Miles mikolas fangraphs

Here's something that won't surprise you. The number one starter in all of baseball last year, when it took getting hitters to chase pitches outside the strike zone, was Patrick Corbin. Of course it was Patrick Corbin! Dude threw 95% of the sliders last year, and that's just a little exaggeration (it was just over 41%, if you're going to check my math). The other guy on the list, minus 0.1% outside the swing zone behind Corbin, was Jacob deGrom. I think... I do. DeGrom had a 1.7 ERA last year and struck out 32% of the batters he faced. People were swinging on a lot of ground outside the strike zone. At number three, the list takes an unexpected turn. Baseball's third-highest chase rate last year belonged to Miles Mikolas, and it's hard to think of a pitcher less reminiscent of Corbin and deGrom than mikolas. While the aforementioned duo had top-10 misses among qualified starters, Mikolas was in the top ten. Corbin and deGrom were examples of a new direction with three true outcomes with which baseball went (mostly one real outcome, in their case), while Mikolas basically had the lowest rate of three real outcomes in all of baseball. What does it mean to generate a ton of swings outside the strike zone, but a little miss? It's hard to understand how Miles Mikolas works. He's kind of a unicorn - you probably think you can name pitchers like him, but none of them fit. Is he Kyle Hendricks, master of control with meaningless change? Mikolas doesn't even throw a change. He also sits around 94.5mph with his fastball, a top 20 among qualified starters in 2018. Hendricks has the slowest fastball in that group. Is he rich Mike Leake, confusingly effective despite never kicking anyone out? That's not it either – Leake never generates swings and misses, and there's never an exaggeration here. He had a bottom-10 swinging strike rate every year he was a qualifying pitcher. Mikolas, meanwhile, is about the league average. Leake also, somehow, throws significantly fewer shots than Mikolas - Mikolas put the ball in the league-leading strike zone 48 percent of the time last year. Percentage zone also destroys my most off-the-wall comp, Jake Arrieta. People think Arrieta's wild, and he certainly doesn't have Mikolas-esque control. Admittedly, he throws a similar pitch mix, and in moments of his career he generated a ton of swings without a crazy amount of whiffs. The problem with straight comparison is that Mikolas absolutely pounds the strike zone. With Arrieta, you had a feeling that he and the hitter didn't know where the ball was going and that he did it. With Mikolas, there's no doubt he knows where the ball is going. When your best approximation of a guy with one of the lowest strike rates in baseball is cy young-winning who ran one of the highest strikeout rates in baseball, it's safe to say your comparisons aren't very close. So how are we supposed to evaluate Mikolas? The move to find a similar pitcher doesn't seem to be working. ZiPS is his number one comparable to Frank Sullivan, the Red Sox' effective starter from the 1950s who is absolutely not helping us as a mental comp in 2019. Modern pitchers make imperfect matches for different reasons. Looking at it from a field independent standpoint doesn't help as much as I'd like - thinking of him as a guy throwing himself into contact feels a little hollow considering how many whiffs Mikolas generates, and he's extreme in so many ways (zone rate, chase rate, ground ball rate, walking rate, etc.) that extrapolation of results from several constituent parts of his game will always be difficult. Instead, let's just look at one thing—one remarkable thing. Miles Mikolas is one of the best pitchers in baseball in one of the best things a pitcher can do -- get hitters to swing on pitches outside the strike zone. Despite this, he hits very few batters. Nevertheless, it is tremendously effective – last season it finished 12th among the pitchers in war. It's strange enough that it's worth exploring for your own good. First, think about this. Inside the strike zone and outside the strike zone are pretty blunt descriptors. As an example, consider the swinging impact that the catcher blocks. That pitch isn't near the strike zone, and the hitter probably isn't even close to hitting it with his swing. It's not really the same as a throw that missed the outside edge of the strike zone by an inch. At the same time, throwing straight into the heart of the plate is not the same as throwing that hits the bottom inside corner, even though they are both in the strike zone. To understand why Mikolas creates so many swings outside the zone, but so few whiffs, we have to zoom in. As a visual aid for the next section, here's a 10×10 graph of Mikolas' throw in 2018. We have a lot of data to work with when it comes to MLB as a whole - 143,609 pitches were thrown at that rough area last year. This is an area where you would expect to generate a decent number of swings and a few misses, and that's exactly what happened. Batters swung to 43% of pitches thrown from the plate last year alone, comfortably more than the 31% outside the field zone where they swung overall. Here are some relevant metrics for both Mikolas and the league as a whole: Pitches near zone MLB Mikolas Swing% 43.2% 47.5% Whiff/Swing 33.5% 26.5% Offense/Swing 37.2% 42.2% 42.2%2%8% SwStr% 14.4% 12.6% wOBA/BIP .302 .247 wOBA .259 .233 Exit speed 81.7 mph 77.4 mph There are some interesting trends to unpack here. The batters really rocked more on Mikolas' pitch, as you'd expect. his high posse rate. They also took less dah, although they hit a ton more foul balls. In fact, hitters put the ball in play at just 30% of their swings against Mikolas, basically the same as the league average, despite missing out less often. When they did put the ball in play, the real fun started – at least for Mikolas. He allowed a minuscule .247 wOBA on balls to put in play (methodological note: I included home runs here). That wasn't much of a pattern size coincidence either - the average output speed of 77.4 mph allowed was the lowest in the majors among pitchers who had 75 measured output speed scores, and still the third lowest (out of 110 pitchers) if you lower the minimum to 50 scores. Opponents recorded only two barrels (Baseball's Savant statistics that essentially mark hits that are extremely likely to go to extra bases) out of 89 times they put the ball in play. Mikolas caused poor contact in a measurable way. The above table does a good job of pointing out the trade-off Mikolas is making in his pitching. He was phenomenally effective at getting soft contact. It is shown in almost every number - a huge percentage of foul ball, poor exit speed, low wOBA across the board. The downside of this soft and dirty contact is a significant reduction in swing surges, and therefore the rate of impact, which (along with walking speed) feeds off the overall wOBA plate layout ending in one of these pitches. So Mikolas is miles better (sorry, I had to) limit the damage to contact, but outperforms the league with less on the overall wOBA. On pitches farther outside the strike zone (all pitches outside the strike zone minus the ones we just looked at), Mikolas showed a similar, albeit less pronounced, Sample: Other Pitches Outside Zone MLB Mikolas Swing% 17.5% 23.9% Whiff/Swing 55.6% 43.7% Offense/Swing 28.0% 41.2% SwStr% 9.7% Offense/Swing 28.0% 41.2% SwStr% 9.9 17% 10.5% wOBA/BIP .268 .377 wOBA .336 .253 Output speed 75.4 mph 75.7 mph Take wOBA scores in this salt grain table, because we enter extremely small sample-sized territory - 30 balls in play for his wOBA/BIP. He still generates more swings and fewer whiffs per swing, though in this case the increased swings support his swing strike rate above the league-high average. His overall wOBA still beats the MLB average comfortably because of his low walking speed. Essentially, Mikolas is in the business of trading takes for dirty balls, a job that all pitchers would like to get into. It's time to come to conclusions and deliver, but for the full, here's the same pitch table in the strike zone: Pitches in zone MLB Mikolas Swing% 66.4% 68.4% Whiff/Swing 17.6% 14.5% Offense/Swing 40.0% 39.. 9% SwStr% 11.6% 9.9% wOBA/BIP .393.328 wOBA .326 .284 Exit speed 89.6 mph 87.4 mph Here, additional swings don't really generate much extra dirty balls, but Mikolas is still output speeds, leading to significant outperformment as a whole. What's the result of all this data? Well, first: Mikolas creates a ton of foul balls, which is feeding both his high-speed chase and high-rate contact hitters on out-of-zone pitches. It works pretty well for him overall because he's able to generate swinging strike rates that are around the league average while throwing fewer pitches that hitters take for balls. This feeds his absurdly low walking speed. Second, Mikolas can live in and around the zone because hitters just can't keep him away. His total allowed exit velocity was more than 2 mph lower than his first league average, and opponents threw him in just 5% of the time they put the ball in play, roughly 2% lower than the league as a whole. Can Mikolas replicate that skill in 2019? Well, a 2017 study by Craig Edwards found small but meaningful during the year of correlation in exit speeds allowed. I repeated the study for pitchers with at least 400 battered ball events in 2017 and 2018 and found a marginally larger r-squared than .21. To be as precise as possible, I'd like to control for the hitters every pitcher has faced, but hey buddy, this is the concluding part of the miles mikolas article, not the article on allowed output speed. We're going to have to save that study for another day. However, I found that an estimate of 50% of first-year EMs allowed and 50% of the league's average EV provided better results in estimating the second year of an EV allowed only from first-year EV, so it might be worth tempering your expectations for Mikolas' contact management skills in 2019. Indeed, Mikolas allowed three home runs in his first start this year. Even if that is the case, though, there is reason to be optimistic about Mikolas' ability to maintain a high level of performance. His pitches outside the zone are tremendously productive - he generates so many swings that he rarely walks anyone, and he leads the league's average swing rate as a result of all those swings, even with all those foul balls. When hitters do get contact, it's the kind of contact you want - the batsmen were festering when putting the ball in play against Mikolas. Even if you think they're going to come back toward the average league contact management, pitchers overall did pretty well when they got hitters to swing on pitches off the plate. If he keeps that performance on the outskirts of the strike zone, everything else will cut into place. What did we find in all this? Well, Miles Mikolas is weird, but you already knew that - the guy eats lizards, because he cries out loud. He's weird in the way he throws too much, though - strange in a way that's hard to appreciate on the surface. No one works in the area outside the strike zone in the same way as Mikolas, chasing swings and avoiding hard contact. Next time you watch Mikolas start, take a moment to appreciate the mystimed swings and just-can't-square-him-up foul balls -- you're looking at a truly unique pitcher at work. Work.

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