BASSEBALL ANALYST

Ready For The Season

diet pepsi

HOT P_.
THE 1985 ELIAS BASEBALL ANALYST $12.95 paperback. MacMillan by Seymour Siwoff, Steve Hirdt & Peter Hirdt

The Childish Reaction: The prestigious Elias Sports Crew has finally condescended to bestow its information on the masses. MacMillan has nicely copped the format and cover design (right down to the exact dimensions) from the BASEBALL ABSTRACT and even managed to pilfer the monicker of our poor little publication. Several readers have called to suggest that it was the implementation of Project Scoresheet that prompted Elias to finally put its vast resources to work for the fans. That could very well be.

The Professional Reaction: I don't think that there is a reader of our publication that should be without this book. I think it a shame that MacMillan thought it had to dance so closely to the ABSTRACT in design because this book can stand up on its own quite nicely. There is so much information in here it's scary. The writing is a tad dry but it is concise and works well off the information presented. Their criticisms of sabermetrics are somewhat ironic, especially their berating Range Factor on the basis that (as we all know) partial games do not get counted, when Elias has had such data for years and never made it available before. Range Factor had been developed as far as it could go without that data. I could go on but I think this book will be a hot topic for our readers to debate on these pages.

POSTCARD of the MONTH
NOTES: In this issue: Articles by Bill James and Craig Wright. Neil Munro discusses the MVP through the years, and Dan Rappoport comments on the article by Jack Carlson in the previous issue. Next time around look for a book review by Mike Kopf, the return of Dan Greenia's patented "Freakshow" and articles by Dan Heisman and Scott Segrin. A man by the name of Robert Godfrey has started a baseball fan organization. I've talked to him on the phone and found him to be a very nice man. Perhaps too nice to take on organized baseball on behalf of the fan. (I'd probably be the storm-the-bastille type). But he has taken the initiative on something that should have been done decades ago and I would suggest contacting him to get information about his project. His address is P.O. Box 4192/Mt. Laurel, NJ 08054/201-235-4192. Annual dues are $10 for new members. If you have any baseball related projects you would like announced, please let me know and I'll be glad to give them space here. For instance, wouldn't it be great if we could start a video-tape exchange for games that we've made copies of? I'd certainly like it, given that I live in an area without cable hook-up. Project Score-sheet is going strong again this year, do what you can to support it. I just had a flash. I see a headline dated early September. It says, JEFF BURROUGHS BLASTS 20th HOMER. Remember, I predicted the Titanic disaster in a previous life. My comments on THE ELIAS ANALYST were written in the heat of first seeing the publication. I felt that the book warranted immediate comment. I hope to see some more comments, preferably better thought out ones on the book in the next issue. Frequent advertiser Ray Chegly, IV reports that he is being treated well and plans to be out by August. For now he is content to bargaining for the rights of the Prison World Series for the Prison Sports Cable TV network. We all wish him luck...
TECHNIQUE OF RUN ESTIMATION BY GAME-LINE ASSEMBLY
By Bill James

I have recently developed an alternative method of estimating the number of runs that would be likely to result from the offensive contributions of any individual. This method has the same goals as the various runs created formulas that I have introduced over a period of years, and as the run-estimation technique discussed by Paul Johnson in the 1985 Abstract; in fact, the genesis of the idea was in something that Paul wrote. In seeking to arrive at the runs created by Babe Ruth in 1929 via a completely different route, Paul used the performance of selected World Series teams in games in which they beat hell out of their opponents, and successfully added together team performances so that they closely approximated the individual accomplishments of Babe Ruth in 1929. The result of this was a convincing argument that Babe Ruth, in fact, would not likely have created 148 runs, as I would have estimated, but something more on the order of 125 to 129. In essence, Paul had created an atypical team by stringing together a series of games in which teams hit at an atypical level, and then used that team as a check on the performance of the unusual player.

Thinking about this, I began to wonder whether it was possible to do the same thing systematically. Couldn’t we, I wondered, check the runs created by any player by finding teams which produced the same individual accomplishments in a number of games, and finding out how many runs they had scored? If not the same exact accomplishments in the same exact number of at bats, at least the same frequencies of accomplishment—the same home run ratio, the same doubles ratio, the same batting average, etc., although in (preferably) a much larger number of at bats.

I have developed a computer format—a spreadsheet form, like the Brock2 system—to do that. The system is not terribly complex, but it is plagued by a number of problems, which we will discuss more after explaining the details of the system. It is not terrifically accurate, it is time-consuming to run through and awkward to use. To solve these problems would require a larger computer than the little 64K Kaypro II that I use. But it can be done, and because we know it can be done, we know it could be done better. I am writing this article to make the knowledge of how it can be done available to you, so that if you have the resources to do it better—the time, the interest, the computer—then you will also have the basis of the system.

The system consists of six parts, which are arranged on the spreadsheet like this:
Section 1 simply gives the record of the player in question.

Section 2 gives the "game lines" of randomly selected box scores—how many at bats, how many doubles, triples, etc.

Section 3 compares the game lines with the accomplishments needed to replicate the player, and issues each a "suitability score".

Section 4 selects out the games with the highest suitability scores, and finds the sum of those games.

Section 5 stores the totals of the game lines selected, and figures the cumulative total.

Section 6 compares the cumulative total to what is needed to replicate the player, and re-assesses the needs of the exercise after each "cycle" of the calculation.

The system works on a series of "cycles", each re-calculation being a cycle. Each time through, it figures out what we have so far and what we still need, and then checks to see which games best suit those needs. The technical explanation follows:

**Section 1—The Player**

Section 1 contains only the cells a1 through f1:
- a1 gives the player's at bats.
- bl gives his hit total.
- c1 gives his doubles.
- d1 gives his triples.
- e1 gives his home runs.
- fl gives his walks.

Let's use Enos Cabell, 1984, for illustration. His line would look like this:

<table>
<thead>
<tr>
<th>a</th>
<th>b</th>
<th>c</th>
<th>d</th>
<th>e</th>
<th>f</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>436</td>
<td>135</td>
<td>17</td>
<td>3</td>
<td>8</td>
</tr>
</tbody>
</table>
Section 2 -- The pool of team games

Section 2 contains the cells a3 through g3, which are simply titles, and then twenty identical lines, a4 through l4 (as in ell-4, not fourteen) and a23 through l23.

- a3 gives the title "AB".
- b3 gives the title "HR".
- c3 gives the title "2B".
- d3 gives the title "3B".
- e3 gives the title "BB".
- f3 gives the title "BB".
- g3 gives the title "Runs".

The twenty lines following represent the accomplishments of teams in games. In my version this includes only 20 games; this is the basic limitation of the system, and the basic reason why it doesn't work better. The system really needs to include a much larger number of games; perhaps a hundred would be enough, but a much larger number still would be preferred.

Cells a4 through g4 (and a5 through g5, etc.) give the data that is called for in the titles—how many times the team batted, how many times the team hit, etc. Cells h4 through l4 (and h5 through l5, etc.) re-state the figures on a per-at bat basis:

- h4 is hits per at bat (b4/a4), or the team batting average in the game in question.
- i4 is doubles per at bat (c4/a4).
- j4 is triples per at bat (d4/a4).
- k4 is home runs per at bat (e4/a4).
- l4 is walks per at bat (f4/a4).

Lines 5 through 23, again, are the same.

Section 3 -- The assessment.

Section 3 occupies cells n through t on lines 4 through 23, and uses them to compare the game lines in Section 2 to what is needed to compile the record desired. Before constructing section 3, you need to know that the needs of the player replication are stated on line 51, in cells h51 through l51 (ell-fifty-one).

- h51 gives the needed number of hits per at bat, i51 the number of doubles/ at bat, j51 the number of triples/ at bat, k51 the number of home runs/ at bat, and l51 the number of walks/ at bat.

In Section 3, we compare the numbers needed to those represented in each game. By assigning penalties for every deviation from the needs, we can produce a "suitability score" for each game. For every .001 (one point) of difference in batting average, we penalize the game .002. If the team in the game in question hit .300 and what is needed is .289, then that is a 22 point penalty. There is a 3 point penalty for each .001 difference in doubles, a four point penalty for each .001 difference in triples, a five point difference in each .001 difference in home runs, and a 1 and a half point penalty for each .001 difference in walks. This is stated in these formulas:

\[ n4 = 2*(h51-h4) \]
\[ o4 = 3*(i51-i4) \]
\[ p4 = 4*(j51-j4) \]
q4 = 5*(k51-k4)
r4 = 1.5*(151-14)

The "s" row is blank at this point, and the "t" row, beginning at t4, gives the suitability score for each game, which is one minus the sum of the penalties:

t4 = 1-(n4+o4+p4+q4+r4)

The smaller the penalties, the better the suitability of the game for the replication of the player's stats. In a sample of 20 games, anything over .6 is usually one of the better scores available. In a larger sample of games, one might expect to consistently find games that would score over .8, and thus to replicate the player's contributions much more accurately.

Section 4--Selection of Most Desirable Games

Section 4, which occupies rows m through t on lines 25 through 44, selects out of the group the games with the highest suitability scores, and forms totals of those games.

We begin this step on line 24, where we will need three cells (it really doesn't matter which three, but I'll use p24, q24 and t24 for illustration). The first of these finds the maximum of the range t4 through t23 (in my software package, the signal for this is "max(t4:t23)"). This identifies the one highest suitability score in the group of games. The second asks for the average of all of the suitability scores ("avg(t4:t23)"). The third, which I have in cell t24, will be used as the cutoff for the selection. The formula that I am using for that is 

\[ \frac{(2*p24)+q24}{3} \]

Using this cutoff will tend to select out of the group of twenty the three or four games that are best suited to the current needs of the replication.

In m25 through m44, then, we ask whether t4 is greater than t24, the "cutoff cell". ("t4>t24"). In my software package, this shows a "1" if t4 is, indeed, greater than t24, and a "0" (zero) if it is not. This total is then multiplied by each of the elements in the game line, thus reproducing the game lines for those games which are selected:

m25 t4>t24 (Producing a one or a zero)
m25 m25*a4
m25 m25*b4
m25 m25*c4

Etc; after p comes q and after c comes d. This produces either another copy of the game line, if the suitability score is high enough, or a string of zeroes. This is repeated on lines 25 through 44.

Line 46, then, takes the sum of the games selected:

n46 sum(n25:n44)
o46 sum(o25:o44) etc.

If you are using a computer that has more memory space available, you might not want to select a "batch" of games at once, but rather one at a time. This can be done by simply putting the maximum in cell t24, and changing the formula for m25 from "t4>t24" to "t4=t24".


Section 5--Storing the totals of the selected games

Section 5, which occupies cells a through g on lines 38 through 47, works backwards. The first line of Section 5 is the bottom line, line 47. Line 47 takes the sum of the games produced by the current cycle. The formula for a47 is simply "n46"; b47 is simply "c46". . . . g47 is simply "t46", or the number of runs scored by the teams which were selected in this cycle.

The formula for a46 is a47; the formula for b46 is b47, while that for c43 is c44, g38 is g39, etc. My software program, and I'm guessing most others, re-calculates from left to right and top to bottom. Thus we can store the information from the previous cycles of the process by simply filtering it upward one line at a time, as is done here. On the first cycle, the information that results goes onto line 47; on the second cycle, it moves to line 46, and the new information goes on line 47. On the third cycle, the first batch of games goes to line 45, the second to line 46, etc. After ten cycles, the first information batch will be on line 38, with the at bat total in a38 and the runs resulting in g38. I'm only set up to handle ten cycles of information, but that's a limitation of my computer; more might be desirable. Ten cycles of information selected as described here yields between a thousand and 1500 at bats of performance; four or five thousand might give a more accurate reading of the rate at which runs tend to result from the performance frequencies described.

Section 6--Re-Assessing the needs

On line 49 (a49 through g49), we find the totals of the games selected; a49 is the sum of a38 through a47, etc.

Line 50 is the information line of the system. This takes the totals entered into the system so far, and expresses them into the number of at bats the player actually had.

<p>| | | | | | |</p>
<table>
<thead>
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</tr>
</thead>
<tbody>
<tr>
<td>a50</td>
<td>a1</td>
<td>(the players at bats)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b50</td>
<td>b49*(a50/a49)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c50</td>
<td>c49*(a50/a49)</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

Etc.; d50 through g50 are the same. This lets you see in the easiest way how close you have come to the exact frequencies desired. Cell g50 also reveals the ultimate information for which the exercise is conducted--how many runs a team would probably score with this production. More on this in the conclusion.

Line 51 calculates the accomplishments that would be needed to replicate the players frequencies in 1500 at bats.

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<tbody>
<tr>
<td>a51</td>
<td>1500</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b51</td>
<td>b49*(a51/a49)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c51</td>
<td>c49*(a51/a49)</td>
<td></td>
<td></td>
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</tbody>
</table>

Etc. I've used 1500 here; in practice another figure sometimes works better, such as 1300 or 1700. For Enos Cabell, 1984, that would produce this line:

<p>| | | | | | |</p>
<table>
<thead>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
<td>f</td>
</tr>
<tr>
<td>1</td>
<td>1500</td>
<td>464</td>
<td>58</td>
<td>10</td>
<td>28</td>
</tr>
</tbody>
</table>
Meaning that in 1500 at bats at the same level of production, Cabell would anticipate 464 hits, 58 doubles, 10 triples etc. Line 52 figures the difference between what is needed, in line 51, and what is already in the book, from line 49:

\[
\begin{align*}
& a_{52} = a_{51} - a_{49} \\
& b_{52} = b_{51} - b_{49} \\
& c_{52} = c_{51} - c_{49} \\
& d_{52} = d_{51} - d_{49} \\
& e_{52} = e_{51} - e_{49}
\end{align*}
\]

Then, we figure (also on line 52) the performance frequencies that are now needed:

\[
\begin{align*}
& i_{52} = \frac{b_{52}}{a_{52}} \\
& j_{52} = \frac{c_{52}}{a_{52}} \\
& k_{52} = \frac{d_{52}}{a_{52}} \\
& l_{52} = \frac{e_{52}}{a_{52}}
\end{align*}
\]

Which completes the cycle. This information, as you will recall, is used in Section 4 of the system.

THE OUTPUT OF THE effort is displayed in cell g50—the number of runs that the teams selected have scored, reduced to the at bats that the player in question has had. Ideally, line 50 would be identical to line 1, except that there is no g cell—no run information—on line 1. In practice, this system rarely makes them identical. For Enos Cabell, 1984, I get this:

\[
\begin{array}{cccccc}
AB & H & 2B & 3B & HR & BB & Runs \\
\hline
\text{Line 1} & 436 & 135 & 17 & 3 & 8 & 21 \\
\text{Line 50} & 436 & 136 & 17 & 4 & 8 & 21 & 64
\end{array}
\]

Maybe that's good enough, maybe it isn't. For Gus Bell, 1954, I get this:

\[
\begin{array}{cccccc}
AB & H & 2B & 3B & HR & BB & Runs \\
\hline
\text{Line 1} & 619 & 185 & 38 & 7 & 17 & 48 \\
\text{Line 50} & 619 & 185 & 38 & 6 & 17 & 51 & 98
\end{array}
\]

But for Eddie Murray, 1984, the results have a problem:

\[
\begin{array}{cccccc}
AB & H & 2B & 3B & HR & BB & Runs \\
\hline
\text{Line 1} & 558 & 180 & 26 & 3 & 29 & 107 \\
\text{Line 50} & 558 & 179 & 25 & 5 & 28 & 67 & 121
\end{array}
\]

With only twenty games to choose from, the system cannot replicate Eddie Murray-like performance in every detail. Further, in the effort to do so it keeps selecting the same games over and over—a problem, indeed, that the system has on most players. Among any group of twenty games, there will only be a few which are similar to the performance that is needed—and if those few games yield an atypical total of runs, then that distortion will seriously effect the estimate of runs resulting.

What is needed to solve that problem is two things: greater efficiency, and more computer space.

The method is, by its nature, probably not a practical way to estimate runs created, although I could be wrong about that. But it could be a very useful way to study runs created in odd or atypical cases, and thus it could be a significant link in the study of alternative runs created methods. If you can provide either of the things needed to help solve the problems, be my guest.
NOTES ON THE STOLEN BASE: 1984 RANGER GAMES

by Craig Wright

DATA: 290 of the 297 steal attempts in 1984 with a pitch count for 203 of the attempts.

QUESTION ONE: What is the average run value of the stolen base and the caught-stealing according to the situational changes?

Using Palmer's Potential Run Table for the 24 base-out situations the average run value for the 202 successful steals was .208 runs. That is down from .220 runs in a similar study of steal attempts in 1982 Ranger games. It may be a result of the opposition running with greater abandon against the Rangers' catching corp which was last in the league in preventing the steal.

The average cost of the 88 caught stealings was -.349 runs. That is also down from a figure of -.358 runs in the 1982 study. Both those figures may seem surprisingly low to those sabermetricians most critical of the stolen base. One's first guess may expect a figure around -.50 runs as the average base runner is usually worth around .35 runs and the average out is worth about -.16 runs.

Often overlooked is that the steal attempt does not involve either the average out or the average base runner. The run scoring potential of the first out of an inning is .216, for the second out, .163, and for the third out, .101.

The out expended in a caught stealing is rarely the first out (21%). It is the third out 41% of the time and the second out, 38%. That places the cost of the out at about .149.

But the real difference is the value of the base runner lost. We are not talking about losing runners who homered, tripled, doubled, or those who singled or walked and already moved to second or third on other hits, walks, errors, or outs. We are not even talking about a runner on first with no outs (run value of .348). Usually it is a runner on first with two outs (.120 run value) or one out (.242). The runner lost is usually worth about .20 to .21 runs.

QUESTION TWO: What is the run value of the errors accompanying the prevention of stolen base attempts?

Again using Palmer's table, I quantified the extra base advancements taken on errors during stolen base attempts and on errant pick-off throws to first base only. It came out to only .016 runs per steal attempt.

QUESTION THREE: What is the breakeven point for the average stolen base attempt?

In the 1982 study the average stolen base was worth .22 runs and the average caught stealing was -.358. That would put the breakeven point at 61.9%. The 1984 figures of .208 and -.349 would put it at 62.7%. This would seem to be a reflection of the basic principle that the breakeven point will rise the more a team runs. The extra steals are likely to come in situations of less value and greater cost if caught. The 1982 study involved two teams (the Rangers and their composite team of opponents) who had 260 steal attempts between them. The 1984 study group had 297 steals. The American League average in 1984 was 290 steal attempts per 162 games so the 1984 figure of 62.7% is a closer mirror of the norm.
All we have measured is the breakeven point relative to the situational changes directly attributable to the steal and caught stealing. If we throw in the gain on errors the .208 becomes .224 and the -.349 becomes -.333. That lowers the breakeven point to 59.8%.

However, we have not considered the cost of common hitting strategies relative to the steal attempt. What about the batter who swings at a ball to protect the runner? Most steal attempts happen early in the count (in my sample of 203 attempts 56% went on the first or second pitch), and the most common counts are 0-0, 0-1, 1-1, and 2-1. According to Palmer's analysis of performance by ball-strike counts one can estimate that the cost of converting a ball to a strike on pitches thrown on these counts costs, on average, about .085 runs.

We know from a past study that pitchers throw 38% balls (5,879 of 15,422) on such counts. Thirty-eight percent of .085 is .032 or an average cost of .032 runs per steal attempt if a batter swings and misses at every ball thrown during a steal attempt. That would place the value of the stolen base at .192 and the cost of the caught-stealing at -.355. That would set the breakeven point at 65.5% and that includes the advancement on errors.

Now, of course, the average batter does not swing at every ball on a steal attempt. However, I am not sure how to quantify that any more than how much a potential base-stealer upsets the pitcher and defense or how often a batter takes or swings through a pitch to allow a steal attempt on a pitch he normally would have hit. All in all, it should be reasonably safe to say that the average steal attempt has a breakeven point around 63 to 65%.

QUESTION FOUR: Is the average batter on the caught stealing a better or weaker hitter than the norm of his team?

To answer this question, I evaluated the batters by their slugging percentage, a key statistic for measuring the batter's potential to advance the runner without using up an out. In evaluating the opposing hitters on caught stealings I found they had an average slugging percentage of .386 relative to their composite team mark of .400. When I did the analysis of the Rangers there was no such difference (.378 - .377). However, I collected the data at two different times, through game #91 and at the end of the season, and found an interesting relationship for the two Ranger players who had horrible first halves, Gary Ward and George Wright. Ward was the batter for 8 chancey steals or caught stealings. Seven of those occurred through game #91 when Ward was a .331 slugger and only one happened after game #91 when Ward was a .578 slugger. George Wright was the batter for two caught stealings when he was a .272 slugger and none when he was a .462 slugger. Adjusting the break downs to reflect Ward and Wright as different hitters according to the time-frame and we end up with a .359 - .377 gap.

Both Doug Rader and the opposing managers tended to gamble more on the steal for advancement when the batter was less likely to advance the runner on his own. That is only logical, but to the best of my knowledge this is the first evidence to try and quantify the phenomenon. Personally, I am surprised the gap is only 4.5%. The impact of this finding on calculating the average breakeven point is negligible.
QUESTION FIVE: Why is it that pitchers with low walk averages generally allow fewer steals?

For a long time the accepted but unproven theory was the "Opportunity Theory", that control pitchers threw fewer pitches per batter thus providing fewer opportunities to steal. The first evidence to question this theory was a realization that it was not just fewer stolen bases correlating with control pitchers but also a reduction in the stolen base success rate. The backers of the "Opportunity Theory" claimed that the limited opportunities tended to force the runners to try and steal before they had figured out the pitcher's move and thus were running at a disadvantage.

Actual study of pitch-counts and what pitches are stolen on has ripped huge holes in the "Opportunity Theory". One, it seems the actual maximum difference in average pitches per batter between pitchers is only .37 pitches or about a 10-11% increase. For example, the average pitches per batter for the five 1984 Ranger starters ranged from 3.40 to 3.71. That means the difference between the two extremes was a single pitch every three batters. Two, the average pitch stolen on did not differ between those pitchers who walked the most and those who walked the least. I separated the 203 steal attempts where the pitch number was recorded by breaking the pitchers into two groups, those who averaged 3.0 or less non-intentional walks per inning and those that did not. The average pitch stolen on against the control pitchers was 2.67 versus 2.65 for the non-control pitchers. Three, the percentage of steal attempts on the first pitch, second pitch, etc. remained relatively the same regardless of the pitcher's control group.

% of Stolen Base Attempts

<table>
<thead>
<tr>
<th></th>
<th>Control Pitchers</th>
<th>Non-Control Pitchers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Pitch</td>
<td>25.2</td>
<td>27.2</td>
</tr>
<tr>
<td>2nd Pitch</td>
<td>31.5</td>
<td>28.3</td>
</tr>
<tr>
<td>3rd &amp; 4th Pitch</td>
<td>28.8</td>
<td>28.3</td>
</tr>
<tr>
<td>5th Pitch or Later</td>
<td>14.4</td>
<td>16.3</td>
</tr>
</tbody>
</table>

The new leading theory for the relationship of control pitchers and low steal totals is the "Mechanical-Necessity Theory". The theory is two-pronged: (1) control pitchers in general seem to have simpler, shorter pitching mechanics which are tougher to get a jump on, (2) most control pitchers lack a "plus" pitch and give more attention to hindering the offense in peripheral areas such as the stolen base. Because they are tougher to steal on successfully, they are run on less.

Interesting in this 1984 sample is that the success rate against control pitchers and non-control pitchers varied greatly on whether the steal occurred early or late in the count.

Stolen Base Success Rate

<table>
<thead>
<tr>
<th></th>
<th>Control Pitchers</th>
<th>Non-Control Pitcher</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>.649</td>
<td>.707</td>
</tr>
<tr>
<td>First and Second Pitch</td>
<td>.730</td>
<td>.686</td>
</tr>
<tr>
<td>Third Pitch or Later</td>
<td>.542</td>
<td>.732</td>
</tr>
</tbody>
</table>
Overall the success rate in stolen bases declines late in the count. From the fifth pitch on, the success rate overall was 14 for 31, .452. This is generally because the poorer base stealers are being sent on hit-and-run plays with 2-2 or 3-2 counts. In this 1984 sample I found the runners who attempted to steal on the 5th pitch or later averaged 54% fewer steals per game for the year than those who attempted steals on the first pitch.

Well, that explains the lack of success against the control pitchers late in the count, but why did the success rate rise against the non-control pitchers when going late in the count? Perhaps it is because there is something to be learned from watching the poor control pitchers' move to the plate and to first. With the average control pitcher all you may learn is you cannot run on him. However, many of the non-control pitchers have exaggerated mechanics which allow them to throw harder but also cause them to commit sooner to going to the plate. They are more likely as a group to have flaws that the runner can pick up on the more he watches him.

QUESTION SIX: What is the best pitch to run on?

Surprise, the first pitch seems to have a distinct advantage overall. The success for both groups on the first pitch was .755 (40 for 53). As noted earlier it is essentially the superior base stealers going on the first pitch, but there seems to be more involved than just that single factor. There were 22 players in my sample who had both a steal and a caught-stealing where the pitch they went on was recorded. In 14 of the 22 cases the average pitch they stole on came earlier in the count than the average pitch they were caught on. Four times it was the same, and only four times the reverse relationship was found. The average of the 22 averages was 2.15 for the successful steal and 2.88 for the caught-stealing.

How is this happening? It seems to me that a lot of stealers are actually stealing on their own commitment, actually cheating on the pitcher by anticipating when they are not throwing to first rather than actually picking up the pitcher's final commitment to the plate and then out-running the play. I guarantee you that is how Carlton Fisk steals his bases; rather than reading the pitcher's move he reads when the pitcher is ignoring him and thus sure to go to the plate. When Fisk breaks, the pitcher is not physically committed to the plate. Had the pitcher consciously watched Fisk he would have an easy pick-off, but Fisk catches the pitcher mentally committed to going to the plate.

Overall it seems to me that a lot of first-pitch steals involve unusually early jumps suggesting that this "commitment" stealing is especially successful on the first pitch when a number of pitchers routinely concentrate more on the batter than the runner.

It also may be that with the pitcher and catcher concentrating more on the batter for the first pitch, they are more likely to exploit a batter's off-speed weakness or a location that would make a catcher's throw more difficult. Then there is simply the surprise factor to first-pitch steals.

Actually, it all makes a lot of sense, particularly if the runner is schooled enough that he knows the pitcher's move already. That is the main argument against the
first-pitch steal, that the runner needs to study the pitcher before stealing. But, 
ever, you can study a pitcher from the bench, you can know a pitcher from a previous 
time on base or even a previous game. And, you can gamble on the early commitment.

In summation, according to the analysis of this data against the background of 
earlier research the following points are made:

1. The average situational gain of the average stolen base is around .21 runs and 
the situational cost of the average caught-stealing is -.35 runs.

2. The run value of the errors relating to stolen base attempts is rather minimal, 
about .016 runs per attempt.

3. The best estimates of the breakeven point for the average stolen base attempt 
is somewhere between 63 - 65%. It can fluctuate from 59.8% to 65.5% just on 
the basis of whether the batter is so committed to protecting the runner that 
he swings at every ball. That 63 - 65% estimate is consistent with other studie: 
of the subject. It could not be much higher or lower and still fit accurately 
in the various methods of predicting runs scored.

4. Managers do tend to take the gamble of more caught-stealings when they have 
a batter less likely to advance the runner on his own. The commitment to this 
strategy is not so great as to impact significantly on the average breakeven 
point.

5. Control pitchers as a group generally contain the stolen base better (fact) 
because they generally have tougher mechanics to run on and generally pay more 
attention to preventing the steal (theory consistent with evidence and observation. 
The stolen base is more successful early in the count against control pitchers 
and vice versa against non-control pitchers. That is the present state of the 
evidence, but it is weak enough that it should be expanded on and duplicated.

6. Overall, the best pitch to run on is the first pitch. Again, the sample size 
is not large and the statement needs further verification.

IMPORTANT REMINDER:

All business regarding the Analyst should be 
directed to Susie McCarthy at: 
PO Box 171 
Winchester, KS 66097 

All comments, submissions, queries and editorial matters are handled by Jim Baker at: 
20 Lincoln Street 
Jersey City, NJ 07307
THE ALL-TIME MOST VALUABLE PLAYERS

By Neil Munro

The Baseball Writers’ Association of America has voted for the Most Valuable Player in each league since 1931. Since then, the number of writers casting votes and the maximum number of points awarded have changed somewhat, but we can establish a ranking of players, in the collective minds of the writers at least, for each year. I have tried to develop a method for determing the cumulative voting results since 1931 in order to select the all-time MVPs, past and present, and to select MVP all-star teams.

Simply adding the vote totals awarded each year proves to be unsatisfactory because the maximum number of votes that a player could achieve has varied widely over the years. From 1931 to 1937, only one writer in each of the eight cities cast votes. This was expanded to include three writers from each city in 1938. With baseball’s first expansion in 1961, only two writers in each city cast votes, even in the N.L. which did not expand until 1962. Beginning in 1977, there were more voting points to be awarded in the A.L. than the N.L. because of the two extra teams.

Consequently, I have used the following system for awarding my MVP voting points to players since 1931. I award 10 points to the player that finished first, 9 points to the second place finisher, eight to third place and so on down to 1 point to the 10th place man in the BBWAA results. Players tied for positions split those points. This method probably fails to recognize the MVP who far outdistances his nearest rivals in the voting. For example the 1956 runner-up, Yogi Berra, finished well behind Mickey Mantle in the vote count, 186 to 336, while in 1960 Mantle placed second by only 3 points with 222 to Roger Maris’ 225 points. Yet Mantle and Berra both get 9 points for their second place finishes under my system. As well a player in the eight team league may have a greater opportunity to collect points than one in a league with 14 teams, but I believe that overall it is a better system than simply adding up the total votes over the years.

In beginning with the 1931 season, I am leaving out some of the brightest stars ever to play the game of baseball. Ty Cobb, Honus Wagner and Nap Lajoie get no points, while Babe Ruth manages to obtain only 10.5 points (he was 5th in the 1931 vote and tied for 6th in 1932). I have not considered the Chalmers Awards which were given (along with their automobile) from 1911 to 1914, nor have I used the League Awards which were presented off and on between 1922 and 1929. As well, The Sporting News selected MVPs between 1929 and 1945, and their winners were often different players than the ones which captured the fancy of the BBWAA, but these are likewise disregarded. I have not made use of these awards in arriving at career MVP points, partly because so many years are missing, and partly because of the strange systems used to select winners. For instance, in 1927, Babe Ruth did not collect a single MVP vote! I gather that each member of the selection committee was allowed to choose only one player from each team, and Gehrig was the choice of seven writers in 1927 while Tony Lazzeri was the eighth and last Yankee selected.
Table I below lists the twenty players who have accumulated the most MVP points since 1931 using the system outlined above. The list is dominated by outfielders. Eight of the top fifteen players in the table played in the outfield in each of the seasons when they received any MVP points and in addition, Musial and Killebrew played much of their careers there as well. The all-time MVP is Stan Musial who ran up a total of 93 MVP points over the course of his career. Musial also finished in the top ten more times than any other player since 1931, achieving this 14 times. Stan the Man is also one of only five players ever to win the MVP award three times.

Ted Williams places number two on the list only 2 points behind Musial. With five years lost to military service in two wars, Williams could easily have reached the number one MVP spot with well in excess of 100 points. Both Williams and Musial had the most runner-up finishes by placing second in the voting four times. Willie Mays, Hank Aaron and Mickey Mantle round out the top five positions on the list. Interestingly, Mantle places ahead of the center fielder he succeeded in Yankee Stadium, as Joe DiMaggio holds down sixth spot. Yogi Berra, in seventh place, is the first non-outfielder on the list. Berra far outdistances all of the other catchers including Dickey, Cochrane and Bench who are usually ranked number one at that position. Frank Robinson, with an MVP award in each league, holds down eighth spot.

Lou Gehrig occupies ninth place but could have been much higher on the list. Gehrig's 1927, 1928 and 1930 seasons are not figured in the point calculations and he surely would have been a serious candidate for league MVP honours in each of those years. Mike Schmidt rounds out the top ten places, and is the first active player to make the list. While I do not believe for a minute that the BBWAA selections display unassailable wisdom, it does seem to be more evidence that Mike Schmidt does belong with the greatest players of all-time. Yet he still does not seem to get the recognition that he deserves. I wonder if he will go into the Hall of Fame on the first ballot that he is eligible.

The only other active players in the top twenty-five on the MVP point list are Reggie Jackson, who is 15th, Pete Rose, 18th place, Eddie Murray, tied for 20th place and Jim Rice, who comes in at the 23rd spot. With the potential for several high finishes in the next few years, Murray should rank with Gehrig and Foxx as one of the top first basemen of all-time, at least in MVP consideration.

Perhaps not surprisingly, the pitchers do very poorly in MVP consideration. Bob Feller is the only one to make the top twenty and he just does manage a tie for 20th place. Warren Spahn, with his consistent 20 win seasons, and Sandy Koufax with a few brilliant years, fail to make the top thirty. Since 1956 the writers might have felt justified in overlooking most pitchers from MVP consideration because they have their own award for excellence, the Cy Young Memorial Award. Still I was somewhat taken back by the relatively low placing on the all-time list of such notable hurlers as Lefty Grove, Tom Seaver, Jim Palmer and Whitey Ford. Certainly, a pitcher must dominate the league in any given season to receive strong MVP consideration from the writers.
TABLE I - THE TOP 20 PLAYERS IN ALL-TIME MVP POINT ACCUMULATION

<table>
<thead>
<tr>
<th>RANK</th>
<th>PLAYER</th>
<th>NUMBER OF TIMES IN TOP TEN</th>
<th>MVP POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Stan Musial</td>
<td>14</td>
<td>93</td>
</tr>
<tr>
<td>2</td>
<td>Ted Williams</td>
<td>12</td>
<td>91</td>
</tr>
<tr>
<td>3</td>
<td>Willie Mays</td>
<td>12</td>
<td>89</td>
</tr>
<tr>
<td>4</td>
<td>Hank Aaron</td>
<td>13</td>
<td>80.5</td>
</tr>
<tr>
<td>5</td>
<td>Mickey Mantle</td>
<td>9</td>
<td>77</td>
</tr>
<tr>
<td>6</td>
<td>Joe DiMaggio</td>
<td>10</td>
<td>70</td>
</tr>
<tr>
<td>7</td>
<td>Yogi Berra</td>
<td>7</td>
<td>63</td>
</tr>
<tr>
<td>8</td>
<td>Frank Robinson</td>
<td>10</td>
<td>59</td>
</tr>
<tr>
<td>9</td>
<td>Lou Gehrig (P)</td>
<td>7</td>
<td>54</td>
</tr>
<tr>
<td>10</td>
<td>Mike Schmidt (A)</td>
<td>8</td>
<td>51</td>
</tr>
<tr>
<td>11</td>
<td>Harmon Killebrew</td>
<td>7</td>
<td>50</td>
</tr>
<tr>
<td>12</td>
<td>Al Kaline</td>
<td>9</td>
<td>49</td>
</tr>
<tr>
<td>13</td>
<td>Brooks Robinson</td>
<td>7</td>
<td>48</td>
</tr>
<tr>
<td>14</td>
<td>Jimmy Foxx (P)</td>
<td>6</td>
<td>45</td>
</tr>
<tr>
<td>15</td>
<td>Reggie Jackson (A)</td>
<td>7</td>
<td>44.5</td>
</tr>
<tr>
<td>16</td>
<td>Hank Greenberg</td>
<td>6</td>
<td>44</td>
</tr>
<tr>
<td>17</td>
<td>Roberto Clemente</td>
<td>8</td>
<td>42</td>
</tr>
<tr>
<td>18</td>
<td>Pete Rose (A)</td>
<td>9</td>
<td>40.33</td>
</tr>
<tr>
<td>19</td>
<td>Ernie Banks</td>
<td>5</td>
<td>40</td>
</tr>
<tr>
<td>20</td>
<td>Eddie Murray (A)</td>
<td>6</td>
<td>39</td>
</tr>
<tr>
<td>20</td>
<td>Bob Feller</td>
<td>6</td>
<td>39</td>
</tr>
</tbody>
</table>

(A) - Player active in 1984; (P) - Player was active before 1931

One pitcher in particular deserves special mention in my opinion. While there has been considerable controversy in the past over players such as Ted Williams and Robin Roberts finishing in second place some years, I think that the one player who has been most slighted in MVP consideration during his career is Whitey Ford. Ford pitched for a team that won the pennant almost every season and so should have been given perhaps more consideration than he may have deserved on that basis alone. Such was not the case however. Consider his record in the following seasons. In 1955 Ford was The Sporting News pitcher of the year in the A.L., leading the league in wins and complete games and was second in ERA, yet he didn’t finish in the top 10 in the MVP vote. In 1956 he was not in the top 10 again (while two other pitchers were) yet he led the league in ERA and winning percentage with a 19-6 record. In 1958 he led in ERA with a 2.01 mark, the best of his career, and also led in shutouts and didn’t get a single MVP vote from any writer. In 1961 he won the Cy Young Award (for the majors in that year) and fashioned an incredible 25-4 record while topping the A.L. in wins, percentage and innings pitched, and he finally cracked the top 10 in MVP voting with a 5th place finish. In 1963 he again led in wins, percentage and innings while carving out a 24-7 record, and this time placed 3rd on the MVP chart. In 1964 Ford was second in winning percentage and shutouts, third in ERA in the A.L. and yet placed 22nd in the MVP voting while seven other pitchers placed ahead of him. As well note that the Yankees won the pennant every one of those years listed. Thus Ford gets a grand total of 14 MVP points under my system, to finish behind two dozen other pitchers on the all-time list.
TABLE II - THE TOP 15 MVP POINT LEADERS, ACTIVE IN 1984

<table>
<thead>
<tr>
<th>RANK</th>
<th>PLAYER</th>
<th>NUMBER OF TIMES IN TOP TEN</th>
<th>MVP POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mike Schmidt</td>
<td>8</td>
<td>51</td>
</tr>
<tr>
<td>2</td>
<td>Reggie Jackson</td>
<td>7</td>
<td>44.5</td>
</tr>
<tr>
<td>3</td>
<td>Pete Rose</td>
<td>9</td>
<td>40.33</td>
</tr>
<tr>
<td>4</td>
<td>Eddie Murray</td>
<td>6</td>
<td>39</td>
</tr>
<tr>
<td>5</td>
<td>Jim Rice</td>
<td>5</td>
<td>38</td>
</tr>
<tr>
<td>6</td>
<td>Steve Garvey</td>
<td>5</td>
<td>33.5</td>
</tr>
<tr>
<td>7</td>
<td>George Foster</td>
<td>4</td>
<td>32</td>
</tr>
<tr>
<td>8</td>
<td>Joe Morgan</td>
<td>4</td>
<td>30</td>
</tr>
<tr>
<td>9</td>
<td>George Brett</td>
<td>3</td>
<td>27</td>
</tr>
<tr>
<td>9</td>
<td>Rod Carew</td>
<td>6</td>
<td>27</td>
</tr>
<tr>
<td>9</td>
<td>Dave Parker</td>
<td>4</td>
<td>27</td>
</tr>
<tr>
<td>12</td>
<td>Greg Luzinski</td>
<td>4</td>
<td>24.5</td>
</tr>
<tr>
<td>13</td>
<td>Amos Otis</td>
<td>4</td>
<td>22</td>
</tr>
<tr>
<td>13</td>
<td>Steve Carlton</td>
<td>5</td>
<td>22</td>
</tr>
<tr>
<td>13</td>
<td>Dale Murphy</td>
<td>3</td>
<td>22</td>
</tr>
<tr>
<td>13</td>
<td>Bruce Sutter</td>
<td>5</td>
<td>22</td>
</tr>
</tbody>
</table>

Using the MVP point system, I have formed all-star teams, both active and all-time (since 1931 in any case) for both leagues. The point totals will vary from those in other lists shown for some players, because some of the MVP points have been accumulated at other positions. Stan Musial is an example of this with 69 points in the outfield and 24 points at first base.

TABLE III - THE ALL-TIME AND ACTIVE MVP ALL-STAR TEAMS

NATIONAL LEAGUE

<table>
<thead>
<tr>
<th>PLAYER (MVP POINTS)</th>
<th>POSITION</th>
<th>PLAYER (MVP POINTS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Johnny Mize (35)</td>
<td>FIRST BASE</td>
<td>Steve Garvey (33.5)</td>
</tr>
<tr>
<td>Joe Morgan (30)</td>
<td>SECOND BASE</td>
<td>Ryne Sandberg (10)</td>
</tr>
<tr>
<td>Ernie Banks (40)</td>
<td>SHORT STOP</td>
<td>Dave Conception (9)</td>
</tr>
<tr>
<td>Mike Schmidt (51)</td>
<td>THIRD BASE</td>
<td>Mike Schmidt (51)</td>
</tr>
<tr>
<td>Willie Mays (89)</td>
<td>OUTFIELD</td>
<td>George Foster (32)</td>
</tr>
<tr>
<td>Hank Aaron (80.5)</td>
<td>OUTFIELD</td>
<td>Dave Parker (27)</td>
</tr>
<tr>
<td>Stan Musial (69)</td>
<td>OUTFIELD</td>
<td>Dale Murphy (22)</td>
</tr>
<tr>
<td>Johnny Bench (34)</td>
<td>CATCHER</td>
<td>Gary Carter (14)</td>
</tr>
<tr>
<td>Dizzy Dean (32)</td>
<td>PITCHER RIGHT</td>
<td>Bruce Sutter (22)</td>
</tr>
<tr>
<td>Carl Hubbell (33)</td>
<td>PITCHER LEFT</td>
<td>Steve Carlton (22)</td>
</tr>
</tbody>
</table>

I have not included Joe Morgan as the active N.L. all-star second baseman because he was in the A.L. with Oakland in 1984. Pete Rose divided his MVP points among four positions, so he doesn’t qualify at any one place on the active all-star team.
### TABLE IV - THE ALL-TIME AND ACTIVE MVP ALL STAR TEAMS

<table>
<thead>
<tr>
<th>AMERICAN LEAGUE</th>
<th>PLAYER (MVP POINTS)</th>
<th>POSITION</th>
<th>PLAYER (MVP POINTS)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lou Gehrig (54)</td>
<td>FIRST BASE</td>
<td>Eddie Murray (39)</td>
</tr>
<tr>
<td></td>
<td>Charlie Gehringer (38.5)</td>
<td>SECOND BASE</td>
<td>Rod Carew (12)</td>
</tr>
<tr>
<td></td>
<td>Lou Boudreau (35)</td>
<td>SHORT STOP</td>
<td>Yount, Ripken (10 each)</td>
</tr>
<tr>
<td></td>
<td>Brooks Robinson (48)</td>
<td>THIRD BASE</td>
<td>George Brett (27)</td>
</tr>
<tr>
<td></td>
<td>Ted Williams (91)</td>
<td>OUTFIELD</td>
<td>Reggie Jackson (44.5)</td>
</tr>
<tr>
<td></td>
<td>Mickey Mantle (77)</td>
<td>OUTFIELD</td>
<td>Jim Rice (38)</td>
</tr>
<tr>
<td></td>
<td>Joe DiMaggio (70)</td>
<td>OUTFIELD</td>
<td>Ken Singleton (18)</td>
</tr>
<tr>
<td></td>
<td>Yogi Berra (63)</td>
<td>CATCHER</td>
<td>Carlton Fisk (19.5)</td>
</tr>
<tr>
<td></td>
<td>Bob Feller (39)</td>
<td>PITCHER RIGHT</td>
<td>Dan Quisenberry (18)</td>
</tr>
<tr>
<td></td>
<td>Hal Newhouser (31)</td>
<td>PITCHER LEFT</td>
<td>Willie Hernandez (10)</td>
</tr>
</tbody>
</table>

On the A.L. team, Vida Blue also has 10 MVP points, if you consider him to be an active left-handed pitcher. Amos Otis had 22 points but was an N.L. outfielder in 1984. Ken Singleton also has 2 more points from his N.L. career. Bobby Grich leads active A.L. second basemen with 5 MVP points if you don’t feel that Rod Carew plays at that spot any more.

Of course using this method of selecting active all-star teams tends to diminish the relative positions of players like Cal Ripken and Ryne Sandberg who should have many productive years ahead of them to move up on the list.

Finally I will leave you with a comment about the up-and-down career of Roger Maris. Maris won the A.L. MVP awards in both 1960 and 1961, but he only once received a single mention for MVP in the rest of his career. In 1964 one writer had Maris in 7th place on his ballot, so Roger finished tied for 25th overall that season. And that was it, he never received one other vote in his career other than in those two great seasons.

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**POSTSCRIPT**

I have just finished reading a review of a new book called *Baseball’s Best, The MVPs*. It seems to deal with almost exactly the same material that I have in this article for the *Baseball Analyst*, but I have not had a chance to read it. The book by Dave Masterson and Timm Boyle must go into a great deal more depth than I have, but I am curious as to how our lists of MVP all-stars compare. Also I wish that I had access to their tables of MVP voting results when I tried to find them for myself over the last year or so.
Dear Analyst:

I think Jack Carlson did a very fine job of describing why Detroit finished first in their division (Issue #16, February 1985) but did not do a good enough job in describing why Pittsburgh placed last in theirs. Obviously, something is missing if he cannot describe why a team with the best ERA in the league, let alone a positive runs scored margin, finishes last.

Let's look at the more obvious omission first. There was no mention about fielding ability. I feel there is no comparison between the "up the middle" defense of the two clubs featured. Although Detroit's and Pittsburgh's Fielding Percentages differed by only .0017, Pittsburgh made 95 errors to Detroit's 70. This amounts to 58.5 total chances per error for Detroit and 53.3 total chances per error for Pittsburgh.

Although the information in the Baseball Guide is not complete, it did account for 88% of the innings played for eight positions, excluding pitchers. The only clear-cut comparison by position was shortstop. Dale Berra made 30 errors, tying Ramirez for the league's worst mark. He handled 22.2 chances per error. Alan Trammell, injured frequently, made 10 errors, or 1 every 50.4 chances. Trammell had 504 chances to Berra's 665. If Trammell had 665 chances, he would have had 13 errors at his Fielding Percentage for the year. Berra's FPCT was .955, Trammell's .980. These two percents are significantly different at the .005 level. (z=2.34)

It might be noteworthy that Jason Thompson led the NL in errors by a first baseman. But he also led in total chances.

Although Pittsburgh had 5059 total chances to 4097 for Detroit, Detroit's outfielders had 1136 total chances to 970 for Pittsburgh. I am not sure what this indicates.

Several ways to operationalize fielding are now offered. (1) Compare the Pirates' fielding pct. versus that of the rest of the league. (2) Run a cross-tabulation on errors for each team in the league by (a) number of outs in inning when error occurred, (b) number of men on base or in scoring position when the error was committed, and (c) compare the number of errors in which a run scored in the same inning versus no run scoring after the error for all teams in the league.

Moving right along: In the table on Won-Loss record by runs scored, Pittsburgh played 39 games (and lost them all) in games it scored fewer than 2 runs, but Detroit played in 20 such games. That statistic should be developed more. How many games did the other National League teams play in which they scored fewer than 2 runs?

The less obvious omission is not so much yours, Mr. Carlson, but in the numbers themselves. I'm referring to the cross-tabulation of runs scored or allowed by innings. From looking at those numbers, if I find two identical scores, regardless of inning, for the teams in question, and isolate those innings; the result, in terms of victories, should be the same. But that is wrong because there is no measure of the variance for runs scored (allowed).

I would hypothesize that Pittsburgh's variance in this statistic would be significantly larger than Detroit's. This is given credence by Mr. Carlson's statement that Detroit scored in 29.8% of its innings, compared to 24.7% for Pittsburgh. Therefore, if I apply that percentage as a constant for all innings and look at the Detroit 4th (82 runs scored) and Pittsburgh 1st (82 runs scored), then Detroit scored in 24 innings (games), and Pittsburgh scored in 20 (extra innings were merged into a 9-inning frame of reference). Therefore, Pittsburgh's scoring varied more than Detroit's. If it varied more, then there is more likelihood for a loss by Pittsburgh than there is for Detroit.

I liked Mr. Carlson's idea, and hopefully, these suggestions will be of use to him for polishing up his study before he presents it to Pittsburgh's General Manager. So how did Kansas City win their division if they were outscored by their opponents?

Regarding Daniel Greenia's METEORS (same issue), it should be helpful if he did something like this again, to note which players had their careers shortened by injury (Herb Score, etc.), death (Lyman Bostock), or race (Luke Easter) so that they could not compile statistics which are comparable to other big-leaguers who went through their careers with one season in which their performance in some statistic was disproportionate to what they did for the remainder of their careers.

--Dan Rappoport