

SATURN 2019 P

MAY 8 | PITTSBURGH, PA

KEYNOTE: BREAKING THE GAME — ANALYTICS REVOLUTIONS IN BASEBALL

DATA SOFTWARE TECHNOLOGY → CHANGED



DAN FOX
PITTSBURGH PIRATES
FROM MARS!

"Percentage Baseball"
"The sinister First Baseman"
"The Hidden Game of Baseball"



Fixing The QUANTIFICATION PROBLEM

- TRADITIONAL STATS
- WEAK INFERENCE
- INFLUENCE BY THINGS NOT UNDER PLAYER CONTROL

TO FIX

- IDENTIFY WEAKNESSES
- CORRECT OR MAKE NEW DATA
- UNDERSTAND RELATIVE VALUE

MOST LEGACY STATS VALUE OUTS APPROPRIATELY + ARE NOT CALCULATED IN THE PROPER CURRENCY

RUNS + WINS

FC. LANE
"YOU CAN'T VALUE WHAT YOU DON'T MEASURE"

- Singles
- Doubles
- Triples

NOT EQUAL



N=1 (YES, YOU ARE A SNOWFLAKE)
DATA POINTS
2005 → 2,000
2008 → 10,000
2016 → 1,000,000 → PER GAME

PLAYERS CARRY LAMINATED CARD, TO SET PROPER POSITION DEPENDING ON BATTER, AND ON-BASE PLAYERS

- POSITIONING COULD MAKE A DIFFERENCE 30-40 RUNS, 3-4 GAMES PER SEASON
- RAN EXPERIMENTS WITH MINOR-LEAGUE TEAMS
- CREATED MODELS TO WORK OUT WHERE TO STAND

GAME STRATEGY	PLAYER DEVELOPMENT	PLAYER ACQUISITION
	ATHLETIC PERFORMANCE	PLAYER VALUE
ANALYTICS PERFORMANCE		
QUANTIFY PERFORMANCE	OBSERVATIONAL DATA	
WEARABLES PERFORMANCE DATA		
EXTERNAL SYSTEMS	INTERNAL SYSTEMS	



PITCH FRAMING

CATCHER BREAK
UMPIRE SPIN
BATTER ANGLE

HOW OFTEN DOES THIS PITCH GET CALLED A STRIKE?

AT THE BEGINNING, PITCHER HAS THE ADVANTAGE, BATTER'S CHANCES IMPROVE WITH MORE EXPOSURE TO PITCHER

HENRY CHADWICK
BOX SCORES TO QUANTIFY PERFORMANCE

