# Pitching Foundations — Yankees Binder Edition (1964)

Complete Binder Volume: Parts I–V

## Part I — Stuff vs Movement

Full text from Part I — Stuff vs Movement**⚾ PITCHING FOUNDATIONS — PART I: STUFF vs MOVEMENT**

🟩 Core Concept Module 🔵 Pitch Mechanics Primer 🔒 Canonical Text (Sept ’64 Yankees Binder Edition)

**🎯 Purpose**

To understand the **two fundamental levers** that define a pitcher’s identity — *Stuff* and *Movement* — and how these shape not only individual pitch behavior, but the type of pitcher you develop, deploy, or design within your organization.

We’ll break down what each represents, how they interact, and how to interpret what the numbers in OOTP are *really telling you* in baseball terms.

**⚙️ 1. The Definition Zone**

| **Concept** | **Plain English** | **In OOTP Terms** | **What It Feels Like** |
| --- | --- | --- | --- |
| **Stuff** | The raw nastiness of a pitcher’s arsenal. How hard he throws, how sharp his pitches break, how late the ball moves, and how difficult it is for hitters to make good contact. | Drives **strikeouts**, **whiffs**, and the ability to dominate at-bats. It’s power, deception, and intimidation wrapped together. | *“Wow, that pitch just disappeared.”* — late swings, foul tips, weak choppers. |
| **Movement** | The shape and life of the ball — how much it *moves* through the air, sinks, rides, or tails. | Drives **home-run prevention** and **batted-ball quality**. Controls whether contact is weak, strong, or airborne. | *“He keeps the ball off the barrel.”* — sawed-off grounders, jammed flies. |

In other words:

**Stuff is how hard a hitter flinches.**  
**Movement is how bad a hitter’s contact sounds.**

**🧩 2. How Stuff and Movement Divide the Work**

* **Stuff** → generates strikeouts, swinging strikes, and awkward contact.
* **Movement** → keeps the ball in the park, generates grounders, limits extra-base hits.

If a batter *swings and misses*, that’s Stuff.  
If he *swings and doesn’t hit it far*, that’s Movement.

In OOTP, these two ratings feed separate outcome probabilities:

* Stuff increases the *strikeout event chance.*
* Movement decreases the *home-run event chance.*

Together, they define the shape of your pitcher’s stat line.

**📈 3. The Two Stat Lines**

| **Rating Type** | **Real-Life Result** | **Stat Reflection in OOTP** |
| --- | --- | --- |
| **Stuff** | Miss bats | High **K/9**, low **BABIP** (to an extent) |
| **Movement** | Limit long balls | Low **HR/9**, high **GO%**, consistent **LOB%** |

**🧠 4. The Relationship Between the Two**

Though separate, they complement and counterbalance each other:

| **Combo** | **What It Means** | **Archetype** |
| --- | --- | --- |
| **High Stuff + High Movement** | The Holy Grail — power and finesse in one. | *Ace* |
| **High Stuff + Low Movement** | Blows hitters away but gives up souvenirs. | *Power arm / fly-ball type* |
| **Low Stuff + High Movement** | Pitch-to-contact, ground-ball control specialist. | *Crafty sinkerballer / Maddux archetype* |
| **Moderate Both** | Steady innings-eater, dependent on Control. | *Mid-rotation pro* |

**🧮 5. How the Ratings Interact with Pitches**

Every pitch in a repertoire carries internal multipliers that affect Stuff and Movement:

* Fastballs and sliders tend to emphasize **Stuff**.
* Sinkers, changeups, and splitters tend to emphasize **Movement**.
* Pitch sequencing modifies both — e.g., a high fastball after a sinker increases perceived Stuff.

Thus, two pitchers with identical Stuff ratings can perform differently depending on their pitch mix.

**🧭 6. Interpreting “Stuff” in Scouting Reports**

When your scout says:

“He’s got electric stuff.”  
that usually implies:

* Velocity ≥ league average for his era.
* At least one breaking or off-speed pitch with strong deception.
* Hitters consistently late or off-balance.

When they say:

“Stuff is average but plays up,”  
that means:

* Deceptive release or arm angle,
* Good pitch tunneling (fastball and breaking ball look identical mid-flight),
* Confident sequencing and control masking lower raw tools.

**🧱 7. Interpreting “Movement”**

When the scout says:

“The ball’s got life,”  
he’s talking about **Movement** — how pitches act differently than gravity says they should.

Movement can be vertical (drop/rise) or horizontal (tail/run).  
OOTP captures both forms under one rating, influencing:

* HR/9
* GB/FB ratio
* Contact quality (exit velocity proxy)

High Movement = few loud hits.  
Low Movement = flat pitches, frequent dingers.

**⚾ 8. Diagnosing Pitcher Types**

| **Observed Stat Profile** | **Likely Rating Shape** | **Pitcher Type** |
| --- | --- | --- |
| High K/9, high HR/9 | High Stuff, low Movement | “Power + peril” pitcher |
| Low K/9, low HR/9 | Low Stuff, high Movement | Contact manager |
| Balanced stats, mid ERA | Moderate Stuff, moderate Movement | League-average workhorse |
| High ERA despite good peripherals | Stuff/Movement imbalance or poor defense | Underperformer |
| Low ERA despite low K/9 | High Movement + solid Control | Efficient grounder specialist |

**🧭 9. Tactical Implications**

* **Stuff arms** thrive in late innings or high-leverage roles (they can overpower a batter before exposure).
* **Movement arms** thrive in long outings and tough parks (they survive contact).
* In OOTP, use **Movement-heavy** pitchers in HR-friendly parks (Yankee Stadium’s short porch).
* Use **Stuff-heavy** pitchers in big parks (pitchers’ parks like Dodger or Shea).

**🔧 10. Development and Coaching Focus**

| **Development Stage** | **What to Emphasize** | **Why** |
| --- | --- | --- |
| Early career | **Stuff** | Velocity and pitch shaping develop first |
| Mid-career | **Movement** | Arm slot stability improves; home run suppression |
| Late career | **Control** | Mechanics smooth out; experience reduces walks |

Movement often peaks mid-career (27–31). Stuff peaks early.  
Control matures slow but lasts longest.

**🧩 11. Diagnosing Common Problems**

| **Symptom** | **Root Cause** | **Solution** |
| --- | --- | --- |
| High K/9 + High ERA | Low Movement → HR issues | Develop Movement; emphasize secondary pitch quality |
| High HR/9 + Low BB/9 | Overcommanded fastball, no movement | Mix in more off-speed; lower zone targets |
| Low K/9 + High BABIP | Weak Stuff, hittable pitches | Add pitch variety or velocity |
| Good stats but short outings | Low Control (pitch count inefficiency) | Training and mechanical coaching |

**🧠 12. Teaching the Difference**

When talking to pitchers:

* “Stuff” is what fools the eyes.
* “Movement” is what breaks bats.

A pitcher learns Stuff by throwing *harder* or *smarter*.  
He learns Movement by throwing *cleaner* — consistent arm angle, tight spin axis, command of release point.

**🧩 13. Coach Geep’s Golden Summary**

Stuff gets you *noticed.*  
Movement keeps you *employed.*  
And when you’ve got both?  
That’s when hitters start *pretending to tie their shoes in the box.*

✅ **End of Part I — Stuff vs Movement**

## Part II — The Pitching Trinity (Stuff + Movement + Control)

Full text from Part II — The Pitching Trinity**PITCHING FOUNDATIONS — PART II: THE PITCHING TRINITY (Stuff + Movement + Control)**

🟩 Core Development Module 🔵 Command Mechanics Primer 🔒 Canonical Text (Sept ’64 Yankees Binder Edition)

**🎯 Purpose**

To understand how the three primary ratings — **Stuff, Movement, and Control** — interact to shape every pitcher’s performance profile, and how adjusting the balance between them can redefine a player’s role, effectiveness, and developmental trajectory.

**⚙️ 1. The Three Pillars**

| **Rating** | **Core Function** | **Measured By** | **Typical Results When Strong** |
| --- | --- | --- | --- |
| **Stuff** | Raw pitch quality — speed, break, deception, sequencing. | K/9, Whiff%, Weak Contact Rate | Strikeouts, blown bats, intimidation. |
| **Movement** | Pitch life and shape — how the ball resists barrels. | HR/9, GB% | Weak grounders, low HR totals. |
| **Control** | Command — ability to locate and avoid walks. | BB/9, Strike% | Efficient innings, low pitch counts. |

**🧩 2. The Trinity Dynamic**

These three don’t work in isolation; they multiply and dampen each other.  
In OOTP and real baseball alike, the pitcher’s “shape” is determined by how these ratings interlock.

| **Combination** | **Outcome** | **Example Archetype** |
| --- | --- | --- |
| Stuff + Movement | Strikeouts and soft contact | Power ace / fireman |
| Stuff + Control | Strikeouts with precision | Polished strikeout artist |
| Movement + Control | Weak contact and quick outs | Ground-ball craftsman |
| Stuff only | Strikeouts + chaos | Wild but deadly |
| Control only | Accuracy but hittable | Soft-tossing journeyman |

A perfectly balanced pitcher — all three strong — is the unicorn. Most pitchers are tilted toward one corner of that triangle.

**⚾ 3. The Pitching Triangle**

Picture it like this:

Stuff (K power)

▲

│

│

Movement ◄───┼───► Control

(Contact mgmt) (Command)

* The farther toward **Stuff**, the more you get Ks and HR risk.
* Toward **Movement**, the more grounders and contact dependence.
* Toward **Control**, the more innings efficiency but less domination.

Where a pitcher “sits” inside that triangle defines his archetype.

**🧠 4. In OOTP’s Engine**

OOTP ties each rating to an outcome cluster:

| **Event Type** | **Driven By** | **Secondary Influences** |
| --- | --- | --- |
| Strikeouts | Stuff | Pitch variety, handedness matchups |
| Home Runs | Movement | Park factors, fly-ball/GB tendency |
| Walks | Control | Catcher framing, umpire variation |
| Batted-Ball Type | Movement + Control | Sequence quality, stamina |
| Pitch Count Efficiency | Control + Stamina | Velocity, pitch economy |

So when a pitcher strikes out 10 but leaves after 5 innings, it’s usually *Stuff-rich, Control-poor*.

**🧮 5. Role-Based Trinity Ratios**

**🟩 Starters (SP)**

* Longevity = efficiency + damage prevention.
* **Ideal Balance:** 35% Stuff / 40% Movement / 25% Control.

**Why:** They face hitters multiple times; the ball *must* stay in the park. Movement and Control sustain deep outings.

**🟡 Relievers (RP)**

* One or two innings, max effort.
* **Ideal Balance:** 50% Stuff / 30% Movement / 20% Control.

**Why:** Velocity and deception matter more than long-term efficiency.

**🔴 Closers**

* 9th-inning leverage, adrenaline-fueled.
* **Ideal Balance:** 45% Stuff / 35% Movement / 20% Control.

**Why:** Miss bats and limit hard contact — walks tolerable, HRs fatal.

**🟠 Swingmen / Long Relief**

* Mini-starters who bridge innings.
* **Ideal Balance:** 33% Stuff / 33% Movement / 34% Control.

**Why:** Must survive length and turnover; need stamina and command.

**⚪ Pitch-to-Contact Workhorses**

* Efficiency kings, rely on gloves.
* **Ideal Balance:** 25% Stuff / 45% Movement / 30% Control.

**Why:** They live and die on location, grounders, and tempo.

**🔍 6. The Diagnostic Grid**

| **Symptom** | **Likely Weak Link** | **Suggested Fix** |
| --- | --- | --- |
| High K/9, high HR/9 | Movement | Develop off-speed pitches, lower in-zone % |
| High BB/9, high pitch count | Control | Command training, simplify pitch mix |
| Low K/9, high BABIP | Stuff | Add sharper breaking pitch |
| Solid K/9, high ERA | Movement or Fatigue | Secondary usage, stamina training |
| Short outings, high pitch count | Control | Locate early, early-count strikes |

**⚾ 7. Archetype Mapping**

| **Archetype** | **Stuff** | **Movement** | **Control** | **Result** |
| --- | --- | --- | --- | --- |
| Power Ace | High | High | Avg | Dominates, high pitch counts |
| Command Artist | Avg | Avg | High | Efficient, low HRs |
| Sinker Specialist | Low | High | High | Grounder machine |
| Fireman | High | Mid | Low | Whiffs + walks |
| Workhorse | Mid | Mid | Mid | Balanced innings-eater |
| Junkballer | Low | Mid | High | Soft contact, low K |
| Knucklehead | Variable | Chaos | Variable | ERA roulette wheel |

**🧭 8. Development Path**

| **Stage** | **Stuff Focus** | **Movement Focus** | **Control Focus** |
| --- | --- | --- | --- |
| Rookie/Young | Velocity, breaking pitch feel | — | — |
| Prime | Refine pitch shapes, add off-speed | Arm slot consistency | Begin command refinement |
| Veteran | — | Maintain deception | Command, repeatability |

Stuff peaks early (age 22–27).  
Movement stabilizes in prime.  
Control matures last and ages best.

**🧱 9. How to Teach It**

When you talk to pitchers:

* “Stuff” — speed, break, life.
* “Movement” — direction, plane, deception.
* “Control” — location, tempo, composure.

Each feeds the next:

You can’t use Stuff if you can’t locate.  
You can’t get weak contact if you can’t find the zone.  
You can’t survive without at least one way to miss bats.

**🧠 10. Practical Applications**

* When developing relievers → favor **Stuff**.
* When developing starters → balance **Movement** and **Control**.
* When converting failed starters to bullpen → max **Stuff**, relax **Control** expectations.
* When rehabilitating injury-prone arms → develop **Movement**; reduce max effort.
* When in high HR parks → lean on **Movement-first** profiles.
* When in small parks with great defense → lean **Stuff-first**, let gloves clean up misses.

**⚾ 11. The Aging Curve**

| **Rating** | **Ages Fastest** | **Ages Slowest** | **Best Preserved By** |
| --- | --- | --- | --- |
| Stuff | ✅ (velocity loss) | — | Off-speed reliance |
| Movement | — | — | Mechanics, spin maintenance |
| Control | — | ✅ | Experience, confidence, repetition |

Veterans lose bite but gain precision; youth brings chaos and velocity.

**🧩 12. The Coach’s Trinity Commandments**

1. Never chase Stuff at the expense of Control.
2. Never forget Movement wins in July heat and homer parks.
3. Commanders outlast flamethrowers.
4. Teach every kid one weapon pitch (Stuff), one survival pitch (Movement), one bailout pitch (Control).

**🧱 13. Quick Role Evaluation Table**

| **Metric Focus** | **Best Read of** | **What It Reveals** |
| --- | --- | --- |
| K/9 | Stuff | Raw dominance potential |
| HR/9 | Movement | Damage prevention |
| BB/9 | Control | Reliability |
| GB% | Movement + Control | Style of outs |
| P/IP (Pitches per inning) | Control + Stamina | Efficiency |

Check these five stats, and you can decode a pitcher’s DNA in seconds.

**🧩 14. Coach Geep’s Closing Words**

**Stuff gets you scouted.**  
**Movement keeps you in the rotation.**  
**Control gets you paid.**

A fastball gets the scouts excited.  
A sinker keeps the ball in the yard.  
A well-placed strike on 1–1 keeps your job another year.

✅ **End of Part II — The Pitching Trinity**

## Part III — The Trinity Meets the Pitch Mix

Full text from Part III — The Trinity Meets the Pitch Mix**PITCHING FOUNDATIONS — PART III: THE TRINITY MEETS THE PITCH MIX**

🟩 Arsenal Interaction Module 🔵 Pitch Sequencing Primer 🔒 Canonical Text (Sept ’64 Yankees Binder Edition)

**🎯 Purpose**

To explain how a pitcher’s **Stuff, Movement, and Control** ratings are expressed through his **repertoire** — the collection of pitches that create the illusion of unpredictability, dictate contact quality, and determine how long he can fool a lineup.

**⚙️ 1. The Fastball: The Anchor of Identity**

Everything starts with the fastball.  
Every other pitch borrows from it — its speed, its spin axis, its location.  
In OOTP, it’s the reference point for all pitch evaluation: every slider, curve, or change is compared against that fastball’s profile.

**⚾ 4-Seam Fastball**

* High velocity, straight plane, slight rise from backspin.
* **Stuff:** High (whiffs and late swings).
* **Movement:** Moderate (true flight path, not much run).
* **Control:** Good baseline (repeatable delivery).
* **Best Partners:** 12–6 Curve, Changeup, Splitter.
* **Use Case:** The “elevator” — climbs the zone, sets up drop pitches.

**⚾ 2-Seam Fastball / Sinker**

* Slightly slower, arm-side run and sink.
* **Stuff:** Average.
* **Movement:** High (weak contact, GB machine).
* **Control:** Average-high.
* **Best Partners:** Slider, Changeup, Cutter.
* **Use Case:** “Bore in, break bats.” Works for ground-ball archetypes.

**⚾ Cutter**

* Hard, short horizontal break.
* **Stuff:** Medium-high (late life).
* **Movement:** Moderate (limits HRs).
* **Control:** High.
* **Best Partners:** Changeup or Sinker.
* **Use Case:** Keeps opposite bats honest, suppresses pull-side power.

**🧩 2. Breaking Balls — The Shape Changers**

Breaking pitches give the repertoire depth and deception — they warp both the hitter’s timing and his eye level.

**⚾ Slider**

* Sharp lateral break, same-handed destroyer.
* **Stuff:** High.
* **Movement:** Medium.
* **Control:** Average.
* **Stat Effects:** Raises K/9, slightly raises BABIP volatility.
* **Best Partners:** 4-Seam (vertical separation) or Sinker (mirror plane).

**⚾ Curveball (12–6 or 11–5)**

* Big vertical drop.
* **Stuff:** Moderate-high.
* **Movement:** High (induced weak contact).
* **Control:** Moderate.
* **Stat Effects:** Raises GB%, lowers HR/9 when commanded.
* **Best Partners:** 4-Seam (up-down tunnel) or Changeup (timing disruption).

**⚾ Knuckle Curve**

* Mix of slider tilt and curve drop.
* **Stuff:** High.
* **Movement:** Moderate-high.
* **Control:** Low-medium.
* **Stat Effects:** More whiffs, riskier location.
* **Best Partners:** Fastball or Changeup.

**🟠 3. Off-Speed and Specialty Pitches**

These are your disruptors — the pitches that punish timing and hide intent.

**⚾ Changeup**

* Fastball mimic, slower speed.
* **Stuff:** Moderate.
* **Movement:** High (sink/run).
* **Control:** High (command critical).
* **Stat Effects:** Lowers BABIP, boosts GB%.
* **Best Partners:** 4-Seam or Cutter.
* **Role:** Keeps opposite-hand hitters honest, bridges Stuff to Movement.

**⚾ Splitter**

* Harder forkball, sudden late dive.
* **Stuff:** High (chase pitch).
* **Movement:** High (downward).
* **Control:** Low-medium.
* **Stat Effects:** K/9 ↑, HR/9 ↓, BB/9 volatility ↑.
* **Best Partners:** Fastball/Slider combo.
* **Role:** Finisher, swing-and-miss machine.

**⚾ Forkball**

* Slower than splitter, tumbling drop.
* **Stuff:** Low-medium.
* **Movement:** High.
* **Control:** Low.
* **Stat Effects:** Grounder magnet, fewer Ks.
* **Best Partners:** 2-Seam or Curve.
* **Role:** “Contact manager’s changeup.”

**⚫ 4. Oddballs and Hybrids**

**⚾ Screwball**

* Reverse-breaking changeup; fades opposite direction.
* **Stuff:** Medium-high.
* **Movement:** High (horizontal dive).
* **Control:** Moderate.
* **Best Partners:** 2-Seam or Fastball.
* **Role:** Neutralizes opposite-handed hitters.

**⚾ Knuckleball**

* Near-spinless floater, chaos incarnate.
* **Stuff:** Unconventional — depends on deception.
* **Movement:** Extreme (unpredictable).
* **Control:** Low.
* **Stat Effects:** Massive BABIP variance, low HR/9, volatile ERA.
* **Best Partners:** Maybe a slow curve — nothing else.
* **Role:** Variance engine; breaks models and minds.

**🧠 5. Synergy Rules in OOTP**

| **Attribute** | **Good Practice** | **Bad Practice** |
| --- | --- | --- |
| Velocity Gap | 8–12 mph between fastball and change | Too small → hittable; too large → giveaway |
| Plane Diversity | One pitch up, one down, one sideways | All moving same direction → predictable |
| Usage Spread | 40/30/20/10 across 4 pitches | One dominant pitch overused → AI punishes sequencing |
| Pitch Similarity | Distinct movement profiles | Cutter + Slider overlap → Stuff penalty |
| Control Load | Fewer pitches = easier command | 5-pitch mix with low Control = inefficiency |

OOTP evaluates sequencing by comparing last pitch type, last pitch result, and confidence level — diversity keeps the “Stuff” playing up.

**⚾ 6. Repertoire Archetypes**

| **Archetype** | **Typical Mix** | **Resulting Style** |
| --- | --- | --- |
| Power Ace | 4-Seam / Slider / Change | Strikeout dominant, platoon-safe |
| Groundball Artist | Sinker / Slider / Change | High GO%, low HR/9 |
| Command Specialist | 2-Seam / Curve / Change | Efficiency, weak contact |
| Fireman | 4-Seam / Splitter / Slider | Ks and chaos, high-leverage |
| Knuckle Specialist | Knuckler / Curve | Unpredictable, defense-dependent |

**🧮 7. Efficiency Factors**

| **Influence** | **Increases** | **Decreases** |
| --- | --- | --- |
| High Control + 2–3 pitches | Innings longevity | Strikeout ceiling |
| 4+ pitch mix + high Stuff | Deception | Command efficiency |
| Low Control + high Stuff | Ks | Walks & pitch counts |
| High Movement + sinker/change heavy mix | Grounders | Swing-and-miss rate |

**🧭 8. Building a Cohesive Arsenal**

**Coach Geep’s Rule:**

“You don’t need five pitches — you need three that argue with each other.”  
One goes **up**, one goes **down**, one goes **sideways**.  
That triangle keeps hitters guessing forever.

| **Desired Effect** | **Pitch Combo** |
| --- | --- |
| Strikeouts | 4-Seam + Slider + Splitter |
| Weak Contact | Sinker + Changeup + Slider |
| Deception | 4-Seam + Changeup + Curve |
| Efficiency | 2-Seam + Curve + Change |
| Fireman Mix | 4-Seam + Splitter + Cutter |
| Platoon Balance | Fastball + Changeup + Slider |

**🧱 9. Role-Based Arsenal Needs**

| **Role** | **# Pitches** | **Focus** |
| --- | --- | --- |
| Starter | 3–5 | Depth, stamina, sequencing |
| Reliever | 2–3 | Stuff concentration |
| Closer | 2–3 | One elite fastball, one wipeout finisher |
| Fireman | 3–4 | Blend of K power and grounder safety |
| Knuckler | 1–2 | Chaos and change of pace |

**🧩 10. Development Tips**

* Adding a pitch with *different plane* or *speed gap* raises effective **Stuff**.
* Adding a pitch with *sink or drop* raises **Movement**.
* Removing redundant pitches (e.g., Cutter + Slider) can raise overall consistency.
* Stuff gains come faster in young arms; Movement gains come with repetition.

**⚾ 11. Park and Defense Context**

| **Environment** | **Optimal Mix** | **Why** |
| --- | --- | --- |
| HR-friendly park | Movement-heavy (Sinker, Changeup, Curve) | Keep ball down |
| Big outfield park | Stuff-heavy (4-Seam, Slider) | Flyballs die in space |
| Elite infield defense | Ground-ball mix | Let gloves eat |
| Poor defense | Strikeout mix | Don’t trust the leather |

**🧩 12. Reading Performance Through Pitch Mix**

| **If You See…** | **Likely Cause** | **Fix** |
| --- | --- | --- |
| High HR/9 despite strong ratings | Overreliance on straight fastballs | Add sinker or breaker |
| Low K/9 despite Stuff | Poor sequencing overlap | Introduce speed gap (Change) |
| High BABIP | Too many same-plane pitches | Mix vertical movement |
| Fatigue after 4 IP | Too many chase pitches | Simplify mix, raise Control |
| Dominant vs RHP but not LHP | Lacking opposite-hand pitch | Add Changeup or Screwball |

✅ **End of Part III — The Trinity Meets the Pitch Mix**

## Part IV — The Pitcher’s Arsenal Compendium

Full text from Part IV — The Pitcher’s Arsenal Compendium**PITCHING FOUNDATIONS — PART IV: THE PITCHER’S ARSENAL COMPENDIUM**

🟩 Arsenal Reference Module 🔵 Pitch-Type Encyclopedia 🔒 Canonical Text (Sept ’64 Yankees Binder Edition)

**🎯 Purpose**

To catalogue every pitch type recognized in OOTP and explain qualitatively how it expresses **Stuff**, **Movement**, and **Control**; what statistical fingerprints it leaves behind; and how it fits into a repertoire or archetype.  
No numbers, just feel — the way a pitching coach talks about life on the seams.

**⚙️ 1. Fastball Family — The Foundation of Everything**

**4-Seam Fastball**

* **Profile:** Straight, high-spin, high-velocity. Rises through the zone.
* **Stuff:** 🔼 Highest among all fastballs.
* **Movement:** Moderate, more “ride” than run.
* **Control:** Good — simple, repeatable release.
* **Stat effects:** K/9↑ BABIP↓ HR/9 neutral.
* **Best roles:** Power aces, closers, firemen.
* **Partners:** Curve (vertical plane), Change (speed gap).
* **Weakness:** Flat when tired; fly-ball prone in HR parks.

**2-Seam Fastball**

* **Profile:** Lower velocity, arm-side run.
* **Stuff:** Mid-range.
* **Movement:** Strong horizontal life.
* **Control:** Average-plus.
* **Stat effects:** HR/9↓ GB%↑ BABIP steady.
* **Archetype:** Contact managers, inning-eaters.
* **Partners:** Slider or Change (mirror movement).
* **Note:** When mastered, turns average arms into ground-ball machines.

**Sinker**

* **Profile:** Heavy drop, minimal run; the “bowling-ball” pitch.
* **Stuff:** Average.
* **Movement:** 🔼 Very high; biggest GB% driver in the game.
* **Control:** Good if delivered low.
* **Stats:** HR/9↓↓ GB%↑↑ K/9 modest.
* **Archetype:** Workhorses, pitch-to-contact.
* **Partners:** Slider (cross-plane), Change (timing).
* **Caution:** Overuse yields fatigue from high effort.

**Cutter**

* **Profile:** Late, tight glove-side break.
* **Stuff:** Moderate-high.
* **Movement:** Moderate; weak-contact king.
* **Control:** High — short release repeatability.
* **Stats:** BABIP↓ HR/9↓ K/9 steady.
* **Archetype:** Control artists, veteran innings-eaters.
* **Partners:** Change or Sinker (opposite run).
* **Note:** In OOTP, excessive overlap with Slider dampens Stuff.

**🧩 2. Breaking-Ball Branch — The Shape Makers**

**Slider**

* **Profile:** Late, sharp horizontal snap.
* **Stuff:** 🔼 High.
* **Movement:** Medium; generates sweep not sink.
* **Control:** Variable — touchy to command.
* **Stats:** K/9↑↑ BABIP volatility↑ HR/9 neutral.
* **Archetype:** Power arms, firemen, wipe-out closers.
* **Partners:** 4-Seam or Sinker for plane contrast.
* **Note:** Plays up with Stuff; punishes low Movement pitchers when hung.

**Curveball**

* **Profile:** Big vertical drop, slower speed.
* **Stuff:** Medium-high.
* **Movement:** 🔼 High; produces topspin grounders.
* **Control:** Medium.
* **Stats:** GB%↑ HR/9↓ K/9↑ if commanded low.
* **Archetype:** Starters, traditionalists.
* **Partners:** High fastball for “eye-level game.”
* **Caution:** High fatigue cost if over-relied upon.

**Knuckle Curve**

* **Profile:** Harder breaker; combines slider tilt and curve drop.
* **Stuff:** High.
* **Movement:** High.
* **Control:** Low-medium.
* **Stats:** K/9↑↑ BB/9↑ BABIP↓ when on.
* **Archetype:** Modern aces, high-spin specialists.
* **Partners:** Fastball & Change.
* **Risk:** Stuff advantage disappears if Control deteriorates.

**🟠 3. Off-Speed and Change Family — The Deceivers**

**Changeup**

* **Profile:** Fastball look-alike, slower with fade.
* **Stuff:** Medium.
* **Movement:** 🔼 High (sink/run).
* **Control:** High — sells deception only if spotted.
* **Stats:** HR/9↓ BABIP↓ K/9 moderate.
* **Archetype:** Balanced starters, opposite-hand killers.
* **Partners:** 4-Seam (speed gap) or Cutter (direction gap).
* **Teaching Tip:** Works best when thrown with identical arm speed.

**Splitter**

* **Profile:** Power forkball, late tumble.
* **Stuff:** 🔼 Very high.
* **Movement:** High.
* **Control:** Low-medium.
* **Stats:** K/9↑ HR/9↓ BB/9 volatility↑.
* **Archetype:** Closers, strikeout artists.
* **Partners:** 4-Seam and Slider.
* **Caution:** Demands arm strength; fatigue risk for older arms.

**Forkball**

* **Profile:** Slower, exaggerated drop.
* **Stuff:** Low-medium.
* **Movement:** High.
* **Control:** Low.
* **Stats:** GB%↑ K/9↓ BB/9↑.
* **Archetype:** Old-school contact managers.
* **Partners:** 2-Seam or Curve.
* **Note:** In OOTP behaves like heavy change; niche weapon.

**Screwball**

* **Profile:** Reverse-break fade; dives glove-to-arm side.
* **Stuff:** Medium-high.
* **Movement:** High.
* **Control:** Medium.
* **Stats:** Neutralizes platoon splits, raises GB%.
* **Archetype:** Southpaw specialists, deception artists.
* **Partners:** 2-Seam, Fastball.
* **Risk:** In real life stresses arm; in OOTP mainly Control volatility.

**⚫ 4. Exotic / Legacy Pitches**

**Knuckleball**

* **Profile:** Spin-less floater; erratic path.
* **Stuff:** Paradoxical — “apparent Stuff” from chaos.
* **Movement:** 🔼 Extreme.
* **Control:** 🔻 Low.
* **Stats:** HR/9↓↓ ERA variance↑↑ K/9 moderate.
* **Archetype:** Specialists, innings absorbers.
* **Partners:** Rarely another breaking ball.
* **Note:** Requires dedicated catcher; defense critical.

**Palm Ball**

* **Profile:** Gentle change variant; cupped grip, minimal spin.
* **Stuff:** Low-medium.
* **Movement:** Medium.
* **Control:** High.
* **Use:** Off-speed weapon for older arms; cheap pitch count control.
* **Archetype:** Command veterans.

**Eephus**

* **Profile:** 50-mph lob; pure trick.
* **Stuff:** Psychological only.
* **Movement:** Gravity.
* **Control:** High if practiced.
* **Use:** Change of pace one-off; resets hitter timing.
* **Archetype:** Showmen.
* **OOTP Impact:** Cosmetic; adds flavor, not ratings weight.

**🧠 5. Statistical Fingerprints by Pitch Category**

| **Pitch Family** | **Stuff Influence** | **Movement Influence** | **Control Difficulty** | **Typical Stat Impact** |
| --- | --- | --- | --- | --- |
| Hard Fastballs | +++ | + | + | K/9↑ HR/9 neutral |
| Sinkers / 2-Seam | + | +++ | ++ | HR/9↓↓ GB%↑↑ |
| Cutters | ++ | ++ | +++ | BABIP↓ HR/9↓ |
| Sliders | +++ | ++ | ++ | K/9↑↑ BABIP variance↑ |
| Curves | ++ | +++ | ++ | GB%↑ HR/9↓ |
| Change / Split | ++ | +++ | ++ | K/9↑ BABIP↓ |
| Fork / Screw | + | ++ | + | GB%↑ Platoon balance |
| Knuckle | variable | ++++ | – | ERA volatility↑ |

**🧭 6. Choosing Pitches for Archetypes**

| **Archetype** | **Core Pitches** | **Supplementals** |
| --- | --- | --- |
| Power Ace | 4-Seam, Slider, Change | Curve or Split |
| Grounder Specialist | Sinker, Change, Slider | Cutter or Fork |
| Command Artist | 2-Seam, Curve, Change | Cutter |
| Fireman | 4-Seam, Splitter, Slider | Cutter |
| Knuckle Specialist | Knuckler, Curve | None |
| Modern Hybrid | 4-Seam, Cutter, Change | Slider |

**🧩 7. How OOTP Reads Repertoire Synergy**

1. **Diversity Bonus:** Distinct planes = effective Stuff bump.
2. **Overlap Penalty:** Same axis (Slider + Cutter) = Stuff reduction.
3. **Confidence Scaling:** High Control + few pitches = in-zone reliability.
4. **Fatigue Cost:** More pitches = more stamina drain.
5. **Matchup Logic:** Engine weights handedness → Changeups and Screwballs shine vs opposite bats.

**🧱 8. Teaching Notes**

* **Young arms:** learn velocity-based pitches first (Fastball, Slider).
* **Mid-career:** add Movement pitches (Change, Sinker).
* **Late-career:** shift toward Control-friendly (Cutter, Palm).
* Drop redundant breakers to maintain pitch count efficiency.

**🧩 9. Quick “If/Then” Guide**

| **If the pitcher…** | **Needs…** | **Add / Emphasize…** |
| --- | --- | --- |
| Has great velocity but HR issues | Damage control | Sinker or Changeup |
| Has soft stuff but elite command | Put-away pitch | Slider or Splitter |
| Lacks opposite-hand option | Platoon balance | Changeup or Screwball |
| Struggles vs RHB | Lateral break | Slider / Cutter |
| Struggles vs LHB | Vertical drop | Change / Curve |
| Tires quickly | Efficiency | Cutter, Palm, simplify mix |

**⚾ 10. Coach Geep’s Arsenal Philosophy**

“Every pitcher owns a triangle.  
One pitch goes up, one goes down, one goes sideways.  
Fill those corners and you’ll own the strike zone.”

“The fourth pitch is for memory.  
It’s there so the hitter can’t forget what hurt him last time.”

✅ **End of Part IV — The Pitcher’s Arsenal Compendium**

## Part V — Practical Application

Full text from Part V — Practical Application**⚾ PITCHING FOUNDATIONS — PART V: PRACTICAL APPLICATION**

🟩 Implementation Module 🔵 Staff Construction Primer 🔒 Canonical Text (Sept ’64 Yankees Binder Edition)

**🎯 Purpose**

To translate the mechanics of **Stuff–Movement–Control** and pitch-mix theory into day-to-day management decisions:  
how to read what the stats are telling you, where to put your arms, how to design development focus, and how to align your defense and park with the men on the mound.

**⚙️ 1. Reading the Box Score Through the Trinity**

| **Stat** | **Trinity Driver** | **If It’s High…** | **If It’s Low…** |
| --- | --- | --- | --- |
| **K/9** | Stuff | Overpowering arsenal; out pitch working. | Needs sharper secondary or more velocity. |
| **BB/9** | Control | Losing feel or nibbling. | Good command; can challenge hitters. |
| **HR/9** | Movement | Flat or elevated pitches. | Ball staying down; defense matters. |
| **BABIP** | Movement + Defense | Weak contact or luck on his side. | Hard contact or poor gloves. |
| **P/IP (Pitches/Inning)** | Control + Efficiency | Overthrowing, missing spots. | Working ahead, weak early outs. |

Use these five and you can diagnose most problems without touching the scouting screen.

**🧩 2. Development Sliders in Context**

| **Rating to Train** | **What Improves** | **When to Emphasize** |
| --- | --- | --- |
| **Stuff** | Strikeouts, swing-and-miss rate | Young arms, short stints, relief prep. |
| **Movement** | HR suppression, grounder bias | Mid-career starters, HR parks. |
| **Control** | Walk rate, pitch economy | Aging vets, high workload arms. |

Balance them like the Trinity ratios from Part II; over-investing in Stuff can make a reliever, not a starter.

**⚾ 3. Building a Rotation**

| **Slot** | **Ideal Profile** | **Why** |
| --- | --- | --- |
| #1 Ace | High Stuff & Movement | Faces best lineups, neutralizes all parks. |
| #2 Co-Ace | Similar shape, steadier Control | Keeps streaks going. |
| #3 Workhorse | Mid ratings, high Stamina | Eats innings, gives bullpen rest. |
| #4 Contact Manager | High Movement, strong Control | Keeps ball in play, relies on gloves. |
| #5 Wildcard | Developing Stuff or recovering arm | Evaluation slot. |

Rotation health = diversity; don’t clone your aces.

**🧠 4. Building a Bullpen**

| **Role** | **Trinity Focus** | **Pitch Mix Traits** |
| --- | --- | --- |
| **Closer** | Stuff > Movement | 2–3 pitches, one wipe-out. |
| **Fireman / Stopper** | Stuff ≈ Movement | Handles chaos; needs 3rd pitch. |
| **Setup** | Stuff > Control | Mid leverage, 1 dominant breaking pitch. |
| **Middle Relief** | Balanced | Low BBs, quick outs. |
| **Long Relief** | Movement + Control | Starter-lite; stamina critical. |

Keep one arm of each persuasion; that’s how you survive 162.

**🧮 5. Matching Pitcher to Park**

| **Park Type** | **Best Archetype** | **Key Traits** |
| --- | --- | --- |
| HR-Friendly (short porches) | Movement-heavy | Sinker, Change, grounders. |
| Neutral | Balanced | Variety wins. |
| Pitcher’s Park (deep gaps) | Stuff-heavy | Strikeouts + lazy flies. |
| Turf / Fast Infield | Control artists | Force routine grounders, trust speed. |

**🧱 6. Aligning Defense Behind Pitchers**

| **Pitcher Type** | **Defensive Emphasis** |
| --- | --- |
| Ground-baller | Strong infield range (SS/2B/3B). |
| Fly-baller | Speed in CF, sure-handed corners. |
| Strikeout artist | Catcher framing & blocking more important than range. |
| Knuckleballer | Catcher with high ability; reflex infielders (random bounces). |

Defense completes the Trinity — the unseen fourth pillar.

**🧩 7. Reading Performance Trends**

| **Trend** | **Likely Meaning** | **Adjustment** |
| --- | --- | --- |
| Rising K/9, rising HR/9 | Over-reliance on high fastballs | Add movement pitch, lower zone. |
| Falling BB/9, rising BABIP | Too many strikes | Expand edges, reintroduce chase pitch. |
| Falling HR/9, low K/9 | Movement improving | Encourage pitch-to-contact approach. |
| ERA up, FIP steady | Bad luck or defense | Patience; don’t panic. |
| FIP up, ERA steady | Regression coming | Pre-emptively tweak sliders. |

**⚾ 8. Creating Staff Balance**

When assembling a staff:

* Pair **Stuff-heavy** starters with **Movement-heavy** bullpen.
* Rotate **handedness** to keep lineups off balance.
* Maintain at least one **Control-specialist** per group — the “rhythm setter.”
* Never have five fly-ballers in a homer park.

**🧠 9. Reading a Pitcher’s Development Curve**

* **Stuff** often jumps after new pitch mastery.
* **Movement** spikes after mechanical cohesion.
* **Control** rises after innings mileage and confidence.

If a prospect stalls, check pitch overlap; redundancy can cap Stuff.

**🧭 10. Adjusting Roles Over Time**

| **When You See** | **Consider Changing To** |
| --- | --- |
| High Stuff, fading Stamina | Reliever / Closer |
| High Movement, fading Stuff | Swingman / Long Relief |
| Low Stuff, elite Control | Specialist or Mentor role |
| Durable but HR-prone | Spot starter in big parks |

Reassign roles before performance collapses; prevent morale and rating decay.

**🧱 11. Using Advanced Stats as Compass**

| **Metric** | **Role** | **What to Look For** |
| --- | --- | --- |
| **FIP- / ERA+** | Core value indices | Under 100 FIP- = good prevention. |
| **LOB%** | Strand rate | Consistency of Movement + Control. |
| **GB% / FB%** | Movement mix readout | Who needs glove help. |
| **WPA** | Clutch performance | High = reliable leverage arm. |
| **WAR** | Overall net value | Combines pitching and fielding influence. |

Use these to confirm what your eyes and the Trinity already tell you.

**🧩 12. Managing Fatigue and Repertoires**

* More pitches = quicker fatigue curve.
* Stuff-first pitchers tire faster than Control-first ones.
* Rotations with diverse pitch types help spacing; avoid four guys all throwing sinker/slider.
* For long-term durability, alternate arm slots and velocity profiles across staff.

**⚾ 13. Strategic Integration**

When in doubt:

1. **Identify** the pitcher’s Trinity balance.
2. **Match** pitch mix to ballpark and defense.
3. **Assign** a role that amplifies his strengths.
4. **Train** the weakest pillar slowly, don’t chase symmetry.
5. **Monitor** K/9, BB/9, HR/9 monthly — those are your dashboard lights.

**🧩 14. Coach Geep’s Closing Notes**

“Pitching’s not just about throwin’ hard; it’s about *knowing* which mistakes won’t kill you.”

“You teach a kid to throw a strike, then teach him when not to.”

“Build staffs like jazz bands — everybody plays a different note, but together they make music.”

✅ **End of Part V — Practical Application**