

BOP - Baseball
**The Base-Out Percentage: Research
Baseball's Newest Yardstick Journal -
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By Barry F. Codell

Is the batting average the most important morsel of information concerning a player's offensive ability?

It most assuredly is not! It is baseball's most misleading number. It has pacified and fooled generations of players, fans, managers and media, masquerading as its grandest garment, but in reality resembling a certain Emperor's uniform.

What can the matter be with the average? Let's begin with the fact that it considers a home run the same as a single. That it pretends no player has ever drawn a walk. That a player hitting into a double play has made one out. That nothing happened when a bunt moved a man along, or a fly ball brought a runner home.

After hiding such integral moments of the game, the batting average cannot proclaim itself an honest indicator of anything but the durability of its own clichés.

How about the offshoot of the BA—the slugging average? Doesn't it take total bases from hits into account? Yes, but then it loses all credibility by disregarding outs made while batting, enabling long-ball hitters to produce outs at a rapid clip and maintaining the slugging average with a once-in-a-great-while long hit. And, of course, the slugging quotient is just as bereft when it comes to explaining walks and dp's, sacrifices, etc.

The base-out percentage is baseball's most complete and informative offensive statistic. Its simplicity may be startling, yet it entails everything a player accomplishes individually whenever his team is at bat. It can be computed in seconds, and easily kept track of. Its roots are in the nature of the game itself, i.e., the struggle of all batters to attain as many bases as possible while attempting to avoid being put out.

Unlike any other statistic, it takes each plate appearance into consideration. Doing this, it reveals abilities and flaws previously unaccounted for and destroys common myths about player success. It is a true barometer of what a player has accomplished during the season and his career.

The base-out percentage is founded on the simple theory that a batter may embark on two journeys after completing a plate appearance: 1) back to the dugout, or more pleasurably, 2) to begin that magic trek around the bases.

Bases are of the highest import, competing with outs for the production of the sport's gold—runs! The game is circling the bases before the third out occurs. To attain the highest number of bases while compiling the fewest number of outs is each batter's dream. To build the highest ratio of bases to outs is his desire. And whether consciously or not, he has always been trying to improve his percentage of bases to outs. This is where the base-out percentage (BOP) comes into focus.

It is figured in this manner: *Bases* are derived by adding total bases, walks, hit by pitch, stolen bases, sacrifice hits and sacrifice flies. *Outs* are totaled by adding "outs batting" (at-bats minus hits), sacrifice hits, sacrifice flies, caught stealing, and double-plays grounded into. Bases are then divided by outs. The result is the base-out percentage (BOP).

Chronicling the base-out percentage is easy. And the results are astounding. Let's sample the 1977 records of two players, their reputations made on the traditional batting average, to see the base-out percentage in action—Willie Montanez, who played with Atlanta, and Gary Thomasson who performed for San Francisco:

	G	AB	R	H	TB	2B	3B	HR	RBI	BA	SA
Montanez	136	544	70	156	249	31	1	20	68	.287	.458
Thomasson	145	446	63	114	201	24	6	17	71	.256	.451

The batting average and slugging percentage give Montanez the offensive edge in the traditional listings. The base-out percentage does not stop there, however. Consider these additional, lesser publicized facts:

	BB	HP	SB	SH	SF	OB	CS	DP
Montanez	35	0	1	0	3	388	1	18
Thomasson	75	1	16	4	8	332	4	7

Gary Thomasson is known as a "waiter," Willie Montanez is affectionately called a "free swinger." In other words, Willie Montanez makes many more outs, all based on avoiding the base on balls, in search of extra bases by hitting away. While he may make a few more bases this way, 249 total bases to Thomasson's 201 (48 more bases), this is nearly negated by the BB column, 35 walks to Thomasson's 75 (40 *less* bases). And by his inability to draw a walk, he has made 56 *more* outs with his free and dubious swinging than Thomasson did by waiting for his pitch and remembering "a walk is as good as a hit." The walk, of course, may sometimes be more damaging physically and mentally to opposing hurlers.

This is not all. Montanez has grounded into 18 dp's overlooked in his batting average, accounting for 18 extra outs. Thomasson was able to avoid the dp's, hitting into only seven.

Further, Montanez did not appreciably aid his team on the base paths. He stole one base and was caught once. Thomasson stole 16 bases, being caught only four times.

All told, the comparison totals:

	Bases Made	Outs Made	Base-Out Percentage
Montanez	288	411	.701
Thomasson	305	355	.859

The base-out percentage is a far cry from the batting average and slugging average. It shows Thomasson had the more effective 1977 season. Careerwise, this also shows: Thomasson's .715 base-out percentage over Montanez's .682.

The 1978 base-out percentage may bring about a reconstruction of what transpired on the field last season. Contrast Pete Rose's glory-and-hit filled campaign as compared to Joe Morgan's "season long slump" of 1978. The base-out percentage has a few final words on the subject—Morgan .762, Rose .752! Also compare:

	BA	SA	BOP
Rice	.315	.600	.984
Otis	.298	.525	.995
Parker	.334	.585	1.042
Burroughs	.301	.529	1.047
Cromartie	.297	.418	.677
Moreno	.235	.303	.752
Buckner	.323	.419	.663
Murcer	.281	.403	.788
Munson	.297	.373	.600
Downing	.255	.342	.632

The base-out percentage (BOP) does not avoid anything a player does offensively. A sacrifice is counted as a base gained *and* an out made. A hit by pitch is a base. A stolen base is for the first time reflected in a percentage.

What Eddie Stanky used to call intangibles—not hitting into dp's, sacrificing, waiting out a pitcher—are rightfully rewarded in the base-out percentage.

The lure of baseball has in great part come in the weighing of players' statistics, analyzing the different offensive departments each batter contributes to. The base-out percentage offers a clear picture of what a player has accomplished. An .800 percentage means that for each 1,000 outs a player has made 800 bases. A BOP of over .700 would be above average. A manager choosing a player who makes 60 bases each 100 outs (.600 BOP), over one who totals 75 bases per 100 outs (.750 BOP), may do so at his team's run-scoring peril.

There were but three 1.000 or over "BOPers" in 1978, meaning these players had more bases than outs. This was a drop from the 11 "Big BOPers" of 1977.

The current career BOP leader is Cincinnati's Joe Morgan, with a mark of .971. (See accompanying charts.) From 1972 through 1977, Morgan had a remarkable string of six straight years with over a 1.000 Base-Out Percentage.

With Morgan and others due to negotiate a contract after the 1979 season, the value of the base-out percentage should be obvious. Signing an out-maker with a nice batting average to a million dollar pact may be questionable. And instead of sulking over a low average, a player may point to his base-out percentage and demand a raise!

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1978 BASE-OUT BREAKDOWN (125 OR MORE BASES)

Player, Team	TB	BB	HP	SB	SH	SF	OB	CS	DP	Bases	Outs	Pct.
J. Burroughs, Atl.	258	117	0	1	0	6	341	2	16	382	365	1.047
D. Parker, Pitt.	340	57	2	20	0	13	387	7	8	421	404	1.042
R. Smith, L. A.	250	70	1	12	0	13	315	5	5	346	338	1.024
A. Otis, K. C.	255	66	4	32	1	10	341	8	10	368	370	.995
W. Stargell, Pitt.	211	50	7	3	0	3	275	2	8	284	288	.986
J. Rice, Bost.	406	58	5	7	1	5	464	5	15	482	490	.984
G. Luzinski, Phil.	284	100	11	8	0	4	397	7	10	407	418	.924
L. Hise, Mil.	277	67	5	10	3	5	369	6	14	367	397	.924
A. Thornton, Clev.	262	93	6	4	2	8	375	7	17	375	409	.917
G. Foster, Cin.	330	70	7	4	0	6	434	4	18	417	462	.903

**CAREER LEADERS, BASE-OUT PERCENTAGE
ACTIVE PLAYERS, 1979 (500 OR MORE BASES)**

Player, Team	Bases	Outs	Pct.
J. Morgan, Cin.	5104	5258	.971
M. Schmidt, Phil.	2359	2500	.944
M. Page, Oak.	717	767	.935
W. McCovey, S.F.	5500	5891	.934
R. Jackson, N.Y. (A)	4098	4532	.904
W. Stargell, Pitt.	4824	5361	.900
A. Thornton, Clev.	1354	1509	.897
B. Bonds, Clev.	4227	4744	.891
D. Parker, Pitt.	1684	1932	.872
F. Lynn, Bos.	1380	1590	.868
C. Yastrzemski, Bos.	6540	7536	.868
J. Rice, Bos.	1635	1886	.867
G. Luzinski, Phil.	2475	2863	.864
R. Smith, L.A.	3988	4629	.862
C. Cedenno, Hous.	2953	3436	.859
G. Tenace, S.D.	2255	2633	.856
R. Carew, Cal.	3836	4529	.847
C. Johnson, N.Y. (A)	864	1021	.846
C. Fisk, Bos.	1957	2314	.846
K. Singleton, Balt.	2714	3213	.845

CAREER TOTALS OF POST-WWII STARS

Player	Bases	Outs	Pct.
Mickey Mantle	6472	5901	1.097
Willie Mays	8043	8062	.998
Frank Robinson	7312	7622	.959
Henry Aaron	8672	9125	.950
Duke Snider	5009	5281	.948
Richie Allen	4494	4772	.942
Eddie Mathews	5982	6474	.924
Harmon Killebrew	5840	6410	.911
Norm Cash	4522	5124	.883
Al Kaline	6179	7123	.867
Minnie Minoso	4355	5052	.862
Jimmy Wynn	4481	5313	.843
Billy Williams	5857	6969	.840
Frank Howard	4108	4892	.840
Rocky Colavito	4019	4812	.835