HIDDEN TREASURES – IF YOU KNOW THE CODE….

Fielding, Pitching Stats Uncovered!

The 1901-2008 **Batting Encyclopedia (BE)** Codell has given us is by no means the extent of his numerical inventions. In addition to more revealing batting formulae the BarryCode will eventually unveil, in its midst nestle four more "so straight to the point" statistics addressing fielding and pitching. The Code promises to be the gift that keeps giving!

The **Fielder's Equator (FE**), Codell's defensive formula referred to in the 2nd edition of the Total Baseball Encyclopedia, was first mentioned as a better alternative to Bill James' Range Factor in the *Sporting News* (1980). For the first time, range and sure-handedness (total chances minus errors = net chances) were covered in the same simple formula:

$$\frac{(PO+A)-(E)}{Games} = \frac{NC}{G} = FE$$

This outcome assured that all fielders could, by position, be measured equally on the same historical playing field.

The **Fielder's Equator** gives glovework its due as the center of stats, perpetually affecting both batting and pitching. It also is a firm middle ground historically between the error-driving fielding averages of the past and the current history-unfriendly UZR judgments.

A Pitcher's Prism Crystallized

In December 1979, SABR member and University of Wisconsin Professor John Warner Davenport featured Barry Codell's Base-Out Percentage for Pitchers in his well known Baseball Graphics. Firmly declaring his allegiance to the BOP model, Davenport, in tribute, translated the 1979 World Series data to a "BOP-Against" analysis of all pitchers in the Pirate-Oriole classic. While respectfully admiring of Davenport's efforts, Barry noted, in the two initial issues of *Chicago Sports* magazine the following spring, the conceptual problem in fully treating BOP for hitters as the mirror to "BOP-Against" for pitchers: batters incrementally trying to attain bases while avoiding outs differ intrinsically from the pitcher's invariably sole (and solo) responsibility, run prevention.

Codell at that time devised what he would always refer to as "a pitcher's prism"--two equally valid yet different value systems, synthesizing the critical categories that point to the pitcher's essential purpose. (A similar "batter's prism" occurs with B-BOP and E-BOP, resolved with the unpublished V-BOP; see "Key to Formulae," also, L. Wittgenstein, Philosophical Investigations and Tractatus-Logico.) Both pitching stats, the **Pitcher's Informer (PI)** and the

Pitcher's Succeeder (PS) are percentages that naturally expand and expound his Lincolnesque theory that all pitchers bear some responsibility for unearned runs all of the time!

The first stat, the **Pitcher's Informer (PI)** quantified this responsibility as follows, keeping the Codell Base-Out dynamic:

$$\frac{2\,(R+ER)}{(IP \times 3)} = \frac{ASB}{ORP} = \mathbf{PI}$$

Within its formidable formula, the **Pitcher's Informer** informs us of an important new number, **Accountable Scoring Bases (ASB),** by subtly charging within the 2(R+ER) numerator 4 bases against the pitcher for every earned run scored, and 2 for each unearned run.

Introduced in this pitching ratio's denominator is the **Outs Recorded Pitching** (**ORP)**, derived by multiplying innings pitched by 3. All outs under the pitcher's domain, as in the **ASB** designation above, could for the first time be easily used as a new pitcher's statistical category. (Did you know, for example, that Wilbur Wood averaged more than 20 wins and 1,000 **Outs Recorded Pitching** over 5 consecutive seasons?)

Pitching responsibility is unavoidable with PI, for does not Scoring Bases per Pitching Outs so correctly capture the pitcher's task? Resoundingly, yes! And yet….

In the March 1980 issue of *Chicago Sports*, Codell poses his prismatic puzzle with a second angle on a hurler's job description, nimbly named **Pitcher's Succeeder (PS**).

PS is a numeric pitching guide using traditional tools to build something completely new. Barry multiplies all Batters Faced (BF) x 4 to determine a backdrop of possible perfection: **Preventable Bases (PB)**. A pitcher's **PS** percentage is then determined by creating a numerator of **Unprevented Bases (UB)** (runners reaching not by error-- hits, walks and HB--plus remaining scoring bases after allowing such baserunners: R x 3). This addresses the "unearned run dilemma" in another cogent manner (reaching by error and scoring charges the pitcher with 3 bases; homering against him, with 4).

The PS speaks to the continual complementary nature of pitcher effort: to keep batters off the bases and, if not able (most importantly), to succeeding in preventing batters from scoring:

$$\frac{(H + BB + HP + 3R)}{(BF \times 4)} = \frac{UB}{PB} = PS$$

In both PI and PS, pitchers (as in Run or Earned Run Averages) seek always the lower figure. When Codell weighs the equally legitimate pitching stats equally, he finally finds, by averaging them in the Pitching Average (PA) a familiar sounding percentage for an excellent goal: a 300 average--only, as a pitcher, below is better!

The formula, of course would be $\frac{PI + PS}{2} = PA$

A career model? Perhaps Pedro Martinez:

$$PI = \frac{3778}{8348} = .435$$

$$PS = \frac{6026}{44812} = .134$$

$$PA = \frac{.435 + .134}{2} = .285$$

Pedro's PA tells us all we need to know of his pitching greatness through the prism of another great stat of Barry Codell. Literally, it's all how he looks at it!

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