Chapter 11. Metamorphosis at the Brink of Disaster

> "The larva races to pupate before the rot dries up or is consumed by other larvae. Pupation and consequent modifications in the imago [adult] remove the fly from the larval competitive arena."
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> - *My ecology notes (1964)*

> "… important achievements require a clear focus, all-out effort, and a bottomless trunk full of strategies."
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> - *Carol S. Dweck* (7)

A Tale of Two Epiphanies

When I was a kid, Dad told me I must work hard if I am to succeed as a pitcher. A lot of mindless throwing to the box would be insufficient. It would take mental work, too. Now it was time to *think.*

Picture this: a pleasant mid-September afternoon in Tucson in 1964. A gentle hundred-degree breeze was wafting the heavy, petrolic scent of the greasewood across arid foothills. In the pallid desert sky a salivating buzzard's keen sense of history had set it to circling overhead.

I stood on my mound, plopping the ball into my glove and staring at the target on the back of the box. Considering Billy Goodman's suggestion to try something new, I was hoping for a flash of inspiration or an inkling right then.

At that moment my short-term and long-term memories kicked in, and dug up an epiphany. That morning I had read that, in insect metamorphosis, the pupa takes a brief break from competition to determine what kind of creature it's going to be and undertake construction. Once complete, the emerging winged adult will no longer have to compete with youngsters crawling around back at the old home – the bacterial slime flux.

As a pitching pupa removed from pressures of competition during the off-season, I was free to redesign myself. If I did it right, I could avoid being lumped in with the rest of the larvae … er, minor league pitchers when spring training sprung into bloom. This would require a whole new look. Something to make coaches and managers grant me my own niche. Of course, it would have to get batters out, too.

That was the general scheme. Next, I needed details. For that, long-term neurons reached back to 1960 to remind me of Max Surkont's advice, "Imagine what the batter sees when he's looking at your pitches". Perhaps a better way of putting this would be, "Imagine what is crossing the batter's mind."

Batter Psychology 101

What happens in the batter's head as the pitch is hurtling toward the catcher? The batter's brain has a tough task. It must predict whether, where, and when to swing the bat, based on what the batter sees during the first one-third of the

pitch's flight. A good fastball takes about four-tenths of a second to get from pitcher's hand to catcher's mitt. The brain has about 130 milliseconds (a little more than an eighth of a second) to get its ducks in a row.

Little is known about batters' brains. You might think the topic would be hot fodder for experimental research, but alas, it is not. From research on the golfer's brain, however, we can guess that major league batters think differently from amateurs. Debbie Crews and John Milton (2) compared brain activity of pro golfers with amateurs as each was attempting an imaginary wedge shot. The less experienced players lighted up the basal ganglia, forebrain, and amygdala, whereas pros were pretty much a blank as the club was being swung. Of course, hitting a golf ball is a proactive action, while the batter must be reactive and probably has brain activity as the ball is traveling toward the strike zone. Still, the thinking of a Little Leaguer isn't what is happening in a major leaguer's head, I imagine.

Let's consider Babe Ruth's cogitation as he faces Dirty Dave Baldwin for the first time and vice versa. Babe intends to look at the first pitch to size up this new guy. He wants to become familiar with the way the ball looks as it comes out of Baldwin's hand and with the spin of the pitch. Babe considers that information to be worth a strike, so he won't be swinging at the first pitch.

Baldwin figures Babe is going to take the pitch, so he might as well get ahead of him by making sure the first pitch is in the strike zone. At the same time, he doesn't want Babe to see the kind of pitch Baldwin intends to use to get this dangerous hitter out – in this case, a screwball low and away. Baldwin throws a hard sinker, but, shoot the luck, it's too low. Baldwin is behind the hitter already. He allows himself a half second of remorse. Then he gets down to plotting his next pitch.

At this point the Babe is looking for something he can pull. He figures Baldwin must throw a strike or go deeper in the hole, so this will probably be a pitch up where he can get a good look at it. He's swinging if his prediction is right.

But Baldwin knows this. Also, he knows Babe still has the residual image of that low sinker tucked away in the unconscious corner of his brain. That image is rapidly deteriorating – still, if Dirty Dave works quickly, it will be hanging around and get in the way of Babe's processing of the next pitch. Baldwin drops his arm to a submarine delivery and undercuts the ball, creating a hard backspin that causes the ball to rise and break in on the left-handed hitter. The pitch looks fat to Babe (and vice versa), but it is too high and tight for him to hit it into fair territory. He pulls a frozen rope up and over the roof of Yankee Stadium. It is foul by thirty feet. The crowd oohs and aahs. Dirty Dave thinks, "That went well."

Pitchers call this process "setting up the hitter." The pitcher is using that residual image of the previous pitch to confound the hitter. This works because the image

resides somewhere in the unconscious mind – the part of the mind that makes decisions for the hitter as the pitch is in the air. How do we know this?

In the 1970s, neurophysiologist Benjamin Libet conducted a series of experiments to determine the relationship between the conscious intention to carry out an action and the initial brain activity that must precede the action. He found that the brain lights up about 350 milliseconds before the conscious mind is aware the action is to be taken. The brain has only 130 milliseconds to decide whether to swing and, if "yes", where to swing. If these decisions are made by the conscious mind (as in the case of a weak-hitting relief pitcher, for example), the ball is in the catcher's mitt before the batter starts the bat moving. Babe must be hitting with his unconscious mind.

So Dirty Dave goes to work on that part of Babe's noggin. Every pitcher tries to throw monkey wrenches into the hitter's unconsciousness – give it some surprises. To do this he varies his pitch speeds. Warren Spahn expressed this succinctly - "Hitting is timing. Pitching is upsetting timing." The great coach Johnny Sain advised his pitchers to avoid showing batters consecutive pitches of the same speed.

Dirty Dave has Babe set up for a slow screwball breaking down and away, inches below the knees on the outside corner of the plate. Babe, with that "fat" high inside riser still lurking mentally, swings at the slower pitch, but misjudges the slowness. The pitch drops farther than Babe's unconsciousness expects, causing the bat to top the ball. The result is a routine two-hopper right back to the cat-like pitcher, who pounces on it and throws Babe out at first easily. Didn't think Dirty Dave could do it, did you?

To See Oursels as Ithers See Us!

Back in September, 1964, I knew of two ways to throw that monkey wrench into the batter's unconsciousness: make the pitch act funny early in its trajectory, or release the ball unconventionally. I had already tried making the pitch act funny - learning about the knuckleball from Warren Hacker in 1961 (see the Glossary for a description of the knuckleball). My first efforts relied on using the fingertips, a method invented by Kickapoo Ed Summers, an outstanding pitcher for the Detroit Tigers in the early 1900s, and made popular by Hall of Famer Hoyt Wilhelm in the 1950s and '60s. This didn't work well for me.

I had more success when I gripped the ball with two or three knuckles sliding on the smooth part between the seams. This is the grip that gave the original knuckleball its name. It was used by Deadball Era[1] pitchers such as Eddie (Knuckles) Cicotte of the White Sox. Like the fingertip knuckler, it is thrown with limited arm motion – sort of a pushing action. It is relatively easy on the arm. The pitch doesn't need much velocity because the deflection is erratic.

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[1] The Deadball Era is generally considered to comprise the first twenty years or so of the 20th Century.

In case the knuckleball didn't pan out, I explored a second option – an odd release. Thinking about Max's advice, I asked myself, "How soon can the batter pick up the ball? Can he detect the launch angle at release? Can he see the ball's spin early in the pitch's flight? And why is that vulture circling over my head?"

These questions gave me clues as to how to develop a more deceptive delivery. Nearly all pitchers in the '60s threw with an overhand or three-quarters delivery; few were throwing sidearm. At one time, back in the mid-1800s, all pitchers were required to throw underhanded. Beginning with Jim Creighton's illegal delivery in 1857 (28), this evolved into a submarine motion – like tossing underhanded except with a whipping action of the arm concluding with a snap of the wrist. Of my contemporaries, Ted Abernathy was about the only submariner.

In the mid-1900s managers and coaches tried to discourage sidearm and submarine deliveries. Coaches told pitchers, "You're dropping your arm," which meant, "Does your arm hurt?" Coaches assumed that a pitcher "drops his arm" to relieve stress – it was seen as a sign of a sore arm. Conventional wisdom assumed no one would lower his delivery to make himself more deceptive.

Would a submarine delivery be deceptive for me? It might, if for no other reason than batters rarely faced it. I tried to picture in my mind what the batter would see: the pitcher whips the ball back so it's hidden behind his body, he takes his stride, and launches the ball upward from about knee high. *That* would look different! Although the release point might not be hard for the batter to deal with, the launch angle would be extraordinary. In addition, the radical spin imparted would bend the ball's path in unfamiliar ways. Unfamiliar was my best bet.

That warm September day, I began submarining and sidearming to the box (Figures 11.1 and 11.2) – trying fastballs, curves, screwballs, sliders, and palmballs, as well as the three-knuckle knuckleball. Thus began a series of thousands of tiny experiments that would sum to one winter's work.

< *insert* Figure 11.1 Launch angle from sidearm delivery (showing the author in 1967). ***here >***

< *insert* Figure 11.2 Launch angle from submarine delivery (showing Byron Speece in 1940). ***here >***

The dark vulturine scout spiraling above me, patiently waiting for me to falter and collapse, began wheeling out over the valley now, never to return.

Laboratory Tests

Each day I labored on the knuckleball and my radical new delivery. Either of these strategies might be my salvation. I even tried to combine them, throwing the knuckleball with a sidearm delivery. Using a sidearm knuckler in the 1930s and '40s Hal Turpin was one of the Pacific Coast League's top pitchers, so I knew this pitch was feasible. I wasn't able to make it work, however.

In the unorthodox delivery experiment, I cultivated a range of lower arm angles, from sidearm to submarine (from three o'analog clock to five o'analog clock). Like the knuckler, low-angled pitches were easy on my arm. I could spin a curveball from down under without the jarring wrist snap that strained my elbow on the overhand curve. In addition, I discovered I could apply new spins and get new deflections, providing me with a "bottomless trunk full of strategies" that weren't available to the overhand pitcher.

But did I know how various pitches were behaving? I couldn't tell what pitches were doing by watching them, and the box was a silent partner. To solve this problem, my father was there when I needed him once again. He stood behind the screen, next to the box, and said things like, "I sure wouldn't want to try to hit that," or "What was that one supposed to do?" His comments monitored my progress, giving me a sense of which grips and angles were working well, and which were busts.

Even with this essential feedback, however, to make a sea change in my pitching methodology wasn't a trivial matter. I would have only five months to reinvent myself – not enough time to reinvent myself twice. I had to resolve whether to concentrate on the knuckler, or the weird delivery.

I didn't agonize over this – I tried out both alternatives for a month and came to a conclusion. By that time I was convinced I could be more successful with the unconventional delivery. I rarely threw the knuckleball during my career. In the minors I mixed it into my repertoire as a change up occasionally. I knuckled only about three or four times in the majors. I recall just two instances of getting a swinging strike with it.

Once the pupa determines what kind of fly it is going to be, it goes for it full bore. Once I determined what kind of pitcher I wanted to be, I practiced the new delivery for hours each day.

But it wasn't quite like learning to pitch all over again. I had accumulated resources over the years - well-developed senses of how to grip the ball, how to impart spin, and how the pitch would behave due to a given rotation speed and direction.

The Geography of the Ball

Ted Williams used to say pitchers don't think. That wasn't true – pitchers just did it differently from batters (and most managers). For instance, we thought a lot about the pitch components, especially the major ones – the hand and the ball.

For one thing, pitchers knew how the fingers differed from one another. We understood the gradations of sensitivity, dexterity, and strength from index around to pinkie – thus, the index finger, the cleverest of them all, controlled the

ball. The middle finger, the most powerful, was the one that must apply the odd spins to prescribe the snake jazz - the deviations the pitches would take.

Pitchers also understood the ball's geography. If you watched us sitting in the bullpen, you would notice we spent a lot of time plunking the ball into our own gloves or tossing the ball up and noting its spin. Idly? Not really. This was part of getting the feel of the ball - the texture of the great gently rounded White Plains and the narrow Hourglass Isthmuses lying between the Red Striated Hills of the seams[2]. As his hands were brought together in the windup or stretch position, the dexterous pitcher oriented his fingers quickly to these topographical features using touch, without looking at the ball snuggled in his glove.

After years of experience, a pitcher could sense a soft bruise resulting from being crushed by Frank Howard's bat. He could recognize rough, over-stretched skin where the ball had once been damp. He could detect seams that were defectively flat or pleasantly high. These tactile faculties were cultivated through hours spent stroking the ball like a seasoned gigolo - knowing every curve, crest, and cue. Even a slight scuffing could be significant to the seasoned hurler.

If a pitcher didn't think the ball felt right – perhaps it weighed a dram too much, or the seams were a tick's breath too low - he would ask the umpire for a new ball. Umps generally obliged. They knew how finicky pitchers could be. Sort of like a dog's ability to smell or hear something that escapes ordinary human senses, except pitchers weren't born with their knack. It had to be developed.

These sensibilities were important even for the sidearmer. Having them helped me work through pitch behaviors resulting from the new grip/arm-angle combinations.

On the Bias

As I hoped, York sent me a contract for the 1965 season. I could hardly wait to get down to Lake Wales, FL, to try out my new stuff on actual, living, breathing batters. I went down there early and looked around for someone, anyone, to strikeout. I didn't find a soul in town who was up to the challenge. I gave up after they slammed the door at that convent.

Once spring training opened officially, though, I had my chance. A thought-provoking chance it was, too. Spring always starts with lots of running, stretching, and batting practice. My efforts at tossing batting practice (BP) brought lots of grumbles from batters and catchers. My guess that the pitch would look weird to hitters was correct but so was my apprehension about throwing strikes. In BP batters are looking to sharpen their batting eyes rather

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[2] A baseball's cover comprises two strips of leather (identical dog bone-shaped geometrical figures called *ovals of Cassini*) stitched together with a single continuous seam.

than struggle to get the bat on an elusive freak pitch. Also, dodge ball should not a part of BP.

That's when Jack Krol became an inspiration to me. Jack was a veteran infielder – about my age and in about the same career situation. Jack watched me throw for awhile and then took his turn in the cage dodging and slapping at my pitches. Afterward he came over to give me a word of encouragement.

Jack: "Dave, just keep doing what you're doing."

Me: "Really? I seem to have a little control problem."

Jack: "Yeah, but you'll get over that soon enough. The stuff you're throwing is going to drive right-handers crazy, and that screwball will work well against left-handers."

Me: "You're the first person to tell me that I'm on the right track."

Jack: "Well, the other hitters are a little irked at being drilled in the ribs in BP. They'll get over that soon enough, too."

Jack was right. They got over it, eventually. Also, my control began coming around. I had a great spring. I could hardly wait for the season to start.

But this was 1965. In the face of the great American cultural revolution (sitting in and dropping out, burning bras and draft cards, etc.), the great American bastions of conservatism were Barry Goldwater and Baseball. Barry was gearing up for an ill-fated run at the Presidency, and Baseball's management buckled their concrete shoes to hold their ground. Anything that had a faint whiff of change was eschewed out the door.

For example, remember Houston's traveling pitching coach - the one I met when he visited Durham in '64? He was on a mission (initiated by upper management) to "persuade" all pitchers in their organization to use the same pitching motion. Also, all were to throw the same three kinds of pitches. Such uniformity was convenient when it came to making roster decisions. It eliminated the unfit, that is, those who didn't fit the mold.

Even years later, after I had demonstrated that I could, too, pitch in the majors throwing that odd way, I had problems with muddled mindsets. Once, just before the opening of a season, my manager gave a newspaper interview in which he said he had no confidence in sidearm pitchers. He wanted only pitchers who threw hard over the top. That left me in sort of a pickle. Reversing metamorphosis doesn't work well. (Insects never try it – an adult fruit fly never says to itself, "Gee, I miss being a larva squirming around in the old noxious slime. I'll just lose these wings and completely revert to childhood.")

I knew when I started this submarine project it was a gamble. There was going to be massive managerial resistance. I figured, “All I need is *one* manager in the organization who is willing to take a chance on me. They can’t all be stick-in-the-muds.” Well, actually I didn’t think “stick-in-the-muds”, but another, more colorful word that isn’t even hyphenated.

I encountered snide and snippy remarks throughout spring training. One organizational executive, an old-timer in body and spirit, said to me, “You throw like a girl pitching a softball. Have a little pride.” I knew I wasn’t popular but I was getting almost everyone out with my “cute little underhand pitches.” At any rate, I was no longer lumped in with all the other pitchers.

Unfortunately, York’s manager didn’t want to deal with setting up a new category. The White Roses had changed skippers that season; the new guy announced he didn’t want me on his staff. Because I had a York contract, I became a ballplayer without a roster. I was thrown onto the auction block. If no manager in the Senators’ farm hierarchy wanted me, I was doomed to pack my bags for Tucson.

But it wasn’t long before Owen Friend, the skipper of the Burlington, NC, team in the Carolina League, thought a 27-year-old pitcher who gets almost everyone out would be just the ticket to boost his inexperienced ball club. I like to think he was right.

Getting Down to Business

I got off to a slow start in ’65. This was not surprising considering my newfound inclination towards misdirection. The curveball was especially troublesome. I had difficulties getting the hang of aiming it *behind* the batter. That just didn’t seem right to me, so I was missing outside consistently. I had established my target in throwing to the box, but pitching to a real batter confused me.

I won just two of my first five decisions. Then, suddenly, the clouds of funk lifted and the sun shone brightly. I found myself in that blessed optimal state - I hardly had to think at all. Before each pitch I imagined what it would do and where the batter would hit it. Then I let my body take care of calculations and logistics. Motion flowed into motion. Baseball was never easy for me, but this was as close as I got to effortless. Perhaps, “uncomplicated” is a better word.

Many years had passed since I had flowed in that particular groove. I experienced it several times more before my career ended. It made me feel I could pitch forever. I guess that’s what players who take performance enhancing drugs must feel like all the time.

After one particularly good game, Owen Friend called me into his office. “Well, old-timer, I’m sorry to lose you, but this is the easiest thing I ever had to do. You’re to fly to Hawai’i tomorrow. You’ve been called up to the Islanders.”

This was the big break I had been working for all those years. Hawai'i was in the class AAA Pacific Coast League. I had played at class AAA ball before, but this would be different. This time it was to be a true testing ground for my ability. I felt if I pitched well in Hawai'i, I would get my shot at the big club.

A Touch of Class AAA

By the time my plane touched down in Honolulu it was mid-August. I still had enough time to show I could pitch at this level.

The manager to convince in this case was George Case. Playing for Washington back in the 1930s and 40s, George was an All-Star four times, and led the American League in stolen bases six times. He batted over .300 thrice. And he was as good a manager as he was a player. He was patient, observant, wise, and understanding – a great combination of characteristics for leading any ball club.

George explained things right off.

George: "Dave, you're going to be a relief pitcher, ultimately, but the big club wants you to get in as many innings as possible here, so you'll go into the starting rotation right away. I understand you were sometimes a starter at Burlington."

Me: "Yes, sir, sometimes."

George: "I'll be frank with you – you're running out of time. You're closing in on thirty. You'd better make it up there soon to have any career left at all. Let's do everything we can to get you up with the Senators as quickly as possible.

Me: "Yes, sir, as quickly as possible."

George was right. In those days before chemical augmentation, a player was expected to deteriorate around the age of thirty. Even though all those years of sit-ups, etc. had kept me in better-than-average condition, and the lower deliveries were easier on my arm, I would be held accountable to Baseball's general timetable for players. Upper management's preconceptions and expectations were carved in stone.

George was as good as his word. He stuck me in the starting rotation immediately, and I picked up where I had left off in Burlington. That in spite of discovering that Honolulu Stadium was one of a whole league full of hitters' ballparks. The high screen in right field didn't come close to making up for the short distance from home – 305 feet - and the consistent trade wind that blew down the Manoa Valley, and out to right.

On the last day of the season, I nailed down a shot to return to Hawai'i for '66. I lost 1-0 with two outs in the bottom of the ninth in Tacoma. Until that last hitter singled in the winning run, I pitched well, and that is what counted.

A Summary of My Experiment

At the end of over twelve months of diligence and discovery, the results of my big experiment with low deliveries were apparent. Outcomes are more convincing, though, when backed up with numbers. Therefore, let's look at the before and after stats of my career to judge how well the transformation worked.

Minor League Career Totals

Before/After Sidearm	***G***	***W***	***L***	***IP***	***H***	***BB***	***SO***	***ERA***
Before	140	23	22	467	506	179	307	4.55
After	240	42	34	533	449	230	488	3.02
Totals	380	65	56	1000	955	409	795	3.74

Averages Per 9 Innings Pitched

Before/After Sidearm	***IP***	***H/9 IP***	***BB/9 IP***	***SO/9 IP***	***ERA***
Before – Minor Leagues	467	9.75	3.35	5.92	4.55
After – Minor Leagues	533	7.58	3.88	8.24	3.02
After – Major Leagues	225	7.61	3.56	6.57	3.08
After - Minor & Major Leagues	758	7.60	3.78	7.74	3.04

G = Games	W = Wins	L = Loses	IP = Innings Pitched
H = Hits	SO = Strikeouts	BB = Bases on Balls	ERA = Earned Run Ave.
X/9 IP = Frequency of X occurring per nine innings pitched			

Even though most minor league innings pitched after I switched were in class AAA leagues while those before I switched were in the lower minors, I was far more successful in the afterlife. The ERA probably tells the story best: 4.55 before vs. 3.02 after. My career ERA in the majors, all occurring after the switch, was almost identical to my ERA in the "after" period in the minors.

About those numbers of walks - my control was actually better after I started throwing sidearm although the average bases on balls per nine innings increased. The average went up because managers more frequently called for intentional walks to left-handed batters, reasoning that lefties got a better view of my sidearm pitches. With first base open, and a right-hander on deck, managers often opted to walk a lefty, and take their chances on the right-hander. Many managers would instruct me to "pitch around" the left-hander. That meant, "Let's see if this guy is dumb enough to try to hit stuff close, but outside the strike zone. If you're dumb enough to throw him a strike, however, you'll be in Idaho Falls." I was always just smart enough to avoid Idaho Falls where, I'm told, vultures often circle over the pitching mound.

To summarize, I got it right. The odd delivery worked. I proved to be at least as intelligent as a fruit fly (aren't we all?). The first six years of my pro career had been bumpy; the next ten years would be a lot smoother.

Help Yourself

In retrospect, I am still amazed that I waited so long for a pitching coach to tell me what to do. After all, I found pitching more attractive than hitting because the pitcher is proactive; the hitter is reactive. The pitcher gets to start things; the hitter waits to see what happens. Being proactive is appealing because it puts you in control. Yet I wasn't being proactive when it came to managing my career.

If you are waiting for good luck to happen, you are waiting for bad luck, too. Good advice, like any other kind of luck, is something that happens to you, maybe. Of course, bad advice can happen to you, too.

I would have been extremely lucky to have found a pitching coach who was able to turn my career around. I pitched for six years in pro ball before I stopped waiting for good fortune – before I finally became proactive and tried to work out things for myself. It took me six years to change from a fixed mindset to a growth mindset. Some good advice: don't wait that long to make your change.