a 30-spot ADP boost, from 91 to 61. He'd finish inside the Top 30, so the intent was on the money.

Justin Verlander reported healthy to camp and threw 13.2 innings with a 1.32 ERA, earning a 36-spot ADP improvement, from 106 to 70. It wasn't nearly enough; he finished 5th overall in roto earnings.

Kris Bryant was the biggest mover in the post-lockout ADPs. Upon signing with the Rockies, he jumped 37 spots, from 92 to 55. But he got hurt and managed just 160 AB, finishing barely inside the Top 500.

There were likely more multi-round movers further down the ADPs, but honestly, after Round 10 (ADP 150 in a 15-teamer), the ADPs hardly matter at all (read "The Ineptitude of ADPs" in the Encyclopedia). From Rounds 11 to 23, almost 65 percent of our picks have historically been losers, with 57 percent finishing at least *four rounds lower* than where they were drafted. Worse, more than 25 percent of our Round 11-23 picks would be *undraftable* even in a 15-team league with 50-man rosters. We stink at this. That is why it is important to know whether better information might have made better picks.

But the key takeaway from this exercise is not about the particular movers. The important note is that, with few exceptions, our player perceptions were anchored in the winter ADPs, even though those rankings were driven by incomplete, often faulty information.

Was that a flawed decision-making process? Perhaps. But I'd have these remaining questions:

Had Kenley Jansen signed in December and Jordan Romano locked down his closer role earlier, would they have earned better ADPs? Established front-line closers typically go a round or two earlier than they did.

Similarly, if Carlos Rodón and Kris Bryant had signed over the winter, might the hype have pushed their ADPs higher?

If the media had been talking up Bobby Witt, Jr. over the winter and we had gotten our first look at him in February, might he have gone higher than No. 61?

If Byron Buxton had put on his slugging display and Justin Verlander compiled even more elite innings for six weeks' worth of spring games instead of three, might their ADPs have broken into the Top 30?

Had we not anchored our rankings in the winter drafts, it's possible these players would have cost us even more at the draft table in March. But even at their actual ADPs, only four of the seven earned back their investment or turned a profit.

View from 38,000 feet

Since the 2016 edition of this book, I've included annual statistical trend data to provide context for our player valuation decisions. The economics of this game are driven by the knowledge about which statistical categories are plentiful or scarce. Supply and demand. If there are fewer 200-inning pitchers or 40-steals sources, you will have to pay more for them. Lots of home runs? Prices and ADPs go down.

Over the past few years, many trends were heading in the same direction. Well, things seem to be starting to plateau. Let's look:

		Players with		
Year	Tot HR	20+ HR	30+ HR	HR/FB%
2013	4661	70	14	10.5%
2014	4186	57	11	9.5%
2015	4909	64	20	11.4%
2016	5610	111	35	12.8%
2017	6105	118	41	13.7%
2018	5585	100	27	12.7%
2019	6776	130	58	15.3%
*2020	6221	119	53	14.8%
2021	5944	102	43	13.6%
2022	5215	71	23	11.4%

** Pro-rated to full season*

There is an explanation for this decline in home runs; in fact, there are several. After being put on notice for use of sticky stuff in 2021, pitchers were far less policed and had nearly free reign again in 2022, suppressing power. There was also a huge surge in rookie hitter debuts last year, players who possessed less potent artillery:

Year	Debuts	Batters	Pitchers
2013	230	85	145
2014	234	84	150
2015	255	95	160
2016	257	80	177
2017	262	89	173
2018	247	78	169
2019	261	85	176
2021	265	96	169
2022	303	153	150

That's more than 50 new batters than last year's 96, which was the high water mark up to that point. That accounted for a whole bunch of plate appearances being spread around more than ever. And while Julio Rodríguez and Michael Harris II earned their stripes, there were also the Spencer Torkelsons and Nick Allens eating up PAs and dragging down the numbers.

However, an even larger influence on the decline in homers was the installation of a humidor in every ballpark last year. I could say that this was the year the balls went soggy, but players still hit more bombs than in 2015. If you recall, 2015 was the year they switched to different balls after the All-Star break and we all went nuts about the late power barrage. Seven years later, the current level seems almost sedate.

But the last thing we want is less offense. Thankfully, we may be getting that back in another area:

Year	Singles%	Three True Outcomes%	K%
2013	67.6%	30.3%	18.9%
2014	68.3%	30.3%	19.4%
2015	66.5%	30.7%	19.5%
2016	65.1%	32.3%	20.2%
2017	63.8%	33.5%	20.6%
2018	64.2%	33.7%	21.6%
2019	61.7%	35.1%	22.3%
2020	62.8%	36.1%	22.9%
2021	63.3%	35.1%	23.2%
2022	65.2%	33.4%	22.4%

Extreme defensive shifting and 100 mph heaters were just as prevalent last year as before. Still, singles as a percentage of hits bounced back to their highest level since 2015. The percentage of three true outcomes (BB, K, HR) settled down as well. However, we can't plant a stake in any of these levels or trends. They will be moving the fences on us in 2023 (metaphorically), so nothing here may be real.

	Number of Pitchers with			
Year	200 IP	200 K	15 W	**10 W
2013	36	12	16	82
2014	34	13	25	83
2015	28	18	13	70
2016	15	12	23	70
2017	15	16	17	74
2018	13	18	19	59
2019	15	24	16	74
*2020	6	20	19	70
2021	4	17	5	54
2022	8	11	14	63

**Prorated to full season* ***Includes relief pitchers*

On the pitching side, the number of 200-inning pitchers rebounded a bit, but 200-strikeout hurlers declined to the lowest level since 2009. Nearly all 11 of those pitchers are going to cost you a ton.

	INNINGS		WINS	
Year	Starters	Relievers	Starters	Relievers
2016	63.3%	36.7%	67.1%	32.9%
2017	61.9	38.1	67.5	32.5
2018	59.9	40.1	62.3	37.7
2019	57.9	42.1	59.7	40.3
2020	55.5	44.5	52.2	47.8
2021	57.3	42.7	55.4	44.6
2022	58.7	41.3	59.4	40.6

Two years ago, it looked like the beginning of a paradigm shift. With the proliferation of game openers and innovative bullpen management, reliever innings and wins were poised to overtake those of starters. Roles would be blurred and tactical in-game situations would drive pitcher usage.

Despite starters winning a larger percentage of games than in the past two years, some teams were a significant drag on that average. Here are the teams whose starters accounted for no more than half of their wins:

Team	Wins	From Starters	Pct.
TAM	86	43	50.0%
CHC	74	37	50.0%
BAL	83	41	49.4%
KC	65	32	49.2%
PIT	62	21	33.9%

The opener-heavy Rays are not surprising, but yikes—Pirates! One might think this list would only include cellar-dwellers, but no. Compare that to the Astros, whose starters accounted for 84 of their 106 wins (79%).

This, too:

Year	IP/GS	CG%
2013	5.90	2.6%
2014	5.97	2.4%
2015	5.81	2.1%
2016	5.65	1.7%
2017	5.51	1.2%
2018	5.36	0.9%
2019	5.18	0.9%
2020	4.78	1.6%
2021	5.02	1.0%
2022	5.20	0.7%

2020 was an aberrant season. Still, I thought it was a terrific direction for the game and I hoped we'd continue that trend. Baseball's caretakers did not, doing all they could to preserve the sanctity of the starter and reliever roles. We see the signs of that trend reversal here. Still, more than one-third of all teams' starting pitchers did average fewer than 5 innings per start in 2022. It's just further justification that we should be chasing high-skilled middle relievers over 5th, 4th and maybe even 3rd starters, and not just for wins.

The definition of insanity

The quotable definition of insanity is "doing the same thing over and over again and expecting different results." This definition has been attributed to various sources, from Albert Einstein, to Sigmund Freud, to Alcoholics Anonymous. For us sports fans, I think it harkens back to cartoonist Charles Schulz.

Picture Lucy. She represents the totality of major league bullpens. Her football represents our quest for saves. And every one of us is Charlie Brown. Each year, Lucy presents us with that ball and goads us into attempting a successful kick, only to pull the ball away every time. Yet, we keep going back, year after year.

From the beginning of time (circa 1980), saves have been the bane of our fantasy existence. The commodity is accumulated by a small core of pitchers, and no matter how much talent they may

or may not have, their positioning on a ninth inning mound is left to the fickle whims of a major league manager.

In 1999, I started tracking how well the experts in LABR and Tout Wars could identify the best investments. We did pretty well that first year, with only a 22 percent failure rate (defined as investments that returned less than 50 percent of their draft price). That jumped to 37 percent in 2000 and 59 percent in 2003 before settling into a 35-45 percent range for a good decade.

After a bad year in 2012 (66%), the failure rate settled down again, but breached 50 percent in 2016 and has not abated since. Over the past six years coming into 2022 (not counting 2020), our failure rate has *averaged* 59 percent.

Concurrently, the average draft price for these closers has plummeted from about $20 in the early 2000s to $11.79 in 2021. The riskier the investment, the less we are generally willing to pay. Even five years ago, it was unheard of to draft a potential closer for less than $10; now, at least one-third of our closers cost less than that.

And then there was 2022.

All the draft season talk was about how Liam Hendriks and Josh Hader were getting overdrafted in the second round, or costing owners $25 and up. And why not? Both had earned around $30 for their owners in 2021. But in 2022, Hendriks returned about $21; Hader just $10.

The losses trickled down throughout most of the draft pool. After Emmanuel Clase, Edwin Díaz and Jordan Romano returned fair value, arms like Giovanny Gallegos, Aroldis Chapman and Corey Knebel failed, and most of the sub-$10 speculative picks were losers.

In all, 25 of the 35 pitchers drafted for saves earned back less than 50 percent of their draft value, a record-breaking failure rate of 71 percent. Over the entire draft pool, only 17 of the pitchers even returned positive earnings, and only two turned a profit—Paul Sewald and Devin Williams. In real dollar terms, the $443 spent on saves in 2022 returned just $65. That's less than 15 cents earned for each dollar spent.

What does this mean for 2023?

		Number of pitchers with		
Year	Saves	30+	20+	5+
2013	1266	19	28	41
2014	1264	17	25	46
2015	1292	19	28	44
2016	1276	15	22	52
2017	1179	10	23	51
2018	1244	8	20	50
2019	1180	11	22	53
*2020	1139	9	17	67
2021	1191	9	19	62
2022	1232	10	18	65

**Prorated to full season*

In 2022, relievers notched the most saves since 2018, but the spread was wider than this chart shows. In 2019, 200 pitchers had at least one save, the first time we ever reached that level. In 2022, that jumped to 223, a new record. So, while more saves are being recorded, more pitchers are getting a piece of them.

Odds are the 2022 studs will continue to command top dollar, because that is what the flawed marketplace does. So Emmanuel Clase and Edwin Díaz will surely cost you a second or third round pick. You can decide to pay that if you want, but be sure to familiarize yourself with Díaz's 2019 stat line to get a sense of the range of possible outcomes. Clase has yet to have a down year; maybe he's due, maybe not.

But the bigger question is this: Why are we still chasing a stat that returned 15 cents on the dollar last year?

Some argue that we should continue to play within the rules as written; figuring out how to make the best of a challenging situation is just part of the game. I would argue that sticking with an approach that has a 15-cent R.O.I. is a first-level definition of insanity.

So I continue to wave the flag for adding Holds to the process.

Some argue that Holds are a flawed stat. A hold is "awarded when a reliever enters the game in a save situation and maintains his team's lead for the next relief pitcher, while recording at least one out." This opens up potential grey areas, not the least of which is that a pitcher can be awarded a hold and a loss for the same appearance.

I would argue that a closer can be awarded a save for coming into a clean ninth inning with a three-run lead, facing the bottom of the batting order and giving up two runs. There is nothing award-worthy about that performance either. It's just cherry-picking your particular flavor of disaster.

These are all situational considerations, which lend themselves to grey areas. But we should be more concerned with populating our fantasy rosters with *skilled players*, regardless of their situational fates. Some of the best-skilled relief pitchers are on the mound in the highest leverage situations, often earlier than the ninth inning, and our current rules mostly ignore them.

Holds are not perfect; neither are saves. As I've written about eleventeen times over the past decade, "saves and holds together form a reasonable proxy for overall bullpen performance."

In fact, saves, holds and even wins are essentially the same class of statistic. They are **role-based tags that help identify players who are placed in situations that maximize their skills.** The outcomes of those performances—saves, holds, wins—are team-based results. If we treat them as what they are—just placekeepers—we can focus on building our pitching staffs with what's *most* important—rostering skilled pitchers.

In some ways, holds are an even better stat than wins, especially those awarded to relievers. With a hold, the pitcher was deliberately put on the mound with an expectation of a positive outcome, and rewarded if successful. By comparison, if a pitcher happened to be the last man on the mound when the offense put the team ahead, he's rewarded with a win no matter how poorly he pitched.

Some leagues are slowly coming around to the Saves + Holds mindset. Some have dimmed the stigma by calling them Solds, or Shaves. And some have decided to dip their toes in by using a category like "Saves + 1/2 Holds," noting that multiple holds can be awarded in a single game. I'm not sure that's necessary; it's a hedge against full adoption.

But here's the thing… Even with holds in the formula, drafters will still tend to focus on saves acquisition as their default approach—saves are still more plentiful on an individual player

basis. Then they'll backfill their staff with prime holds targets who could move into the closer's role. This manner of identifying valuable bullpen arms is how we've always done it, but now with the added benefit of getting to add Holds to our category total. That softens the blow when Raisel Iglesias gets traded into a setup role through no fault of our own, or Aroldis Chapman turns into a pumpkin.

Change is hard; I get it. Maybe you can't imagine tinkering with a core Rotisserie statistic that has been a part of this game for more than four decades. But seriously, we gotta stop chasing a stat with a 15 cent R.O.I. Lucy is teeing up that football again; we already know this will not end well.

The New Rules: Here we go!

We have enough trouble projecting the future without MLB throwing a bunch of new wrinkles into the mix. Beginning in 2023, there will be a new balanced schedule, pitch clock, bigger bases, defensive shackles, and a host of corollaries that likely add 50 pages to an already-bloated rulebook.

When deciding to make changes and close loopholes in a roto constitution, I always advise not to make things too complicated or difficult to administrate. But that's exactly what MLB has done. There are so many accommodations for breakages in play and areas where umpires have the discretion to interpret as they see fit that this can only lead to angst.

I hate angst.

The impact of the new balanced schedule: For the first time since ever, all 30 teams will play the other 29 teams at least once during the season. That will mean 24 fewer games against intra-divisional opponents, which will presumably level the competitive playing field.

For some teams and players, this is good news. A.L. East teams will be able to feast on more Central Division chum. If Aaron Judge can hit 62 homers facing divisional foes 76 times, imagine what he could do shifting 24 of those games to some lesser opponents. And Nick Pivetta is probably throwing a party right now. (Were you invited? I was not. Sad.) He faced the Yankees, Rays and Blue Jays 13 times in 2022, accounting for 64 of his 180 innings, and posted a 7.57 ERA against those divisional opponents. His ERA against every other team was 2.95.

Of course, this is not such good news for other teams and players. The Reds, Pirates, Royals and Tigers won't be able to beat up on each other as much, now facing more games against tougher opponents. Even Shane Bieber becomes a little less desirable—his ERA against divisional opponents was 2.27; against everyone else it was 3.58. I might be less tempted to take a chance on Tarik Skubal, or maybe even Hunter Greene. And N.L. West hitters who used to feast on Rockies pitchers will have fewer visits to Coors Field. I'm talking about guys like Jake Cronenworth, Christian Walker and Mike Yastrzemski, all of whom posted an OPS over 1.000 at Coors in 2022.

At First Pitch Arizona, Todd Zola also reminded us that this change will affect park factors as the mix of road parks will now be different. Given the need for a good three years of data here, it will take awhile for this to provide us with usable intel.

Some analysts believe this change will have a more far-reaching impact than any of the other new rules. I wouldn't go that far. The other rules will affect all games; this change only affects some. Still, select players will see a measurable impact.

Gut Prediction: One of the Central Division winners will have a sub-.500 record. One of the other division winners will make a run at 120 victories.

The impact of the pitch clock: The use of a pitch clock in the minors in 2022 cut the duration of games by about 25 minutes. This is good news for people who want shorter games. Fantasy leaguers don't care if games go seven hours as long as our stats keep accumulating, but the pitch clock could potentially impact those numbers.

Pitchers will only be allowed 15 seconds between pitches when the bases are empty and 20 seconds when there are runners on base. By comparison, last year's pitchers took an average of 18.2 seconds and 23.6 seconds, respectively. Chopping off 3-4 seconds seems like no big deal. But for some pitchers, those precious seconds will feel like trying to catch the 5:09pm PATH train to Hoboken when it's 5:05pm and you're stuck in a crowd at 34th street. (New Yorkers understand.) Basically, *every second counts.*

(Yes, you can always catch the 5:16. You're missing the point.)

Major league pitchers have had mixed reactions to the change. The clock may or may not affect their ability to maintain the rhythm to which they have become accustomed. Some might easily adjust; some might not.

The league-wide average time between pitches, regardless of on-base conditions, has slowly increased over the past few years. Some pitchers are used to lollygagging on the mound way beyond the average, and they might have the most trouble adjusting to the new rule. In 2022, here are the starting pitchers who averaged over 20 seconds between pitches, regardless of on-base conditions. *(All advanced data is from Statcast and Baseball Savant.)*

Pitcher	Seconds
Shohei Ohtani	21.7
Luis Garcia (HOU)	21.2
Corbin Burnes	21.1
Michael Kopech	21.1
Yu Darvish	21.0
Lucas Giolito	20.7
Alek Manoah	20.7
Jordan Montgomery	20.4
Kevin Gausman	20.3
Aaron Nola	20.2
Justin Verlander	20.1

Lollygaggers, all of them.

Perhaps more worrisome are hard-throwing relievers. They occupy higher positions on the ranking list above. Those who routinely throw at triple-digit speed might require a longer recovery time between maximum effort deliveries. Shorten that recovery time and what could happen?

- They throw at a lower velocity, which potentially affects their effectiveness.
- They continue to throw at max effort, which potentially affects their effectiveness *and* risks injury.
- They continue to throw at max effort; nothing bad happens.

In 2022, the worst offenders, each taking 24 seconds or longer between pitches were (in ascending order of down time) Hunter Strickland, Alex Vesia, Aroldis Chapman, Andrew Bellati, Devin Williams, Kyle Finnegan and Kenley Jansen. But the co-winners of the 2022 Mike Hargrove Human Rain Delay Award (Pitchers Division) were Jonathan Loaisiga and Giovanny Gallegos, each clocking 25.8 seconds between pitches and besting all hurlers by at least two tenths of a second. (Again, remember the PATH train.)

In 2021, Chapman led the field at 26.9 seconds; Rafael Dolis led in 2020 with 27.2 seconds. Over the past five years, the lollygaggiest pitchers were Chapman (24.3), Emmanuel Clase (24.4) and Finnegan (25.8). Looking only at the data when runners were on base, the following relievers averaged *over a half a minute* between pitches: Alex Colomé, Devin Williams, Giovanny Gallegos and Kenley Jansen (the worst offender at 31.4 seconds). Heck, grab a seat and do Wordle while you're waiting.

All of this adds some risk to our 2023 pitching picks. However, it's not as easy as just pushing a bunch of hard-throwers down our ranking lists. When the clock was tested in the minors, there were reports that it helped young pitchers maintain focus better. Over several years, it even decreased the incidence of injuries. So we can't respond to this in broad strokes.

One thing I do know for sure: the pitch clock has already had a devastating effect on me personally.

Before this year, my wife Sue and I had a routine that had become near and dear to our relationship. Sue works in the ticket office at Clover Park, the Mets' spring training venue and also home to the St. Lucie Mets of the Florida State League (and 2022 Champions). During the minor league season, I'd attend games and wait for her to get off work and join me, usually around the fifth inning. We'd have a beer and watch the rest of the game together, which would be a nice end to our respective workdays.

But since they started using the clock, the games have been going quicker and Sue hasn't gotten off work until almost the eighth inning, *after they've stopped selling beer*. This has been particularly troublesome since our marriage is fueled by evening alcohol.

Okay, that's hyperbole. But it really stinks that we can't have this nice routine anymore. Two innings to wind down together—sans alcohol—just doesn't cut it.

Some rules don't affect everyone equally; I guess that's the point.

Gut Prediction: Starting pitchers will be mostly unaffected. Bullpen management will become even tougher than it already is, with more underperformances, more injuries and more closer turnover.

The impact of bigger bases: Increasing the size of bases from 15 inches to 18 inches was sold to us as a means to reduce injuries and perhaps to increase base-stealing. According to *Baseball America*, when this was tested in the minors, "the stolen base rate and success rate skyrocketed, but that had much more to do with the other rules tweaks than it had with the larger bases." Regardless, the running distance from first base to second base (and second to third) was shorter by four and one half inches (or 11.43 centimeters for Blue Jays fans). Logic says that must have had *some* effect.

Units of measure can be abstract concepts without some real-world examples. So for perspective and context, here are everyday items that are about 4.5 inches (11.43 cm) long:

- The diameter of a compact disc
- The longer side of a household sponge
- A can of Campbell's Chicken Noodle Soup

And here are things that are slightly longer than 4.5 inches:

- An uncapped Bic pen
- Two stacked baseballs
- My Pete Alonso bobble-head

So, is the length of a soup can enough to make a difference in stolen base attempts and successes? Will it help all runners equally? Will it increase the rate that runners attempt to steal? Or will baserunners whose SB success rate was on the fringes of acceptability get more of a boost? Chicken soup cures all ills, so it could help all of that.

I like to use a rule of thumb that the minimum SB success rate that provides value to a team is 80% (some teams are more lenient). Of the 84 players who had at least 10 SB attempts last year, 55 (65%) met that threshold. But there were another 12 who were successful between 75% and 79% of the time. Perhaps those 12 might see a benefit to larger bases. A closer look:

Player	SB	CS	SB%	SBO%	Spd
Luis Robert	11	3	79%	15%	92
Taylor Walls	10	3	77%	14%	101
Whit Merrifield	16	5	76%	17%	100
Steven Kwan	19	5	79%	13%	151
Aaron Hicks	10	3	77%	10%	134
Victor Robles	15	4	79%	23%	143
Julio Rodríguez	25	7	78%	25%	159
Thairo Estrada	21	6	78%	22%	121
Tyler O'Neill	14	4	78%	20%	109
Cedric Mullins II	34	10	77%	29%	120
Marcus Semien	25	8	76%	21%	140
Adam Engel	12	4	75%	32%	143

I'd filter out the first group of three as their underlying speed skill (Spd) was barely league average or below. Steven Kwan and Aaron Hicks might have some potential to increase their bags, but they'd need to get more of a green light (SBO%). That could come with larger bases, but is not a given.

The final seven have the underlying skill and have been given the opportunity in the past. They might be the best prospects for a bump in stolen bases.

Those with slightly lower success rates, between 70% and 74%, who meet the other two criteria include Luke Williams, Oneil Cruz, Dylan Moore and Jazz Chisholm. They could see a surge in steals too.

Further fueling these numbers will be the fallout from pitchers being limited to only two throws to first base to hold a runner. A third throw has to nail the runner or the pitcher will be charged with a balk. This sets up a cat-and-mouse game, and odds are there will be many more runners taking off for second base, especially as the pitch clock ticks down. According to *BA*, this made more of an impact on the rise of SB in the minors.

Still, all this is good news for our stolen base totals. After a decade-long decline in running…

Year	Tot SB	Players with 20+	30+
2013	2693	40	16
2014	2764	39	15
2015	2505	30	7
2016	2537	28	14
2017	2527	29	6
2018	2474	28	11
2019	2280	21	8
*2020	2387	29	9
2021	2213	19	6
2022	2487	24	6

** Pro-rated to full season*

…we started to turn the corner last year. However, that 274-SB increase may not be a cause for celebration. We did see a nice influx of speedy guys in 2022, but they are not necessarily ones you want to chase. The following players stole at least 10 bases in 2022.

Player	SB	BA	xBA	OBP
Jorge Mateo	35	.221	.223	.267
Bobby Witt, Jr.	30	.254	.235	.294
Andrew Velasquez	17	.196	.196	.236
Jose Siri	14	.213	.206	.268
Bryson Stott	12	.234	.239	.295
Eli White	12	.200	.169	.274
Luke Williams	11	.236	.187	.287
Oneil Cruz	11	.233	.232	.294
Jeremy Pena	11	.253	.250	.289
Taylor Walls	10	.172	.209	.268

That's 163 steals from 10 relatively new players, none of whom could crack a .300 OBP. These are among the "huge surge in rookie debuts who possessed less potent artillery" as I noted earlier. The fantasy value of these players might be goosed a bit because of those bags, but it's risky to chase steals from players who have trouble making it to first base.

That's not all. There were also a dozen veterans who swiped at least 10 bags and could not break a .300 OBP last year: Harrison Bader, Cody Bellinger, Adam Engel, Billy Hamilton, Garrett Hampson, Ramon Laureano, Nicky Lopez, Brandon Marsh, Whit Merrifield, Victor Robles, Myles Straw and Joe Wendle. That was another 163 steals.

These 326 stolen bases from sub-par OBP sources represented a disturbing data point:

Players with 10+ SB and sub-.300 OBP

Year	No.	Steals
2016	13	193
2017	11	233
2018	17	293
2019	8	139
2021	16	214
2022	22	326

So, while steals may be getting easier to come by, they also come with a cost. Still, players are running, and that trend will likely increase next season. If the impact of the larger bases in the minors is any indication, the spike in base-stealing could be substantial. If you've decided to hoard steals, that might not be necessary next year. Or in some cases, advisable.

Gut Prediction: League-wide stolen base attempts will rise 20 percent, and at least five players will exceed 50 bags. The supply-demand valuation transition begins.

The impact of banning the shift: This rule will force all four infielders to be positioned on the infield dirt with two on each side of second base. This is a terrible, terrible idea.

Balanced schedule? Makes competitive sense. Larger bases? A tweak at the margins. Pitch clock? Quickening the pace of play doesn't change the rules of the game. But restricting the free movement of defensive players? That alters the very game itself.

Last year I wrote:

> *"At its core, defensive shifting just seems to be part of the natural batter versus pitcher meta-game. As such, the common argument we keep hearing is, "Well, batters just need to learn to hit the other way," which is obviously as easy as teaching a frog to croak Puccini. If it was that simple, then this wouldn't even be an issue, but 100 mph fastballs test the limits of human reaction time. It's tough enough for hitters to make any contact these days, just like it's tough enough to train frogs to even stay on key."*

That hasn't changed. The only thing that surprises me a little is this: Faster pitches beget shorter batter reaction times, which should beget swinging late on pitches, which should beget more opposite field contact. There are too many "shoulds" in that sentence (and too many "begets") but it makes logical sense to me. Lefty hitters should be spraying hits all over left field. Righty hitters should be spraying hits all over right field. Why isn't that happening?

On our fantasy end, what *should* happen with the shift ban is more hits, higher batting averages and higher ERAs. Again, this won't affect all players equally and there are no guarantees. Analysts are speculating that some hitters will over-compensate for the gaps in the defense, open their swings and strike out more often, sacrificing the potential for additional hits. I suppose that could happen.

But baseball remains a game of adjustments and readjustments, and teams will always try to find loopholes to manipulate the system. So, despite the limitations imposed by this new rule, defenses will likely find a way to reposition their fielders—shortstop right at second base, secondbaseman on the edge of the grass, rightfielder moves in, centerfielder moves to hard right center—to cover more of the right side and minimize the impact for lefty hitters. Will it work? Who knows? If it does, someone else will come up with another tactic to combat it.

In the end, we might see virtually no effect on a league-wide basis. Individual players are another story.

It's fair to assume that high contact pitchers might be most affected in a game where more balls-in-play find outfield grass. These low-strikeout hurlers already tend to have higher ERAs. But I'm not worried that a guy like Spenser Watkins—with his 4.70 ERA and 14% strikeout rate—will be harmed by a more open field; I'm not drafting his ilk anyway. I'm more concerned about the downside of starting pitchers like these (2022 stats, maximum 3.99 ERA and 18% strikeout rate):

Starters	ERA	WHIP	K%	GB%	LD%	FB%
Adrian Sampson	3.11	1.23	17	40	20	40
Andre Pallante	3.17	1.42	16	64	19	17
Dean Kremer	3.23	1.25	17	39	21	39
Johnny Cueto	3.35	1.23	16	43	19	38
Cal Quantrill	3.38	1.21	17	42	20	38
Matt Manning	3.43	1.17	18	41	19	40
Zack Greinke	3.68	1.34	12	41	23	35
Adam Wainwright	3.71	1.28	18	43	24	33
Devin Smeltzer	3.71	1.22	14	39	16	46
Chris Flexen	3.73	1.33	16	34	20	46
JP Sears	3.86	1.29	18	40	18	41
Noah Syndergaard	3.94	1.25	17	43	19	38
Cole Irvin	3.98	1.16	17	38	20	42

And these relief pitchers, most of whom are unlikely to be drafted but typically end up on a roster when you're trying to tourniquet a hemorrhaging ERA:

Relievers	ERA	WHIP	K%	GB%	LD%	FB%
Jake Woodford	2.23	1.12	13	52	20	28
Alex Young	2.36	1.50	18	54	20	25
Zach Pop	2.77	1.15	16	57	19	24
Erasmo Ramirez	2.92	1.08	18	45	21	34
Mason Thompson	2.92	1.14	15	53	15	32
Joel Payamps	3.23	1.37	17	53	17	31
Ralph Garza	3.34	1.54	11	41	26	32
Andres Machado	3.34	1.37	18	43	23	34

All those ERAs could spike.

Perhaps targeting hitters is a better approach. Here is a list of last year's highest contact hitters who were shifted against the most in 2022 (minimum 300 PA, 75% shift rate, 75% contact rate):

Hitters	BA	Shift%	ct%	GB%	LD%	FB%
Yordan Alvarez	.306	88	77	39	22	39
Kyle Tucker	.257	91	83	34	19	47
Josh Naylor	.256	77	82	49	17	34
Adley Rutschman	.254	80	78	38	23	38
Salvador Perez	.254	76	76	36	18	46
Keibert Ruiz	.251	82	87	40	23	37
Marcus Semien	.248	75	82	34	19	47
Corey Seager	.245	93	83	40	21	39
Anthony Santander	.240	85	79	31	19	50
Max Kepler	.227	90	83	46	20	34
Jonah Heim	.227	78	79	39	18	43
Anthony Rizzo	.224	83	78	33	18	49
Jesse Winker	.219	76	77	39	21	41
Rowdy Tellez	.219	78	77	39	16	45
Carlos Santana	.202	98	80	39	17	44

If you were to assemble a group of prime candidates for a batting average spike, this is as good a place to start as any. Within this list, a few are particularly interesting—those with high line drive or ground ball rates. Yordan Alvarez is scary. Andy Rutschman and Keibert Ruiz lead a quartet of upwardly mobile backstops. And imagine a healthy Max Kepler and Jesse Winker.

In the end, if you decide to downgrade pitchers or upgrade hitters, just don't treat everyone on the above lists the same. Spend time looking at each one's profile individually. And for those hoping for data to support Joey Gallo hitting .270, sorry to disappoint you.

Gut Prediction: Hitters who had been shifted against the most will see an average 15-point increase in batting average, but some could see a 30-40 point boost. Some pitchers will see a 0.10 increase in ERA. However, these bumps are just averages and will not affect every player equally.

Chaos theory

Baseball was never perfectly predictable, but we could always count on power hitters slamming balls over fences and bullet throwers keeping runners off the bases. There were patterns to the data, leading indicator skills metrics, and aging curves. We had assembled enough research and rules to project performance within a broad range, and mitigate a good amount of risk. There were always lots of messy moving pieces but we could organize them well enough that playing fantasy baseball wasn't a completely random game.

For 2023, all bets are off.

Credible research requires a control group and, optimally, a single test variable. Once you introduce more variables, it becomes challenging to determine which one impacts the observed results. With MLB introducing *multiple* rule changes, it will be tough to pinpoint the reason for any anomalies—or utter chaos—that occurs in 2023.

If ERAs spike, will it be because the clock messed with pitcher timing? Or will it be because of the new holes in defensive alignments? Or will it be because of an increase in stolen bases? Or a weak division pitcher facing better opponents?

If stolen bases spike, will it be because of the larger bases? Or will it be because the clock has messed with pitcher timing, opening up more opportunities to steal? Or will it be because pitchers can't hold runners on as well with the pickoff limitations? Or maybe runners are taking off more often with the pitch clock ticking down? Or will it be because rising batting averages due to shift restrictions opened up more baserunning opportunities?

If stolen bases dive, will it be because the shift limitations position the shortstop closer to the second base bag than usual? Or will it be because there are more holes on the right side of the infield, which encourage more hit-and-run plays?

If batting averages soar, will it be because of the shift limitations? Or will it be because the clock is messing with pitcher timing? Or will it be because the defense is trying to protect against increased base-stealing, thereby opening up even more holes? Or will it be because strong division hitters are facing more weak division pitchers?

If batting averages decline, will it be because hitters are seduced by the outfield gaps and striking out more? Or will it be because the pitchers are trying to adjust to shorter recovery times by not throwing as hard so batters are trying to go the other way more often, unsuccessfully? Or will it be because weak division hitters are facing more strong division pitchers?

Or if batting averages rise or fall, or ERAs rise or fall, or stolen bases rise or fall, might it be due to normal everyday, run-of-the-mill regression, and have nothing to do with the new rules at all? Yeesh.

There's more.

It is also possible that all the stat lines at the end of 2023 will look no different than those of this year. Perhaps the rule changes will cancel each other out. Or maybe the impacts seen in the minors simply won't carry over to the majors. Or maybe normal

regression will effectively offset any impact of the new rules.

But one season is just a sample size of one. It might also be a faux equilibrium that could explode in 2024 if there is a shift in any of the variables. This could be the fluttering of a butterfly's wings that causes a tsunami. If everything looks the same, we just might be sitting on a slowly-igniting powder keg.

Or maybe the explosion happens now. ERAs, stolen bases and batting averages could all spike. Cy Young candidates could all have ERAs over 4.00. Andrew Velasquez could steal 100 bases. Joey Gallo could compete for the batting title. The Tigers and Pirates could meet in the World Series.

And it all could start with a can of soup. Flap those wings, little butterfly!

With these rule changes, so many things could happen. There are too many interrelationships. And we may not be able to parse the data well enough to figure out which specific variable drives any particular result. Because of this massive uncertainty, it was difficult to adjust the player projections in this book. We've made a few tweaks, but nothing truly impactful. Because, well, we just don't know. And when you just don't know, everything becomes more random.

Welcome to our prognosticating nightmare.

Gut Prediction: The theme for next year's introduction will be the fallout from unintended consequences.

But, wait…

Maybe, possibly… everything could go right. If nothing else, this *will* be the first off-season in years with a baseline of normality. Maybe all these changes will provide us with a more fulfilling baseball spectating experience. Maybe that alone will be worth any statistical wreckage left for us analysts to clean up. We are survivors, after all. My cynicism has trouble seeing calm climbing out of chaos, but who knows? It's possible that baseball will once again prove to be an immortal phoenix, rising from the ashes of yet another incarnation.

LIMA 2023

It's been 25 years since I participated in the inaugural Tout Wars NL-only draft and made one of the most notable $1 buys in history. Here is how I describe it in my upcoming historical memoir, *Fantasy Expert* (coming Fall 2023 to a bookseller near you):

> *About two-thirds of the way into the draft, I had spent a ton on offense but the only pitchers on my staff were two mediocre starters and a closer. Fearing that I would not be able to afford any other decent pitchers, I started looking at the names on my sabermetric speculation list – those guys with great support metrics but lousy surface stats. My Denny Neagle List. It was time to take a dive.*
>
> *I glanced at my page and saw a 25-year-old right-hander who had just earned the No. 4 starter job in the Houston Astros rotation. His ERAs coming into 1998 were 6.11, 5.70 and 5.28. As the draft passed the three-hour mark, I called out four words that would forever change the course of my fantasy baseball career.*
>
> *"Jose Lima, one dollar."*

I then go on to deconstruct the phenomenon of "crickets" and how everyone thought I was crazy. But Lima went on to win 16 games with a 3.71 ERA, earning me $23 in profit and helping me win the Tout Wars-NL league. The process I used to identify him as a target, and the draft strategy that arose from that became the LIMA Plan: Low Investment Mound Aces.

The plan had a specific set of rules and statistical benchmarks that have been adjusted over time. But we have not been keeping up with the current statistical environment fast enough. I was looking over the definition in last year's book and realized that LIMA has become out of touch with the current game and the way we do analysis now.

So it's time for an update.

The general rules remain unchanged: You start by budgeting $60 of your $260 wallet for your pitching staff, allotting $30 of that to acquire saves. Then you ignore ERA and WHIP, instead targeting pitchers solely by their skills metrics. We've always looked for high strikeout rates and K/BB ratios, and low HR rates. Those skills are still foundation elements, but the metrics and benchmarks need to better reflect how we measure them now. So, the new LIMA filters will advise you to only draft pitchers with:

- a strikeout rate of 25% or greater
- a walk rate of less than 10%
- a home run rate of less than 3.5%

In 2022, these new benchmarks would have yielded about 100 LIMA-worthy pitchers, about 70% of them relievers. About two-thirds of the entire LIMA pool earned less than $10, making them potentially undervalued. It's a classic LIMA pool.

Stud starters like Justin Verlander and Shane McClanahan lead that way, as do lockdown closers like Emmanuel Clase and Edwin Díaz. The magic comes further down the list, with pitchers who will likely be undervalued next spring, like Tyler Mahle, Shawn Armstrong and perhaps Taylor Rogers. All are LIMA-worthy based on their 2022 skills metrics. Our projections in this book yield a new set of candidates for 2023, identifiable by the LIMA grades in their player boxes.

The last part of the Plan are the hitters. Those metrics and benchmarks will remain the same. You can review the complete set of LIMA rules in the Fanalytic Encyclopedia on page 60.

CONSUMER ADVISORY

AN IMPORTANT MESSAGE FOR FANTASY LEAGUERS REGARDING PROPER USAGE OF THE *BASEBALL FORECASTER*

This document is provided in compliance with authorities to outline the prospective risks and hazards possible in the event that the Baseball Forecaster is used incorrectly. Please be aware of these potentially dangerous situations and avoid them. The publisher assumes no risk related to any financial loss or stress-induced illnesses caused by ignoring the items as described below.

1. The statistical projections in this book are intended as general guidelines, not as gospel. It is highly dangerous to use the projected statistics alone, and then live and die by them. That's like going to a ballgame, being given a choice of any seat in the park, and deliberately choosing the last row in the right field corner with an obstructed view. The projections are there, you can look at them, but there are so many better places to sit.

We have to publish those numbers, but they are stagnant, inert pieces of data. This book focuses on a live forecasting process that provides the tools so that you can understand the leading indicators and draw your own conclusions. If you at least attempt your own analyses of the data, and enhance them with the player commentaries, you can paint more robust, colorful pictures of the future.

In other words...

If you bought this book purely for the projected statistics and do not intend to spend at least some time learning about the process, then you might as well just buy an $8 magazine.

2. The player commentaries in this book are written by humans, just like you. These commentaries provide an overall evaluation of performance and likely future direction, but 70-word capsules cannot capture everything. Your greatest value will be to use these as a springboard to your own analysis of the data. Odds are, if you take the time, you'll find hidden indicators that we might have missed. Forecaster veterans say that this self-guided excursion is the best part of owning the book.

3. This book does not attempt to tackle playing time. Rather than making arbitrary decisions about how roles will shake out, the focus is on performance. The playing time projections presented here are merely to help you better evaluate each player's talent. Our online preseason projections update provides more current AB and IP expectations based on how roles are being assigned.

4. The dollar values in this book are intended solely for player-to-player comparisons. They are not driven by a finite pool of playing time—which is required for valuation systems to work properly—so they cannot be used for bid values to be used in your own draft.

There are two reasons for this:

a. The finite pool of players that will generate the finite pool of playing time will not be determined until much closer to Opening Day. And, if we are to be brutally honest, there is really no such thing as a finite pool of players.

b. Your particular league's construction will drive the values; a $10 player in a 10-team mixed league will not be the same as a $10 player in a 12-team NL-only league.

Note that book dollar values also cannot be compared to those published at BaseballHQ.com as the online values are generated by a more finite player pool.

5. Do not pass judgment on the effectiveness of this book based on the performance of a few individual players. The test, rather, is on the collective predictive value of the book's methods. Are players with better base skills more likely to produce good results than bad ones? Years of research suggest that the answer is "yes." Does that mean that every high skilled player will do well? No. But many more of them will perform well than will the average low-skilled player. You should always side with the better percentage plays, but recognize that there are factors we cannot predict. Good decisions that beget bad outcomes do not invalidate the methods.

6. If your copy of this book is not marked up and dog-eared by Draft Day, you probably did not get as much value out of it as you might have.

7. This edition of the Forecaster is not intended to provide absorbency for spills of more than 7.5 ounces.

8. This edition is not intended to provide stabilizing weight for more than 18 sheets of 20 lb. paper in winds of more than 45 mph.

9. The pages of this book are not recommended for avian waste collection. In independent laboratory studies, 87% of migratory water fowl refused to excrete on interior pages, even when coaxed.

10. This book, when rolled into a cylindrical shape, is not intended to be used as a weapon for any purpose, including but not limited to insect extermination, canine training or to influence bidding behavior at a fantasy draft.

Welcome to the 37th Edition

If you are new to the *Baseball Forecaster*, the sheer volume of information in this book may seem a bit daunting. We don't recommend you assess its contents over a single commute to work, particularly if you drive. But do set aside some time this winter; instead of staring out the window, waiting for baseball to begin again, try immersing yourself in all the wisdom contained in this tome. There's a ton of it, and the payoff—Yoo-Hoo or otherwise—is worth it.

But where to begin?

The best place to start is with the Encyclopedia of Fanalytics, which provides the foundation concepts for everything else that appears in these pages. It's our research archive and collective memory, just as valuable for veterans as it is for rookies. Take a cursory read-through, lingering at any section that looks interesting. You'll keep coming back here frequently.

Then just jump in. Close your eyes, flip to a random page, and put your finger down anywhere. Oh, look—Gavin Lux. Power has been disappointing, but contact rate is on the rise and he's just 25. With some consistency and age-related skills growth... maybe there's another level lurking here. See, you've learned something already!

What's New in 2023?

The game on the field is ever-changing; and we strive to keep up:

Updated formulas: we refined a couple of existing formulas to better reflect the trends in today's game:

- LIMA Grades get an adjustment as we shift benchmark levels to better reflect today's walk, strikeout, and HR rates. See the side bar on Ron Shandler's introductory essay (pg. 9) for details.
- Our xHR (and xHR/F) metrics now adjust to the league environment each year, making it more accurate for each individual season's HR output by measuring batted balls that would have been a HR in that season. (Astute readers may notice xHR totals in this book may not match prior editions of this book due to this change.)

A new way to look at playing time is a major research piece that introduces an entirely new way to think about (and measure) playing time. See pages 67 and 275 for more info.

Also, answers to questions, such as: How well does a reliever's first-half performance foretell their second-half performance? How does volume of AB and IP correlate with roto standings points? Is there an ideal structure to your first five draft picks? And much, much more.

Updates

The Baseball Forecaster page at BaseballHQ.com is at www.baseballhq.com/bf2023. This is your headquarters for all information and updates regarding this book. Here you will find links to the following:

Content Updates: In a project of this magnitude, there are occasionally items that need clarification or correction. You can find them here.

Free Projections Update: As a buyer of this book, you get one free 2023 projections update. This is a set of Excel spreadsheet files that will be posted on or about March 1, 2023. Remember to keep the book handy when you visit as the access codes are hidden within these pages.

Electronic book: The complete PDF version of the *Forecaster*—plus Excel versions of most key charts—is available free to those who bought the book directly through the BaseballHQ.com website. These files will be available in January 2023 for most of you; those who have an annual standing order should have received the PDF just before Thanksgiving. Contact us if you do not receive information via e-mail about access. Information about the e-book version can be found through the website.

If you purchased the book online or at a bookstore, or would like these files earlier, you can purchase them from us for $9.95. Reach us at support@baseballhq.com for more information.

Beyond the Forecaster

The *Baseball Forecaster* is just the beginning. The following companion products and services are described in more detail in the back of the book.

BaseballHQ.com is our home website. It provides regular updates to everything in this book, including daily updated statistics and projections. A subscription to BHQ gets you more than 1,000 articles over the course of a year updated daily from spring training through the end of the regular season, customized tools, access to data going back over a decade, plus much more. For a free peek, sign up for our BaseballHQFriday newsletter at www.baseballhq.com/friday.

We take this show on the road twice a year via our *First Pitch Forums* weekend conferences. We just completed our 27th year of our Arizona Fall League symposium, *First Pitch Arizona*. It's the ultimate fantasy baseball getaway, where you can meet top industry analysts and network with fellow fantasy leaguers. There are also plans to return for *First Pitch Florida* in 2023, with three days of baseball talk, spring training games and the legendary LABR expert league drafts. Find out more about these events on page 281 and at BaseballHQ.com.

The 18th edition of the *Minor League Baseball Analyst* is the *Forecaster's* prospect companion, with stat boxes for 900-plus prospects, essays on prospects, lists upon lists, and more. In an era where rookies matter, it's an essential resource and available in January.

RotoLab is the best draft software on the market and comes pre-loaded with our projections. Learn more at www.rotolab.com.

Even further beyond the Forecaster

Visit us on *Facebook* at www.facebook.com/baseballhq. "Like" the BaseballHQ page for updates, photos from events and links to other important stuff.

Follow us on *Twitter*. Site updates are tweeted from @BaseballHQ and many of our writers share their insights from their own personal accounts. We even have a list to follow: www.twitter.com/BaseballHQ/lists/hq-staff.

But back to baseball. Your winter comfort awaits.

—Brent Hershey and Ray Murphy

For new readers...

Everything begins here. The information in the following pages represents the foundation that powers everything we do.

You'll learn about the underlying concepts for our unique mode of analysis. You'll find answers to long-asked questions, interesting insights into what makes players tick, and innovative applications for all this newfound knowledge.

This Encyclopedia is organized into several logical sections:

1. Fundamentals
2. Batters
3. Pitchers
4. Prospects
5. Gaming

Enough talking. Jump in.

Remember to breathe.

For veteran readers…

As we do in each edition, this year's ever-expanding Encyclopedia includes relevant research results we've published over the past year. We've added some of the essays from the Research Abstracts section in the 2022 *Forecaster* as well as some other essays from BaseballHQ.com.

And we continue to mold the content to best fit how fantasy leaguers use their information. Many readers consider this their fantasy information bible.

Okay, time to jump-start the analytical process for 2023. Remember to breathe—it's always good advice.

Abbreviations

Fundamentals

What is Fanalytics?

Fanalytics is the scientific approach to fantasy baseball analysis. A contraction of "fantasy" and "analytics," fanalytic gaming might be considered a mode of play that requires a more strategic and quantitative approach to player analysis and game decisions.

The three key elements of fanalytics are:

1. Performance analysis

2. Performance forecasting

3. Gaming analysis

For performance analysis, we tap into the vast knowledge of the sabermetric community. Founded by Bill James, this area of study provides objective and progressive new ways to assess skill. What we do in this book is called "component skills analysis." We break down performance into its component parts, then reverse-engineer it back into the traditional measures with which we are more familiar.

Our forecasting methodology is one part science and one part art. We start with a computer-generated baseline for each player, driven by the performance analysis and a contextual assessment of the player's role and expected playing time. We then make subjective adjustments based on a variety of factors, such as discrepancies in skills indicators and historical guidelines gleaned from more than 30 years of research. We don't rely on a rigid model; our method forces us to get our hands dirty.

You might say that our brand of forecasting is more about finding logical journeys than blind destinations.

Gaming analysis is an integrated approach designed to help us win our fantasy leagues. It takes the knowledge gained from the first two elements and adds the strategic and tactical aspect of each specific fantasy game format.

Component Skills Analysis

Familiar gauges like HR and ERA have long been used to measure skill. In fact, these gauges only measure the outcome of an individual event, or series of events. They represent statistical output. They are "surface stats."

Raw skill is the talent beneath the stats. Players use these skills to create the individual events, or components, that are the building blocks of measures like HR and ERA. Our approach:

1. It's not about batting average; it's about seeing the ball and making contact. We target hitters based on elements such as their batting eye (walks to strikeouts ratio), how often they make contact and the type of contact they make. We then combine these components into an "expected batting average." By comparing each hitter's actual BA to how he should be performing, we can draw conclusions about the future.

2. It's not about home runs; it's about power. From the perspective of a round bat meeting a round ball, it may be only a fraction of an inch at the point of contact that makes the difference between a HR and a long foul ball. When a ball is hit safely, often it is only a few inches that separate a HR from a double or long fly out. We can now measure elements like swing speed, exit velocity and launch angle to provide a more granular perspective. We must incorporate all these components to paint a complete picture of power.

3. It's not about ERA; it's about getting the ball over the plate and minimizing the damage of contact. Forget ERA. You want to draft pitchers who walk few batters (Control), strike out many (Dominance) and succeed at both in tandem (Command). You generally want pitchers who keep the ball on the ground (because home runs are bad), though some fly ball pitchers can succeed under the right conditions. All of this translates into an "expected ERA" that you can use to validate a pitcher's actual performance.

4. It's never about wins. For pitchers, winning ballgames is less about skill than it is about offensive support. As such, projecting wins is a high-risk exercise and valuing hurlers based on their win history is dangerous. Current trends in pitching usage—which fragment roles and spread innings to more pitchers—dilute our ability to project wins even more. Target skill; wins may or may not come, but it's your best hope. Many leagues are switching to tracking innings instead.

5. It's not about saves; it's about opportunity first and skills second. While the highest-skilled pitchers have the best potential to succeed as closers, they still have to be given the ball with the game on the line in the 9th inning, and that is a decision left to others. Over the past 10 years, about 55% of relievers drafted for saves failed to hold the role for the entire season (that percentage is over 63% since 2018). The lesson: Don't take chances on draft day. There will always be saves in the free agent pool. Or toss out a wider net over the bullpen pool and switch to Saves-plus-Holds.

Accounting for "luck"

Luck has been used as a catch-all term to describe random chance. When we use the term here, we're talking about unexplained variances that shape the statistics. While these variances may be random, they are also often measurable and projectable. To get a better read on "luck," we use formulas that capture the external variability of the data.

Through our research and the work of others, we have learned that when raw skill is separated from statistical output, what's remaining is often unexplained variance. The aggregate totals of many of these variances, for all players, is often a constant. For instance, while a pitcher's ERA might fluctuate, the rate at which his opposition's batted balls fall for hits will tend towards roughly 30%. Large variances can be expected to regress towards 30%.

Why is all this important? Analysts complain about the lack of predictability of many traditional statistical metrics. The reason they find it difficult is that they are trying to project performance using metrics that are loaded with external noise. Raw skills metrics follow better-defined trends during a player's career. Then, as we get a better handle on the variances—explained and unexplained—we can construct a more complete picture of what a player's statistics really mean.

Baseball Forecasting

Forecasting in perspective

The crystal ball aura of "predicting the future" conceals the fact that forecasting is a process. We might define it as "the systematic process of determining likely end results." At its core, it's scientific.

However, the *outcomes* of forecasted events are what are most closely scrutinized, and are used to judge the success or failure of the forecast. That said, as long as the process is sound, the forecast has done the best job it can do. *In the end, forecasting is about analysis, not prophecy.*

Baseball performance forecasting is inherently a high-risk exercise with a very modest accuracy rate. This is because the process involves not only statistics, but also unscientific elements, from random chance to human volatility. And even from within the statistical aspect there are multiple elements that need to be evaluated, from skill to playing time to a host of external variables.

Every system is comprised of the same core elements:

- Players will tend to perform within the framework of past history and/or trends.
- Skills will develop and decline according to age.
- Statistics will be shaped by a player's health, expected role and venue.

While all systems are built from these same elements, they also are constrained by the same limitations. We are all still trying to project a bunch of human beings, each one...

- with his own individual skill set
- with his own rate of growth and decline
- with his own ability to resist and recover from injury
- limited to opportunities determined by other people
- generating a group of statistics largely affected by external noise.

Research has shown that the best accuracy rate that can be attained by any system is about 70%. In fact, a simple system that uses three-year averages adjusted for age ("Marcel") can attain a success rate of 65%. This means all the advanced systems are fighting for occupation of the remaining 5%.

But there is a bigger question… *what exactly are we measuring?* When we search for accuracy, what does that mean? In fact, any quest for accuracy is going to run into a brick wall of paradoxes:

- If a slugging average projection is dead on, but the player hits 10 fewer HRs than expected (and likely, 20 more doubles), is that a success or a failure?
- If a projection of hits and walks allowed by a pitcher is on the mark, but the bullpen and defense implodes, and inflates his ERA by a run, is that a success or a failure?
- If the projection of a speedster's rate of stolen base success is perfect, but his team replaces the manager with one that doesn't run, and the player ends up with half as many SBs as expected, is that a success or a failure?
- If a batter is traded to a hitters' ballpark and all the touts project an increase in production, but he posts a statistical line exactly what would have been projected had he not been traded to that park, is that a success or a failure?
- If the projection for a bullpen closer's ERA, WHIP and peripheral numbers is perfect, but he saves 20 games instead of 40 because the GM decided to bring in a high-priced free agent at the trading deadline, is that a success or a failure?
- If a player is projected to hit .272 in 550 AB and only hits .249, is that a success or failure? Most will say "failure." But wait a minute! The real difference is only two hits per month. That shortfall of 23 points in batting average is because a fielder might have made a spectacular play, or a screaming liner might have been hit right at someone, or a long shot to the outfield might have been held up by the wind... once every 14 games. Does that constitute "failure"?

Even if we were to isolate a single statistic that measures "overall performance" and run our accuracy tests on it, the results will still be inconclusive.

According to OPS, these players were virtually identical in 2022:

BATTER	HR	RBI	SB	BA	OBA	SLG	OPS
Tellez,R.	35	89	2	.219	.306	.461	.767
Urshela,G	13	64	1	.285	.338	.429	.767

If I projected Rowdy Tellez-caliber stats and ended up with Gio Urshela's numbers, I'd hardly call that an accurate projection. According to Rotisserie dollars, these players were also dead-on in 2022:

BATTER	HR	RBI	Runs	SB	BA	R$
Arenado,N	30	103	73	5	.293	$27
Semien,M	26	83	101	25	.248	$27

It's not so simple for someone to claim they have accurate projections. And so, it is best to focus on the bigger picture, especially when it comes to winning at fantasy baseball.

More on this: "The Great Myths of Projective Accuracy"

http://www.baseballhq.com/great-myths-projective-accuracy

Baseball Forecaster's forecasting process

Our approach is to assemble component skills in such a way that they can be used to validate our observations, analyze their relevance and project a likely future direction.

In a perfect world, if a player's raw skills improve, then so should his surface stats. If his skills decline, then his stats should follow. But, sometimes a player's skill indicators increase while his surface stats decline. These variances may be due to a variety of factors.

Our forecasting process is based on the expectation that events tend to move towards universal order. Surface stats will eventually approach their skill levels. Unexplained variances will regress to a mean. And from this, we can identify players whose performance may potentially change.

For most of us, this process begins with the previous year's numbers. Last season provides us with a point of reference, so it's a natural way to begin the process of looking at the future. Component skills analysis allows us to validate those numbers. A batter with few HRs but elevated power metrics has a good probability of improving his future HR output. A pitcher whose ERA was poor while his pitching support metrics were solid might be a good bet for ERA improvement.

Of course, these leading indicators do not always follow the rules. There are more shades of grey than blacks and whites. When indicators are in conflict—for instance, a pitcher who is displaying both a rising strikeout rate and a rising walk rate—then we have to find ways to sort out what these indicators might be saying.

It is often helpful to look at leading indicators in a hierarchy. A rank of the most important pitching indicators might be: K-BB%, K%, BB% and GB/FB rate. For batters, contact rate tops the list, followed by power, walk rate and speed.

Assimilating additional research

Once we've painted the statistical picture of a player's potential, we then use additional criteria and research results to help us add some color to the analysis. These other criteria include the player's health, age, changes in role, ballpark and a variety of other factors. We also use the research results described in the following pages. This research looks at things like traditional periods of peak performance and breakout profiles.

The final element of the process is assimilating the news into the forecast. This is the element that many fantasy leaguers tend to rely on most since it is the most accessible. However, it is also the element that provides the most noise. Players, management and the media have absolute control over what we are allowed to know. Factors such as hidden injuries, messy divorces and clubhouse unrest are routinely kept from us, while we are fed red herrings and media spam. *We will never know the entire truth.*

Quite often, all you are reading is just other people's opinions... a manager who believes that a player has what it takes to be a regular or a team physician whose diagnosis is that a player is healthy enough to play. These words from experts have some element of truth, but cannot be wholly relied upon to provide an accurate expectation of future events. As such, it is often helpful to develop an appropriate cynicism for what you read.

For instance, if a player is struggling for no apparent reason and there are denials about health issues, don't dismiss the possibility that an injury does exist. There are often motives for such news to be withheld from the public.

And so, as long as we do not know all the facts, we cannot dismiss the possibility that any one fact is true, no matter how often the media assures it, deplores it, or ignores it. Don't believe everything you read; use your own judgment. If your observations conflict with what is being reported, that's powerful insight that should not be ignored.

Also remember that nothing lasts forever in major league baseball. *Reality is fluid.* One decision begets a series of events that lead to other decisions. Any reported action can easily be reversed based on subsequent events. My favorite examples are announcements of a team's new bullpen closer. Those are about the shortest realities known to man.

We need the media to provide us with context for our analyses, and the real news they provide is valuable intelligence. But separating the news from the noise is difficult. In most cases, the only thing you can trust is how that player actually performs.

Embracing imprecision

Precision in baseball prognosticating is a fool's quest. There are far too many unexpected variables and noise that can render our projections useless. The truth is, the best we can ever hope for is to accurately forecast general tendencies and percentage plays.

However, even when you follow an 80 percent play, for instance, you will still lose 20 percent of the time. That 20 percent is what skeptics use as justification to dismiss prognosticators; they conveniently ignore the more prevalent 80 percent. The paradox, of course, is that fantasy league titles are often won or lost by those exceptions. Still, long-term success dictates that you always chase the 80 percent and accept the fact that you will be wrong 20 percent of the time. Or, whatever that percentage play happens to be.

For fantasy purposes, playing the percentages can take on an even less precise spin. The best projections are often the ones that are just far enough away from the field of expectation to alter decision-making. In other words, it doesn't matter if I project Player X to bat .320 and he only bats .295; it matters that I project .320 and everyone else projects .280. Those who follow my less-accurate projection will go the extra dollar to acquire him in their draft.

Or, perhaps we should evaluate the projections based upon their intrinsic value. For instance, coming into 2022 would it have been more important for me to tell you that Trea Turner was going to hit .300 or that Nolan Arenado would improve from a .255 average to hit .275? By season's end, the Turner projection would have been more accurate, but the Arenado projection—even though it was off by nearly 20 points—would have been far more valuable. The Arenado projection might have persuaded you to go an extra buck on Draft Day, yielding more profit.

And that has to be enough. Any tout who projects a player's statistics dead-on will have just been lucky with his dart throws that day.

Perpetuity

Forecasting is not an exercise that produces a single set of numbers. It is dynamic, cyclical and ongoing. Conditions are constantly changing and we must react to those changes by adjusting our expectations. A pre-season projection is just a snapshot in time. Once the first batter steps to the plate on Opening Day, that projection has become obsolete. Its value is merely to provide a starting point, a baseline for what is about to occur.

During the season, if a projection appears to have been invalidated by current performance, the process continues. It is then that we need to ask... What went wrong? What conditions have changed? In fact, has *anything* changed? We need to analyze the situation and revise our expectation, if necessary. This process must be ongoing.

When good projections go bad

All we can control is the process. We simply can't control outcomes. However, one thing we *can* do is analyze the misses to see *why* they occurred. This is always a valuable exercise each year. It puts a proper focus on the variables that were out of our control as well as providing perspective on those players with whom we might have done a better job.

In general, we can organize these forecasting missesinto several categories. To demonstrate, here are players whose 2022 Rotisserie earnings varied from our projections.

Performances that exceeded expectation

Development beyond the growth trend: These are young players for whom we knew there was skill. Some of them were prized prospects in the past who have taken their time ascending the growth curve. Others were a surprise only because their performance spike arrived sooner than anyone anticipated... Michael Harris II, Steven Kwan, Josh Rojas, Nico Hoerner, Andrew Vaughn, Taylor Ward, Alec Bohm, Julio Rodríguez, Jeremy Peña, William Contreras, Spencer Strider, Kyle Wright, Jhoan Duran, Nestor Cortes, Brady Singer, Alek Manoah

Skilled players who just had big years: We knew these guys were good too; we just didn't anticipate they'd be this good... Aaron Judge, Adolis García, Andrés Giménez, Tommy Edman, Nate Lowe, Dansby Swanson, Christian Walker, Anthony Santander, Francisco Lindor, Pete Alonso, Nolan Arenado, Randy Arozarena, Miles Mikolas, Merrill Kelly, Tyler Anderson

Unexpected health: We knew these players had the goods; we just didn't know whether they'd be healthy or would stay healthy all year... Josh Naylor, Jeff McNeil, Zac Gallen, Triston McKenzie

Unexpected playing time: These players had the skills—and may have even displayed them at some time in the past—but had questionable playing time potential coming into this season. Some benefited from another player's injury, a rookie who didn't pan out or leveraged a short streak into a regular gig... Luis Rengifo, Luis Arraez, Jose Miranda, Thairo Estrada, Jon Berti, Ross Stripling, Cristian Javier

Unexpected role: This category is reserved for players who played their way into, or backed into, a larger role than anticipated. For most, there was already some previously demonstrated skill: Brandon Drury, Harold Ramirez, Ryan Helsley, Daniel Bard, Jeffrey Springs, Scott Barlow, Camilo Doval, Clay Holmes

Unexpected discovery of the Fountain of Youth: These players should have been done, or nearly done, or at least headed down the far side of the bell curve. That's what the trends were pointing to. The trends were wrong... Paul Goldschmidt, Elvis Andrus, Matt Carpenter, Albert Pujols, José Quintana, Justin Verlander, Johnny Cueto, Yu Darvish, Michael Wacha

Surprise, yes, but not as good as it looked: These are players whose numbers were pretty, but unsupported by their skills metrics. Enjoy them now, but be wary of next year... Eugenio Suárez, Tony Gonsolin, Jorge Mateo

Who the heck knows? Maybe there are reasonable explanations, but this year was so far off the charts for... Martín Pérez

Performances that fell short of expectation

Hobbled masses yearning to breathe free: These are players who got hurt, may not have returned fully healthy, or may have never been fully healthy (whether they'd admit it or not)... Adalberto Mondesi, Kris Bryant, Brandon Lowe, Ozzie Albies, Miguel Sanó, Anthony Rendon, Alex Kirilloff, Wander Franco, Brandon Belt, Austin Meadows, Jonathan India, Avisaíl García, Nick Madrigal, Byron Buxton, Joey Votto, Bryce Harper, Yasmani Grandal, Mitch Haniger, Jorge Polanco, Jazz Chisholm, Wil Myers, David Fletcher, Yoán Moncada, Tim Anderson, Adam Duvall, Mitch Garver, Luis Robert, Trevor Story, Tyler O'Neill, Michael Brantley, Chris Taylor, Walker Buehler, John Means, Frankie Montas, Chris Sale, Shane Baz, Hyun-Jin Ryu, Jack Flaherty, Brandon Woodruff, Lance Lynn, Casey Mize, Jacob deGrom, Luis Severino, Tyler Mahle, Nathan Eovaldi

Accelerated skills erosion: These are players who we knew were on the downside of their careers or had soft peripherals but who we did not think would plummet so quickly. In some cases, there were injuries involved, but all in all, 2022 might have been the beginning of the end for... Lorenzo Cain, Nelson Cruz, Jonathan Schoop, Didi Gregorius, Yuli Gurriel, Aroldis Chapman, Michael Pineda, Patrick Corbin, Kyle Hendricks

Inflated expectations: Here are players who we really should not have expected much more than what they produced. Some had short or spotty track records, others had soft peripherals coming into 2022, and still others were inflated by media hype. Yes, for some of these, it was "What the heck was I thinking?" For others, we've almost come to expect players to ascend the growth curve faster these days. (You're 23 and you haven't broken out yet? What's the problem??) The bottom line is that player performance trends simply don't progress or regress in a straight line; still, the skills trends were intriguing enough to take a leap of faith. We were wrong... Akil Baddoo, Spencer Torkelson, Jarred Kelenic, Javy Báez, Jared Walsh, Ketel Marte, Bobby Dalbec, Sean Manaea, Ian Anderson, Josiah Gray

Unexpected loss of role: This category is reserved for would-be closers who lost the job before they could return profit... Jake McGee, Matt Barnes, Craig Kimbrel, Will Smith, Anthony Bender, Tanner Houck, Taylor Rogers, Mark Melancon, Giovanny Gallegos, Corey Knebel, Lou Trivino, Raisel Iglesias

Surprise, yes, but not as bad as it looked: These are players whose numbers were disappointing, but supported by better skills metrics. Diss them now, but keep an open mind for next year… JD Martinez, Teoscar Hernández, Gerrit Cole

Who the heck knows? Maybe any one of these players could have been slotted into another category, but they still remain head-scratchers… Juan Soto, Whit Merrifield, Trevor Rogers, Lucas Giolito, José Berríos, Josh Hader.

About fantasy baseball touts

As a group, there is a strong tendency for all pundits to provide numbers that are publicly palatable, often at the expense of potential accuracy. That's because committing to either end of the range of expectation poses a high risk. Few touts will put their credibility on the line like that, even though we all know that those outliers are inevitable. Among our projections, you will find no .350 hitters or 70-steal speedsters. *Someone* is going to post a sub-2.50 ERA next year, but damned if any of us will commit to that. So we take an easier road. We'll hedge our numbers or split the difference between two equally possible outcomes.

In the world of prognosticating, this is called the *comfort zone*. This represents the outer tolerances for the public acceptability of a set of numbers. In most circumstances, even if the evidence is outstanding, prognosticators will not stray from within the comfort zone.

As for this book, occasionally we do commit to outlying numbers when we feel the data support it. But on the whole, most of the numbers here can be nearly as cowardly as everyone else's. We get around this by providing "color" to the projections in the capsule commentaries, often listing UPside or DOWNside projections. That is where you will find the players whose projection has the best potential to stray beyond the limits of the comfort zone.

As analyst John Burnson once wrote: "The issue is not the success rate for one player, but the success rate for all players. No system is 100% reliable, and in trying to capture the outliers, you weaken the middle and thereby lose more predictive pull than you gain. At some level, everyone is an exception!"

Validating Performance

Performance validation criteria

The following is a set of support variables that helps determine whether a player's statistical output is an accurate reflection of his skills. From this we can validate or refute stats that vary from expectation, essentially asking, is this performance "fact or fluke?"

1. Age: Is the player at the stage of development when we might expect a change in performance?

2. Health: Is he coming off an injury, reconditioned and healthy for the first time in years, or a habitual resident of the injured list?

3. Minor league performance: Has he shown the potential for greater things at some level of the minors? Or does his minor league history show a poor skill set that might indicate a lower ceiling?

4. Historical trends: Have his skill levels over time been on an upswing or downswing?

5. Component skills indicators: Looking beyond batting averages and ERAs, what do his support metrics look like?

6. Ballpark, team, league: Pitchers going to Colorado will see their ERA spike. Pitchers going to Oakland will see their ERA improve.

7. Team performance: Has a player's performance been affected by overall team chemistry or the environment fostered by a winning or losing club?

8. Batting stance, pitching style/mastery: Has a change in performance been due to a mechanical adjustment?

9. Usage pattern, lineup position, role: Has a change in RBI opportunities been a result of moving further up or down in the batting order? Has pitching effectiveness been impacted by moving from the bullpen to the rotation?

10. Coaching effects: Has the coaching staff changed the way a player approaches his conditioning, or how he approaches the game itself?

11. Off-season activity: Has the player spent the winter frequenting workout rooms or banquet tables?

12. Personal factors: Has the player undergone a family crisis? Experienced spiritual rebirth? Given up red meat? Taken up testosterone?

13. And in 2023, MLB's new rules: How will the balanced schedule, defensive shift limitations, larger bases and pitch clock impact a player's numbers?

Skills ownership

Once a player displays a skill, he owns it. That display could occur at any time—earlier in his career, back in the minors, or even in winter ball play. And while that skill may lie dormant after its initial display, the potential is always there for him to tap back into that skill at some point, barring injury or age. That dormant skill can reappear at any time given the right set of circumstances.

Caveats:

1. The initial display of skill must have occurred over an extended period of time. An isolated 1-hit shutout in Single-A ball amidst a 5.00 ERA season is not enough. The shorter the display of skill in the past, the more likely it can be attributed to random chance. The longer the display, the more likely that any reemergence could be for real.

2. If a player has been suspected of using performance enhancing drugs at any time, all bets are off.

Corollaries:

1. Once a player displays a vulnerability or skills deficiency, he owns that as well. That vulnerability could be an old injury problem, an inability to hit breaking pitches, or just a tendency to go into prolonged slumps.

2. The probability of a player correcting a skills deficiency declines with each year that deficiency continues to exist.

Contract year performance *(Tom Mullooly)*

There is a contention that players step up their game when they are playing for a contract. Research looked at contract year players and their performance during that year as compared to career levels. Of the batters and pitchers studied, 53% of the batters performed as if they were on a salary drive, while only 15% of the pitchers exhibited some level of contract year behavior.

How do players fare *after* signing a large contract (minimum $4M per year)? Research from 2005-2008 revealed that only 30% of pitchers and 22% of hitters exhibited an increase of more than 15% in BPV after signing a large deal either with their new team, or re-signing with the previous team. But nearly half of the pitchers (49%) and nearly half of the hitters (47%) saw a drop in BPV of more than 15% in the year after signing.

Risk Analysis

Risk management and reliability grades

Forecasts are constructed with the best data available, but there are factors that can impact the variability. One way we manage this risk is to assign each player Reliability Grades. The more certainty we see in a data set, the higher the reliability grades assigned to that player. The following variables are evaluated:

Health: Players with a history of staying healthy and off the IL are valuable to own. Unfortunately, while the ability to stay healthy can be considered skill, it is not very projectable. We can track the number of days spent on the injured list and draw rough conclusions. The grades in the player boxes also include an adjustment for older players, who have a higher likelihood of getting hurt. That is the only forward-looking element of the grade.

"A" level players would have accumulated fewer than 30 days on the major league IL over the past five years. "F" grades go to those who've spent more than 120 days on the IL. Recent IL stays are given a heavier weight in the calculation.

Playing Time and Experience (PT/Exp): The greater the pool of MLB history to draw from, the greater our ability to construct a viable forecast. Length of service—and consistent service—is important. So players who bounce up and down from the majors to the minors are higher risk players. And rookies are all high risk.

For batters, we simply track plate appearances. Major league PAs have greater weight than minor league PAs. "A" level players would have averaged at least 550 major league PAs per year over the past three years. "F" graded players averaged fewer than 250 major league PA per year.

For pitchers, workload can be a double-edged sword. On one hand, small IP samples are deceptive in providing a read on a pitcher's true potential. Even a consistent 65-inning reliever can be considered higher risk since it would take just one bad outing to skew an entire season's work.

On the flipside, high workload levels also need to be monitored, especially in the formative years of a pitcher's career. Exceeding those levels elevates the risk of injury, burnout, or breakdown. So, tracking workload must be done within a range of innings. The grades capture this.

Consistency: Consistent performers are easier to project and garner higher reliability grades. Players that mix mediocrity with occasional flashes of brilliance or badness generate higher risk projections. Even those who exhibit a consistent upward or downward trend cannot be considered truly consistent as we do not know whether those trends will continue. Typically, they don't. *(See next: Using 3-year trends as leading indicators)*

"A" level players are those whose runs created per game level (xERA for pitchers) has fluctuated by less than half a run during each of the past three years. "F" grades go to those whose RC/G or xERA has fluctuated by two runs or more.

Remember that these grades have nothing to do with quality of performance; they strictly refer to confidence in our expectations. So a grade of AAA for a bad player only means that there is a high probability he will perform as poorly as we've projected.

Using 3-year trends as leading indicators *(Ed DeCaria)*

It is almost irresistibly tempting to look at three numbers moving in one direction and expect that the fourth will continue that progression. However, for both hitters and pitchers riding positive trends over any consecutive three-year period, not only do most players not continue their positive trend into a fourth year, their Year 4 performance usually regresses significantly. This is true for every metric tested (whether related to playing time, batting skills, pitching skills, running skills, luck indicators, or valuation). Negative trends show similar reversals, but tend to be more "sticky," meaning that rebounds are neither as frequent nor as strong as positive trend regressions.

Reliability and age

Peak batting reliability occurs at ages 29 and 30, followed by a minor decline for four years. So, to draft the most reliable batters, and maximize the odds of returning at least par value on your investments, you should target the age range of 28-34.

The most reliable age range for pitchers is 29-34. While we are forever looking for "sleepers" and hot prospects, it is very risky to draft any pitcher under 27 or over 35.

Evaluating Reliability *(Bill Macey)*

When you head into an upcoming auction or draft, consider the following with regard to risk and reliability:

- Reliability grades do help identify more stable investments: players with "B" grades in both Health and PT/Experience are more likely to return a higher percentage of their projected value.
- While top-end starting pitching may be more reliable than ever, the overall pool of pitchers is fraught with uncertainty and they represent a less reliable investment than batters.
- There does not appear to be a significant market premium for reliability, at least according to the criteria measured by BaseballHQ.com.
- There are only two types of players: risky and riskier. So while it may be worth going the extra buck for a more reliable player, be warned that even the most reliable player can falter—don't go overboard bidding up a AAA-rated player simply due to his Reliability grades.

Normal production variance *(Patrick Davitt)*

Even if we have a perfectly accurate understanding of a player's "normal" performance level, his actual performance can and does vary widely over any particular 150-game span—including the 150-game span we call "a season." A .300 career hitter can perform in a range of .250-.350, a 40-HR hitter from 30-50, and a 3.70/1.15 pitcher from 2.60/0.95 to 6.00/1.55. And all of these results must be considered "normal."

Health Analysis

Injury Primer *(James C. Ferretti, DO)*

Every player injury and recovery process is unique. Still, you can gain a sizable advantage with a better understanding of both injuries and the corresponding medical terms. An overview of the human musculoskeletal system:

- *Bones:* The rigid support framework which is also a foundation for the other moving parts.
- *Cartilage:* Soft tissue that acts as a cushion and prevents wear—usually in areas where bones are close to each other.
- *Muscles:* Bundles of fibers that bend and stretch to perform work.
- *Tendons:* Bundles of (less bendy/stretchy) fibers that attach muscles to bones.
- *Ligaments:* Bundles of (even less bendy/stretchy) fibers that attach bones to other bones.

Some common ailments:

A **fracture** is simply a break in a bone, which means it isn't able to act as a stabilizer or absorb/distribute forces. Time to heal and/or long-term effects? Usually 4-6 weeks, though sometimes longer, though once the new bone has matured, it's as good as new.

Strains/sprains are tears of the fibers of muscles/tendons (strains) and ligaments (sprains). Most doctors categorize them on a Grade 1, 2, 3, scale, from less severe to most.

Time to heal and/or long-term effects? A rough estimate is 2-4 weeks for a Grade 1, 4-8 weeks for a Grade 2, and at least 8 weeks for a Grade 3. There can be long-term effects, notably that the repaired areas contain fibrous ("scar") tissue, which is neither as strong nor as flexible as the original tissue, and is more prone to re-injury.

Inflammation is an irritation of soft tissues, often from overuse or repetitive motion and the structures affected get "angry." Even if they occur for different reasons, inflammation and a Grade 1

strain can behave similarly—and both can keep a player out for weeks. Long-term effects? Injury/pain can recur, or even worsen without adequate time to heal. (So, maybe your player coming back early isn't such good news after all.)

Some widely-used injury terms:

"No structural damage" sounds reassuring, but it's often misleading. When medical imagers unaffiliated with MLB clubs make an injury diagnosis, they might term it a fracture, dislocation, soft tissue tear, or inflammation; all of which are bad news. Or they may call it "normal," or "negative," which is good news. But rarely would they describe an injury in terms of "no structural damage," because it's not an actual diagnosis. Rather, it's a way of saying that whatever body part being imaged is intact, with no broken bone or soft tissue tear. This is not the same as a "normal" or "negative" diagnosis. When you hear "no structural damage", continue to keep a close eye on the situation.

Similarly, **"day-to-day"** sounds reassuring—but really doesn't tell you anything other than "We aren't sure," which can be far more worrisome.

"X-Rays are negative": Imaging a player is usually prompted by sudden or increasing onset of pain. Most baseball injuries, though, are to soft tissue, which is never diagnosed with an X-ray alone. Unless there's suspicion of a broken bone or joint injury, an X-ray probably isn't going to tell you much. We often see writers and analysts use a "negative" X-ray report to justify that the injury is "not believed to be serious." Don't make that mistake—await the results of more definitive imaging/tests, like a CAT scan or MRI.

Injured list statistics

Year	#Players	3yr Avg	IL Days	3yr Avg
2012	409	408	30,408	27,038
2013	442	419	29,551	28,523
2014	422	424	25,839	28,599
2015	454	439	28,982	28,124
2016	478	451	31,329	28,717
2017	533	488	30,913	30,408
2018	574	528	34,284	32,175
2019	563	557	36,394	33,864
2020*	456	-	13,518	-
2021**	835	657	47,693	39,457
2022	726	708	44,389	42,825

*Due to the 60-game season, 2020 data is not included in 3-year averages.
** The 2021 data includes 103 players/1,467 days whose only "injury" loss was due to a COVID-19 quarantine, and another 78 players who had other injuries in addition to a COVID quarantine.

IL days as a leading indicator *(Bill Macey)*

Players who are injured in one year are likely to be injured in a subsequent year:

% IL batters in Year 1 who are also DL in year 2	38%
Under age 30	36%
Age 30 and older	41%
% IL batters in Year 1 and 2 who are also DL in year 3	54%
% IL pitchers in Year 1 who are also DL in year 2	43%
Under age 30	45%
Age 30 and older	41%
% IL pitchers in Yr 1 and 2 who are also DL in year 3	41%

Previously injured players also tend to spend a longer time on the IL. The average number of days on the IL was 51 days for batters and 73 days for pitchers. For the subset of these players who get hurt again the following year, the average number of days on the IL was 58 days for batters and 88 days for pitchers.

How a batter's age affects IL stays *(Jeff Zimmerman)*

Some players seem to get more than their fair share of injuries, but for those hitters with the "injury-prone" tag, it only takes one healthy season to make a difference. After breaking up hitters into three age groups (25 and younger; 26-29; 30 and older), a study examined length and frequency of IL stints. Among the findings:

1. If someone in the youngest group goes on the IL once, they aren't as likely to again the next season. The probability increases after two IL seasons, however, from 33% to 43%.
2. The best health is exhibited by the middle group. It seems this age is the sweet spot for avoiding injuries. The hitters have shown they can hold up to a full season, but their bodies have not started to break down.
3. Not surprisingly, the oldest group takes longer to heal. The IL-related stats hover above the league average, but the IL rate doesn't increase as a player racks up previous injuries.

Do overworked hitters wear down? *(Jeff Zimmerman)*

A study compared the first- and second-half statistics for batters who played the most games over the entire season from 2002-16. These players were continually run out on the field, and one figures that fatigue would show up in their statistics. In actuality, their output improves the more they play. Though this concept goes against conventional wisdom, it is true: If a hitter plays more, the more likely he is healthy and not wearing down.

In-Season Analysis

The weight of early season numbers

Early season strugglers who surge later in the year often get little respect because they have to live with the weight of their early numbers all season long. Conversely, quick starters who fade late get far more accolades than they deserve.

For instance, take Josh Bell's month-by-month batting average in 2022. The perception is that his .266 mark was a solid follow-up to 2021's .261 and within a normal range for his career, but doesn't nearly show how much he struggled in the second half. Bell had a .315 BA at mid-season—and was still batting over .300 on August 6—but batted only .185 over the season's last nine weeks:

Month	BA	Cum BA
Apr	.365	.365
May	.252	.298
June	.358	.319
July	.253	.302
August	.188	.278
Sept-Oct	.199	.266

Courtship period

Any time a player is put into a new situation, he enters into a courtship period. This period might occur when a player switches leagues, or switches teams. It could be the first few games when a

minor leaguer is called up. It could occur when a reliever moves into the rotation, or when a lead-off hitter is moved to another spot in the lineup. There is a team-wide courtship period when a manager is replaced. Any external situation that could affect a player's performance sets off a new decision point in evaluating that performance.

During this period, it is difficult to get a true read on how a player is going to ultimately perform. He is adjusting to the new situation. Things could be volatile during this time. For instance, a role change that doesn't work could spur other moves. A rookie hurler might buy himself a few extra starts with a solid debut, even if he has questionable skills.

It is best not to make a roster decision on a player who is going through a courtship period. Wait until his stats stabilize. Don't cut a struggling pitcher in his first few starts after a managerial change. Don't pick up a hitter who smacks a pair of HRs in his first game after having been traded. Unless, of course, talent and track record say otherwise.

Half-season fallacies

A popular exercise is to analyze players who are consistent first half to second half surgers or faders. There are several fallacies with this analytical approach.

1. There are very few players who show consistent changes in performance from one half of the season to the other.

2. Multi-year scans may not show any consistency at all. A player whose 5-year batting average shows a 15-point rise in the 2nd half, for instance, may actually have experienced a BA decline in several of those years, a fact that might have been offset by a huge BA rise in one of the years.

3. The season's midpoint is an arbitrary delineator of performance swings. Some players are slow starters and might be more appropriately evaluated as pre-May and post-May. Others bring up their game in a pennant chase and might see a performance swing with an August 15 cut-off. Each player may have his own individual tendency, if, in fact, one exists at all.

Half-season tendencies

Despite the above, it stands to reason logically that there might be some underlying tendencies on a more global scale, first half to second half. In fact, one would think that the player population as a whole might decline in performance as the season drones on. There are many variables that might contribute to a player wearing down—workload, weather, boredom—and the longer a player is on the field, the higher the likelihood that he is going to get hurt. A recent 5-year study uncovered the following tendencies:

Batting

Overall, batting skills held up pretty well, half to half. There was a 5% erosion of playing time, likely due, in part, to September roster expansion.

Power: First half power studs (20 HRs in 1H) saw a 10% drop-off in the second half. 34% of first half 20+ HR hitters hit 15 or fewer in the second half and only 27% were able to improve on their first half output.

Speed: Second half speed waned as well. About 26% of the 20+ SB speedsters stole *at least 10 fewer bases* in the second half. Only 26% increased their second half SB output at all.

Batting average: 60% of first half .300 hitters failed to hit .300 in the second half. Only 20% showed any second half improvement at all. As for 1H strugglers, managers tended to stick with their full-timers despite poor starts. Nearly one in five of the sub-.250 1H hitters managed to hit *more than* .300 in the second half.

Pitching

Overall, there was some slight erosion in innings and ERA despite marginal improvement in skills metrics.

ERA: For those who pitched at least 100 innings in the first half, ERAs rose an average of 0.40 runs in the 2H. Of those with first half ERAs less than 4.00, only 49% were able to maintain a sub-4.00 ERA in the second half.

Wins: Pitchers who won 18 or more games in a season tended to pitch *more* innings in the 2H and had slightly better skills metrics.

Saves: Of those closers who saved 20 or more games in the first half, only 39% were able to post 20 or more saves in the 2H, and 26% posted fewer than 15 saves. Aggregate ERAs of these pitchers rose from 2.45 to 3.17, half to half.

In-season trends in hitting and pitching *(Zach Larson)*

League-wide baselines not only change each season, but monthly within a season as well, due to a variety of factors (such as weather). A study of the 2021 and 2022 seasons found some general trends, including the fact that hitters do tend to perform better in warmer weather. Some of the variances between the two years can be attributed to post-pandemic and post-lockout factors.

2022 MLB stats by month (per game):

Month	GP	R	HR	RBI	SB	AVG	K	SV	ERA	WHIP
Apr	634	4.03	0.91	3.82	0.48	0.231	8.50	0.27	3.72	1.24
May	839	4.43	1.08	4.22	0.52	0.246	8.21	0.25	4.10	1.28
Jun	808	4.49	1.19	4.30	0.52	0.246	8.32	0.24	4.14	1.29
Jul	780	4.32	1.10	4.12	0.51	0.245	8.46	0.26	3.97	1.27
Aug	840	4.22	1.04	4.07	0.50	0.245	8.33	0.24	3.93	1.27
Sep/Oct	958	4.17	1.09	3.99	0.54	0.240	8.58	0.25	3.91	1.25

2021 MLB stats by month (per game):

Month	GP	R	HR	RBI	SB	AVG	K	SV	ERA	WHIP
Apr	766	4.26	1.14	4.01	0.46	0.232	9.07	0.24	3.98	1.25
May	834	4.41	1.12	4.19	0.46	0.239	8.92	0.25	4.06	1.29
Jun	796	4.66	1.28	4.46	0.45	0.246	8.69	0.24	4.43	1.32
Jul	742	4.62	1.29	4.41	0.44	0.248	8.51	0.23	4.39	1.32
Aug	828	4.54	1.24	4.35	0.45	0.246	8.51	0.25	4.26	1.29
Sep/Oct	892	4.67	1.27	4.49	0.47	0.250	8.38	0.25	4.42	1.32

Can in-season deficiencies in ratio categories be overcome?

(Patrick Davitt)

Many fantasy players think that later in the season, we can't move the decimals (BA, ERA, WHIP) because with the majority of AB/IP in the books, the ratio's large denominators make it too hard. While it's true we can't move as much late as early, we can still gain points. We tested this idea at the two-thirds mark in the season. Using teams and stats in a 15-team mixed expert's league, we built tables to see how much an owner could gain—first just by dropping a poor performer, and then by replacing a poor performer with a good performer.

From a study of a 15-team mixed expert's league, we found that it's still possible to gain points in the ratio categories by replacing a poor performer with a good performer, even at the two-thirds mark of the season. (Obviously, stratification of league standings will vary.)

Batting Average

The BA test projected a team to finish with a .257 BA. With 190 remaining projected AB per batter, we found that by dropping a players and not replacing him:

- Drop a .235 hitter: Team BA .25756
- .225 hitter: .25783
- .215 hitter: .25810

The gains are amplified when the poor hitter is replaced with a high projected BA hitter. Dropping a .215 pBA hitter and adding a .305 guy jumps team pBA to .25927. Dropping a .245 and adding a .265 still gains 57 baseline points. Again, depending on how close your league standings are, this matters.

ERA

Gains in pitching decimals can be greater because the denominator is smaller than BA. This study used a team with a 4.00 final pERA in 1,325 IP. Let's start again by just dropping a poor performer with 55 pIP:

- Dropping a 4.50 pERA pitcher, finished at 3.976
- 5.00 pitcher: 3.954
- 5.50 pitcher: 3.933

And now, by adding a low-pERA replacement: Dropping a 5.50 disaster for a 2.75 stud means a final pERA of 3.885, an improvement of .115.

Again, much depends on how each category is stratified.

Surprisingly Productive Years *(Ed DeCaria)*

Here's a skills-based method of finding productive in-season roster additions:

1. Consider all batters projected for 50% or less playing time, all starting pitchers projected for 10% or less of his team's innings pitched (about 140 IP), and all relief pitchers projected for less than 4% of his team's innings pitched (about 50 IP)
2. Using each player's projected skills—not stats—in the form of his Mayberry scores, include only batters whose sum of three Mayberry skills (power, speed, and hitting) was 7 or higher (8 or higher for mixed leagues). For pitchers, only consider players whose sum of two Mayberry skills (xERA and strikeout rate) was 4 or higher (5 or higher for mixed leagues). For relievers, we also counted Mayberry's saves potential score, so we included only relievers whose sum of three scores was 7 or higher (8 or higher for mixed leagues).
3. Examine the specific situation of each player that met our first two criteria and assign a realistic playing time upside given his skills and injury, consistency, and forecast risk, and that of the player(s) ahead of him on his team's depth chart.
4. Calculate a single number that measured their "projected skill" over their "potential playing time" to arrive at their "potential value."
   a. For hitters, take his Mayberry sum and multiply it by his potential playing time (pPT). Then rank batters by this metric and subtract the minimum value of the group from all players, so that the least valuable batter had a marginal score (mSCORE) of zero. Then use mSCORE to calculate each player's "share" of the total, and multiply that by the league's total wasted dollars (using a 65/35 batter/pitcher split) to determine each batter's potential value (pR$).
   b. Similarly for pitchers, take the Mayberry sum multiplied by potential innings percentage (pPT) and rank pitchers by this metric. Subtract the minimum value of the group from all pitchers, then use mSCORE to calculate each pitcher's "share" of the total, and multiply that by the league's total wasted dollars (using a 65/35 batter/pitcher split) to determine each pitcher's potential value (pR$).

Use these rankings to produce lists of players who are projected for far less than full playing time despite good or even great skills. A well-timed pick-up of any one of these players could be a boon to most teams' chances of winning their league.

Teams

Johnson Effect *(Bryan Johnson)*: Teams whose actual won/loss record exceeds or falls short of their statistically projected record in one season will tend to revert to the level of their projection in the following season.

Law of Competitive Balance *(Bill James)*: The level at which a team (or player) will address its problems is inversely related to its current level of success. Low performers will tend to make changes to improve; high performers will not. This law explains the existence of the Plexiglass and Whirlpool Principles.

Plexiglass Principle *(Bill James)*: If a player or team improves markedly in one season, it will likely decline in the next. The opposite is true but not as often (because a poor performer gets fewer opportunities to rebound).

Whirlpool Principle *(Bill James)*: All team and player performances are forcefully drawn to the center. For teams, that center is a .500 record. For players, it represents their career average level of performance.

Other Diamonds

The Fanalytic Fundamentals

1. This is not a game of accuracy or precision. It is a game of human beings and tendencies.
2. Draft skills, not stats. Draft skills, not roles.
3. A player's ability to post acceptable stats despite lousy support metrics will eventually run out.
4. Once you display a skill, you own it.
5. Virtually every player is vulnerable to a month of aberrant performance. Or a year.
7. Exercise excruciating patience.

Aging Axioms

1. Age is the only variable for which we can project a rising trend with 100% accuracy. (Or, age never regresses.)