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# Advanced Statistics in Arkansas Sports Reporting

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Advanced Statistics in Arkansas Sports Reporting

A thesis submitted in partial fulfillment  
of the requirements for the degree of  
Master of Arts in Journalism

by

Andrew Epperson  
University of Arkansas  
Bachelor of Arts in Journalism, 2017

May 2019  
University of Arkansas

This thesis is approved for recommendation to the Graduate Council.

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## **Abstract**

*This study seeks to analyze how Arkansas' sports journalists are adapting to the recent surge in available advanced statistics that are being used by certain national news organizations. Using in-depth qualitative research that includes in-depth interviews with a number of individuals in the print, broadcast, and athletics side of sports coverage, we discover how journalists and coaches use these next-generation analytics, what they fundamentally mean for the evolution of each respective path, and why so few Arkansas reporters and writers use them at the time of this paper's defense. We see how budgets and deadlines restrict the use of these statistics, why journalism's time-oriented workplace environment poses challenges to their use and how changes in daily routine nearly always result in some form of discord. Through research, we find that the more readily available these statistics are, the more likely an individual writer will work to implement them. Likewise, the more steps and obstacles standing in the way of relatively-easy usage, the higher chance that these statistical tools will not be used.*

**KEYWORDS** statistics; sports journalism; technology; Arkansas; digital

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## **Introduction**

Ever since the Greeks first introduced the world to formal sporting events with the 776 B.C. ancient Olympic Games, teams and athletes have increasingly looked for any and all ways to gain a competitive advantage over their respective opponents (Swaddling, 1996). Today's modern, evolved sports culture often looks toward math and numbers for a calculated edge, and so do the entities that cover them.

Throughout the years, this desire to find any scrap of advantage to use in the competitive sports arena manifested in a number of ways. Halfon wrote about the early days of baseball, this could mean outright cheating through various measures (2014, 4). In a less-risky venture, some, like the late New York Yankees owner George Steinbrenner or Miami Heat President Pat Riley, both of whom simply believed in opening their wallets to obtain the best players, thereby giving their teams unmatched firepower that led to seven total World Series titles (Madden, 2011).

Journalists closely covered these attempts by athletes and team owners to gain incremental advantage. Sportswriters of the early 20<sup>th</sup> century were careful to keep reports of potential cheating scandals out of the headlines for fear of crossing sources and putting their own careers at risk (Halfon, 2014). Meanwhile, cross-platform journalists like Brian Windhorst found fame through reporting on the Miami Heat's assemblage, and sports reporters with an understanding of business allowed readers to grasp the off-the-field, in-office success the Yankees had before hanging their championship banners (Madden and Klein, 2012). Now, in today's sports culture, media entities are beginning to increasingly utilize the same advanced statistics used by teams and players to gain advantages that can be measured.

Sports analytics is a term that refers to various equations, numbers, and calculations that go beyond box scores to rate certain elements of a team, individual, or lineup. While box scores

list statistics that can be readily and easily understood, these advanced metrics offer predictive analysis that can determine why certain philosophies work, whether lineups need to be changed, and give a long-term solution to many of the problems a simple box-score analysis could not address (Alamar, 2013). One major account of the rise of modern sports analytics cites Bill James, an avid baseball fan and writer, as a groundbreaker in developing our evolved understanding of sports analytics and giving us a defined term to describe them in 1977 (Lewis, 2003). He coined many of the phrases we now associate with advanced baseball metrics, including “win shares,” “runs created,” and “range factor.” Whether it be “runs created” in baseball, “true shooting percentage” in basketball, or “air yards” in football, each sport has its own unique range of advanced statistics that can directly correlate to success. Just as the athletes being covered are affected by these numbers, certain news organizations such as *FiveThirtyEight* and *The Athletic* are producing content almost exclusively under the statistical analysis umbrella. Their stories are filled with numbers, but not the kinds readily available after any game. The capabilities of advanced statistical analysis could theoretically give reporters added knowledge to back up certain claims they otherwise would base off generalization, such as the notion that home-field advantage really plays a factor, certain players having a “clutch gene,” or what teams play better in close games (Albert & Koning, 2007). Through paid services or in-house devotees, coaches, players, and sports journalists can record and document a number of statistics that do not show up on the box score after the games, but certainly play out through each contest and uncover patterns that ultimately lead to better success rates when discovered (Miller, 2015).

While these national news organizations typically cover professional teams, there have been instances where University of Arkansas Razorback sports have overlapped and made appearances. In fact, an article by *Athletic* writer Sam Vecenie detailed why Razorback

sophomore forward Daniel Gafford had NBA potential based on non-traditional statistics such as block rates, offensive rating, points per possession, and usage metrics (Vecenie, 2019). As Alamar wrote, the predictive possibilities brought on by statistical measures “can play a key role in this process by assisting decision makers in identifying goals for the player that will best support the team, as well as tracking, analyzing, and projecting progress so all interested parties know whether a player is developing,” (Alamar, 2013, 12). That ability has played a role in the work of many media companies. An article titled “The Browns are Still a Nightmare. But Maybe Not for Long” by Neil Paine of *FiveThirtyEight* uses statistics compiled by Pro Football Reference organized into a Simple Rating System. This effectively mathematically predicts the future of the Cleveland Browns, a franchise that has battled for simple relevancy the past decade (2018).

Research conducted for this thesis found that in Arkansas, a state that has produced quality athletes and journalists, much of the new advances in statistical research have been left out of today’s reporting. This finding emerged from a content analysis of local media content on databases and 12 interviews with sports journalists and athletic officials. This leads one to wonder why, with a new technology permeating the national scene, sports analytics are often overlooked on the state level. In a state that is dominated by a collegiate fan base rather than professional teams, it only seems logical at first thought that these statistics would be used more frequently in an attempt to broaden coverage, strengthen reports, and give readers more than what they could see in a box score or on a screen.

This study seeks to discover the answer to those questions, give a brief history of analytics’ evolution throughout time, list potential benefits of possible implementation, and describe the digital platforms through which we could eventually consistently see these



mediums. As journalism continues to evolve from print to digital, much like the analytics themselves, it is reasonable to infer that the benefits of advanced metrics could be sufficient enough to result in an increase in their implementation. “I think a *KenPom* account is worth it. I mean, every college coach in the country uses it, so I don’t know why every journalist wouldn’t use it, as well,” said Johnny Carver, an analytics consultant who used numbers to help NBA teams scout. He watched analytics grow from a small niche hobby to a much-needed element for teams’ success, and he noted that journalists have an opportunity to go beyond basic statistics to see what he does. The structural changes seen in that evolution are computer-based, so it is a natural progression for statistics to go past what journalists can calculate by themselves in box scores. Through a series of interviews and research, it was determined that there is a disconnect between a hope for implementation and the true reality of the situation. The result tells the story of sports analytics to this point in Arkansas reporting, answers many questions about why they have not become an industry standard, and dictates what sports journalists within the industry think about advanced statistics’ evolution and what that means for future workplace responsibilities.

### **Literature Review**

Much has been written about the benefits of sports analytics (Alamar, 2013). The meshing of information about workplace changes and sports analytics helps to explain how advanced statistics changed sports and media culture, why national news organizations have begun using them much-more prevalently, and why college-focused media has been slow to adopt the same methods. Of course, numbers should not be deified as unequivocal truth, as they can often misrepresent a topic of coverage if not utilized correctly. “A number is an opinion,”

Sarah Cohen wrote in her book *Numbers in the Newsroom* (2014). “It’s just hidden behind scientific-sounding methods and carries an air of authority. Some opinions carry the credibility of years of impartial study. Others don’t.”

The modern understanding of sports analytics began with someone who wanted to apply mathematical reasoning to a sport he loved as a way to be closer to it. Bill James, an avid baseball fan who strove to find the secrets behind why certain baseball lineups worked while others did not, drew the American public to sports analytics in a series of articles and journals that were written as supplemental texts for an extremely-devoted readership (Lewis, 2003). Through self-termed “sabermetrics,” he used unordinary statistics to analyze why certain teams might win or lose, and starting with *The Bill James Baseball Abstract* in 1977, he supplied this information to anyone who subscribed to the articles (James, 1986). While his writings were initially met with minor curiosity and fascination, they did not leave a major impact on the sport itself until a forward-thinking general manager named Billy Beane began structuring his Oakland Athletics after James’ ideology when deciding how to parse out contracts (Lewis, 2003). As a small-market team, the Athletics simply could not afford the bank-breaking, household-name players who demanded more money because of high RBI and home run seasons. In James’ system, on-base percentage (OBP) was the key to creating runs rather than flashier RBI or home run numbers, and many often-overlooked players seemed to have higher on-base percentage than expensive stars (Lewis, 2003). With this information, Beane constructed a team with a \$44 million budget that competed against a Yankees organization that spent over \$125 in payroll (Lewis, 2003). That season was documented in a seminal book titled *Moneyball*, written by Michael Lewis, that came out in 2003 and opened the door to the possibilities of sports analytics. The text documented how other teams and executives might be able to use the information for

their own benefit. Some of the principles introduced by James also influenced Theo Epstein, who, as the general manager of the Boston Red Sox, used the analytics to build up some of the roster that ultimately won the 2004 World Series and ended an 86-year championship drought (Fracella, 2009).

While advanced statistical research in sports began with James' initial musings, Glockner (2016, 4) writes that advanced statistics themselves can be traced back to at least as far as 1959, when then-North Carolina basketball coach Frank McGuire discussed "per-possession performance" in *Defensive Basketball*. While the coach charted a simple offensive and defensive rating by hand through use of mathematics, today's analytics gurus develop their numbers through a variety of avenues, including season-long charts and graphs that measure shots and lineups that provide greater context of athletes' performance. More importantly, these statistics give teams and athletes a deeper understanding of their sports, ways in which they can find success and gain a competitive advantage, and provide positive or negative measures of their performance. These elements can be charted either on a group or individual level, and many coaches across the country look to them as a way to perfect their coaching techniques (Jayal, 2018). In the same way, they can be used as fundamental information for Arkansas sports journalists to better understand the athletes and teams in the state.

Arkansas' sports environment differs from larger states with professional sports franchises. Arkansas has no major league franchises; aside from minor league professional baseball in Little Rock and Springdale, Razorback athletics effectively stands in as the professional teams. While two Double-A baseball affiliates, the Northwest Arkansas Naturals and Arkansas Travelers, play within state lines, attendance numbers indicate people still care significantly more about the Razorbacks. In the 2018 season, the Travelers averaged 4,498 in

attendance, while the Naturals averaged 4,748, according to figures listed on the minor league baseball's website. The numbers were the second- and third-lowest averages in the Texas League, the conference in which both teams play. The Razorback baseball team, on the other hand, averaged 7,996 people per game which exceeded the Naturals' and Travelers' averages by more than 3,000<sup>1</sup>. The football and basketball teams garner even more attention, and a lack of popular sports programs across the state's other colleges allows the Razorbacks to flourish as the state's primary fan favorite. Because of this, local coverage focuses heavily on the Razorbacks as well as high-school teams (Amman, 2019). *The Associated Press* is the only national news wire with a presence in Arkansas, the *Democrat-Gazette* is the only statewide paper, and the Little Rock-Pine Bluff television market is the largest in the state but ranked No. 57 in the country, according to the 2018-19 Nielsen Ratings. The small size of the Arkansas media market is one reason cited in interviews for the lack of sophisticated analytics in sports reporting.

Advanced metrics are gathered by teams, coaches, and subscription-based entities through various avenues. Johnny Carver, an analytics expert who spent time working for NBA teams, described how spatial tracking systems collect data in professional basketball arenas (2019). "They've got these cameras that are up in the rafters of their gyms, and they track coordinates, and you can analyze data from that, and they give that data to the public on their own website," Carter said. These cameras determine where players should pick their shots, how lineups mesh, where weaknesses and strengths are in a matchup sense, and how to divvy up shots. The same systems are not available in most college gyms, thereby taking away the ability

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<sup>1</sup>This information was gathered by dividing the total attendance numbers by the 39 games played in Baum Stadium.

to pluck data in a similar manner. “They say it’s because of not having the funds to do so,” Carter said. “I would beg to differ.”

The cost of subscription-based analytics services is not as steep as one might assume. For a *KenPom* subscription, which can be shared between members of a sports department, the price for a year of the service is \$19.99. Granted, there are more-expensive services like *Synergy* that cost \$6,500 annually, but *KenPom*’s cheap price tag makes it affordable. Plus, many of the analytics charts available online, like *Massey Ratings*, *Bihl*, *Haslametrics*, and *Fleming*, are entirely free to use. They do not break down information into easily-readable charts, per se, but the statistics are listed for anyone willing to put in the necessary time to understand and report on them.

Some veteran sports journalists believe advanced analytics can make an article too numbers heavy and detract from a compelling personal narrative. From Grantland Rice’s coverage of Notre Dame’s heyday in the early 20th century to present, a particular style of writing evolved into the widely-used, AP-style narrative seen in much of today’s sportswriting (Craig, 2002). The style focused on simplicity, concise storytelling, and important information listed high without any confusing elements (Holt, 2019). This traditional writing style puts an emphasis on quote-centered information, and it strays away from advanced statistics because of the notion that the stories should be accessible by all readers and not just a select few who can understand the analytics. This was seen in the lessons and stories included in Holtzman’s *No Cheering in the Press Box* (1978).

There is also a notion from some people within the sports realm that analytics ruin the games themselves. In a *Guardian* article from August 2018, retired baseball player Jayson Werth was clear in his ire toward how the analytics industry changed his favorite sport. “They’ve got all

these super nerds, as I call them, in the front office that know nothing about baseball but they like to project numbers and project players,” Werth told a Philadelphia sports podcast host, according to the article (Timms, 2019). Werth continued, “I think it’s killing the game. It’s to the point where [we could] just put computers out there. Just put laptops and what have you, just put them out there and let them play. We don’t even need to go out there anymore. It’s a joke.” In this instance, athletes’ relationship with sports analytics tacticians somewhat relates to their often-tumultuous communication with media, as evidenced by backlash from historical sports figures like Jim Brown, Mike Tyson, Gregg Popovich, Bill Belichick, and Kevin Durant (Zirin, 2018; Hoffner, 1998; O’Connor, 2018). With these examples and so many others, the notion is that people within the sports themselves hold their thoughts and opinions in higher regard than those covering them, and they take criticism with ire or nonchalance. While these individuals expressed problems with media members themselves, Werth applied much of the same argument to his lashing out against sports analytics.

As Schudson lays out in *Discovering the News*, the “objectivity norm” serves to benefit journalists (2001), and this principle is entirely apparent in how sports analytics can give a sense of objectivity. Schudson discussed some of the underpinnings of objectivity, which dates back to the Enlightenment, a time when science and reason became rapidly accepted over systematic ignorance through which individuals were told how to think. The Enlightenment celebrated science—and data—and the increase in working analytics follows in that tradition.

### *Newsroom Adoption of Technology*

The emergence of analytics represents another facet of the digital revolution in newsrooms. Therefore, they can be treated similarly when analyzing how journalists react to

their implementation. Leonardi (2009) writes that a change in organizational reporting structures must begin with an encouraged shift by someone in charge, but he adds that implementation is ultimately difficult because people “often lack the capabilities to communicate differently” and stick to prior techniques. If a boss or leader attempts to force mass practice of new ideas, individual reporters may feel a sense of “psychological reactance,” which, as posited by Jaffe, indicates a certain loss of creative freedom or independence. When this happens, workers may be motivated to resist such changes (2008). Also, an individual’s internal contextual framework often trumps what an editor may deem to be a rational workplace change, and this in and of itself could prove to be challenging for even the most mathematically-thinking editors (Rice 1987). Through research for this thesis, the reasons behind Arkansas sports journalism’s failure to overwhelmingly implement these analytics became clear, but so did hope that a shift in culture may change that in the future.

### **Methodology**

In order to determine how college-centered sports journalists viewed analytics as a resource, in-depth interviews were conducted with 10 print and broadcast journalists. While the majority of these individuals covered the Razorback beat at the time of this paper’s defense, there were also several who worked in sports outside of Arkansas and were interviewed to analyze how other college-based coverage compared or contrasted. There were also two non-journalists who worked with analytics in a sports-oriented career, so they were interviewed to show how these numbers applied to the events being covered. The decision to interview journalists for the majority of this qualitative research was based on their obvious familiarity with changes in media culture, the daily responsibilities of reporting work, and the growing use

of sports analytics by their colleagues and competitors. As Lindlof and Taylor (2011) write, journalists make for quality interviews in research because of their communicative abilities.

To gather these journalists, I used a purposeful sampling approach to select past contacts throughout the course of my work in sports journalism. Through the use of phone texts, Facebook messages, and emails, I reached out to 17 individuals related to the topic of study and received replies from 15. The interviews took place from October 2018 to March 2019. Of the initial contacts, 12 interviews were conducted, which fits into the 10-15 range described by Kvale (1996, 102-103), who said the number represents a reasonable attempt to create a sizable group that takes away the ability for one thought process to dominate the qualitative method. At first, the interviewees were chosen based on their affiliation to sports analytics or the Razorback beat. After initial interviews were completed, other media members were chosen based on comments given by the thesis committee on work that was needed

Four of the journalists covered Razorback sports for print publications. Two reported and edited for print. One exclusively worked as a television sports reporter. Three reported and served as television sports directors. The remaining two interviewees worked with sports analytics, one as a coach and the other as a consultant. Those included represented different generations of sports media, as the most-experienced individual had logged over 35 years of experience, while the least-experienced was serving as his college paper's editor-in-chief. With this diversity in age, a sense of sports analytics' history meshed with future thoughts from a younger group.

In order to see how sports journalism and analytics are presented alongside each other at the collegiate level, a survey was conducted in the University of Arkansas' three sports journalism courses. The questions were centered on students' career plans, interest in math, and



ability to comprehend advanced statistics. Forty-five students took the three-question survey, which has a 100-percent response rate. The survey was an attempt to understand whether journalism students are prepared for the major changes facing them in modern newsrooms. As Howard wrote, post-graduate jobs often lead to specialization that eliminates the need for humans to develop new skills, and they respond by not taking the time to learn and grow in their own spare time (1998, 40-42). With this fact in mind, I wanted to explore whether future sports journalists likely to work on the Razorback beat at some point in their young careers had any aptitude to work with advanced statistics. My research in collegiate sports revealed important insights, but they are limited due to the sample sizes. While they do not speak for the all media models, these interviews certainly served to give important insights into how college-based coverage deals with the growing importance of sports analytics.

## **Findings**

### *Analytics Benefit Arkansas Coaches and Media*

Like many college programs across the country, the University of Arkansas features the use of analytics with its teams (Schaefer, 2019). Many college coaches have in-house data tacticians that crunch some of the same information tracked by the spatial tracking systems, and they often combine video elements with basic, charted statistics to create efficiency metrics (Schaefer, 2019). The results may not be as high-tech as what spatial tracking systems offer, but they still benefit teams and players.

In today's modern sports lexicon, this information can be obtained by sports journalists through similar methods, and subscription-based services offer the data even if media entities do not have in-house analysts (Miller, 2015). When applied to Arkansas sports journalism, in-depth

interviews suggest that a relative few reporters take this information and apply it to their own work. There are many ways in which these statistics can be gleaned and thereby used by reporters, both in print and television, to strengthen their claims. Out of the numerous media entities that cover the Razorback beat, only two actively used analytics in their work: Andrew Hutchinson of *Rivals* and Scottie Bordelon of the *Northwest Arkansas Democrat-Gazette*. Another statistics-based company, HogStats.com, documented historical statistics concerning the Arkansas men's basketball team, but this organization does not supply advanced statistics. Before delving into a review of Hutchinson's and Bordelon's methods for using analytics in the Razorback beat, one must grasp how the teams themselves use these statistics as self-generated reports on perceived success.

Todd Schaefer, an assistant coach for the Razorback women's basketball team at the time of this writing, devised a simple efficiency chart early in his coaching career that helped him decide how to set up his lineups. By 2019, that system evolved into a two-prong analytics apparatus that combined video and numbers to rate players in their respective roles, set lineups and decide playing time, and give the Razorback coaching staff a drawing board from which they can test preseason and coaching techniques (Schaefer, 2019). Schaefer said use of these analytics helped the women's basketball team improve from 13-18 in the 2017-18 regular season and Southeastern Conference tournament to a 20-14 record in 2018-19. "In probably late November, we started looking at reducing the number of combinations that we were going to play in the games," Schaefer said. "We wanted to figure out which one of those worked the best instead of playing a large number, which is what we were doing in our...preseason games, and early non-conference schedule." When the numbers and game videos started rolling in, players started mathematically separating themselves from the pack, whether through higher efficiency ratings

than their teammates or obvious ability to generate scoring opportunities. One player, Bailey Zimmerman, continued to register playing time despite not passing the “eye test” for average basketball fans. Heading into the National Invitation Tournament, Arkansas’ first postseason berth under Neighbors and Schaefer, Zimmerman’s 3.5 points per game and 3.6 rebounds per game surely did not match her average 18 minutes of playing time. This was good for sixth on the team, according to statistics provided by Razorback Athletics. Despite what seemed to be an obvious disconnect, sports analytics indicated that Zimmerman’s efficiency warranted continued playing time. “There was a point in time where you kind of almost, whether you wanted to or not, assumed that maybe Bailey wouldn’t be able to have that type of same impact,” Schaefer said. “If we thought that, we would have been wrong because she has that same impact, in fact even more so on a team that is better, has more talent, and can score easier.”

Through analytics, the Schaefer and the coaching staff were able to determine that Zimmerman deserved more playing time than someone whose box-score numbers may have been more impressive. That is a distinct reportable fact, but research uncovered that it was not discussed in any of the publications that cover the Razorback women’s basketball team on a regular basis. On the webpages for the *Northwest Arkansas-Democrat Gazette*, *HitThatLine*, *Pig Trail Nation*, *5News*, and *40/29 News*, searches for “Bailey Zimmerman” resulted in a collective hundreds of results, but when terms like “analytics,” “metrics,” or “efficiency” were included, zero pertinent articles were written about the subject pertaining to the player, as of March 21, 2019. I spent well over an hour scouring these sites for any advanced-statistical analysis concerning Zimmerman, and there was none to be found. In a similar search through the America’s News Database on April 26, 2019, there was a similar finding. Without this information, reports on the Razorback women’s basketball team’s success are incomplete and

surface level. As a freelancer, I was one of two *Democrat-Gazette* writers who covered the women's basketball team during the season, and neither of us used analytics in our work. With differences in systems and goals for each team, simply analyzing an individual, box-score statistic and using it as reasoning for wins and losses can lead sports journalists to be flawed in their coverage, Schaefer said (2019).

Without the video element used by most teams, mathematical equations can stand in to generate predictive and usable statistics in reporting. Michael Lewis, a professor of marketing at Emory University and a sports analytics researcher unrelated to the writer of *Moneyball*, developed detailed equations to serve as predictive measurements. In 2017, he wrote about the ways in which to prognosticate whether an NFL rookie quarterback would succeed in throwing touchdowns by plugging college facts into an equation:  $TDS = \beta_0 + B_1 \times CollegeWins + \beta_2 \times Graduate + \beta_3 \times Height(inches)$ . Because general managers can obtain data on the number of games won collegiately, whether the player graduated, and height, this regression can be relatively-easily calculated. "Linear regression is easy to implement and produces equations that are easy to understand," Lewis wrote in his Emory blog (2017). This is just one example of an individual equation that can be cited or utilized in reports. While the results of these metrics have no true bearing on how a player will truly perform given that they often do not factor in variables that could affect the results, they are mathematically sound in what they produce. General managers can easily gather the information needed to fill out this equation and others that are similar, and so could sports journalists. "We can have two different truths based on what we see from a player," Carver said. "For example, the development of a player on a team. There are a lot of scouts that I talk to in the NBA and we disagree very strongly on certain college players, their prospects in the NBA, what they can and can't do particularly with their shooting forms." When

these disagreements in perceived truth arise, the numbers point to the truth lingering under the surface. “If a team’s got one of the lowest defensive rebounding percentages in the country, that’s not something you can really argue with,” Carver said.

With a minor understanding of sports analytics, how they can be utilized, the mechanisms through which they are gathered, and a few examples of their implementation, Hutchinson’s and Bordelon’s respective regular usage can be understood through a purely Arkansas reporting-based lens. Hutchinson, who has covered the Razorback beat for various publications since 2012, utilizes a service called *ProFootballFocus* and his own self-maintained spreadsheets and databases to generate analytics-based data for his stories and tweets (Hutchinson, 2019). Bordelon also preserves and employs a spreadsheet that charts the men’s basketball teams’ efficiency ratings. Because he is a self-described “basketball nerd,” much of his analytics work is used in his stories during that particular season. Through similar subscription-based services like *KenPom* and *Hoop Lens*, Bordelon finds next-level statistics that bolster his stories (Bordelon, 2019).

In an article titled, "Deeper look at pros, cons of Ben Hicks as Arkansas' next QB," Hutchinson used advanced statistics to analyze what graduate transfer quarterback Ben Hicks could bring to the Razorback football team (2019). After an abysmal 2018 season for Arkansas' quarterbacks, Hicks' decision to transfer from Southern Methodist to Arkansas could have been a godsend for Razorback fans. Still, it is understood that the American Athletic Conference and Southeastern Conference are incomparable. "Everyone is wondering if this is going to be a good thing, if he's going to be able to succeed playing in the SEC," Hutchinson said. "That's a hard question to answer, so I looked up his stats." The mathematically-minded journalist charted Hicks' statistics on a game-by-game basis, looked at his "splits" (broken-down charts that

compare statistics from two or more categories), and utilized advanced statistics from *ProFootballFocus*. "They create passing charts for quarterbacks where you can see their deep throws, deep throws down the middle, deep throws down the left sideline, right sideline, etcetera," Hutchinson said. "I was able to look up and determine what he does...on deep passes." Hutchinson included a splits chart in the report, which broke down Hicks' completion percentage against AP Top-25 teams, Power Five opponents, ProFootball Focus' Top-50 defenses, and worse-ranked defenses. It also featured his yards-per-attempt and touchdown-interception ratio versus those listed categories. Hutchinson used ProFootballFocus' advanced capabilities to compare Hicks' deep-threat ability to other quarterbacks. "He completed around 40 percent of his deep passes, and alone that doesn't sound great because a 43-percent completion percentage isn't going to win you many games," Hutchinson said. "When you consider the fact that it's deep passes 20 yards down the field, I was able to look up how other SEC quarterbacks did, how Arkansas' quarterbacks did." The results were quite telling and serve as a certain encouragement to Razorback fans who endured watching Cole Kelley and Ty Storey in 2018. "I had to look up each individual quarterback, add it up, and I think Arkansas completed something like 30 percent, which is just terrible...last in the SEC." By implementing these outside-the-box statistics, Hutchinson added a layer to his work that gave his readers a deeper understanding of sports through a mathematical lens.

Bordelon said his initial leap into the sports analytics realm began when he and his college roommate split the cost for an annual *KenPom* account to chart games for back-and-forth betting purposes. "We loved getting on there and checking out what Arkansas' numbers were, and every now and then we'd put some money on some basketball games or whatever, and you want everything that you can [use] to get an edge," Bordelon said. After he was hired by the

*Northwest Arkansas Democrat-Gazette* to cover high school sports, several of the coaches he worked with referred him to a service called *Crossover*. One year, he covered a Springdale Harbor High School basketball team that featured a quality point guard named Tylor Perry. Bordelon used *Crossover* to digitally analyze game footage and detail the spots on the court where the guard was shooting best. Once he received a promotion to cover the Razorback beat, he started using *KenPom* as a regular resource. He also employs *Hoop Lens*, a program that charts the numbers and uses color coding to represent positive and negative trends. An excerpt on the website's homepage states, "Modern analytics can seem like an alphabet soup of numbers disconnected from reality. But buried in these numbers are tools that can be used for self-assessment and scouting opponents. You know these numbers are out there -- you just are not sure how to use them. We can help" (2014). With the system *Hoop Lens* has in place, Bordelon can analyze how efficient a team is in a breakdown of individual players, two-player subsets, lineups, and styles. The information allows him to support certain claims in his writing that would otherwise be categorized by box-score numbers.

Going back to the *Athletic* article on Gafford, Vecenie combined classical reporting styles with video elements and metrics to give a three-pronged basis for why he could credibly make the claims he did. For example, under the subtitle "Rim-runner extraordinaire," Vecenie embedded a short clip of Gafford on a pick-and-roll play and then included advanced statements like, "On non-post-ups at the basket, Gafford averaged 1.44 points per possession, good for the 93rd percentile among college basketball players," (Vecenie, 2018). While taken as an individual article, the piece does a solid job detailing why the college sophomore will more than likely be a high selection in the 2019 NBA Draft. The two-pronged reporting approach that combines video and analytics can benefit digital entities, as seen with the online-exclusive *Athletic*, broadcast

stations looking to utilize print and video mediums in their web presence, and print companies hoping to achieve the same.

### *Implementation as a Challenge: Comprehension*

The initial question posed to the sports journalists was, “What is your familiarity with advanced analytics?” Several common themes emerged in the responses. First, interviewees described their own fondness for sports analytics. After giving short explanations on where they often saw these type of statistics, which resulted in answers like *FiveThirtyEight*, *ESPN*, *Elias Sports*, and *KenPom*, there was a nearly-universal tendency for the interviewees to describe their own fondness for sports analytics. For example, one television reporter, who admitted to using advanced statistics only when they were presented on ESPN or in Tweets that can be checked for veracity, claimed to be a “numbers person” who recognized and appreciated next-generation statistics. A print reporter said he did not use them but found them fascinating in his own personal research, and he noted that may start plugging them into stories after the conclusion of this project. The second general response involved challenges associated with attempting to integrate these analytics into daily reporting. The discussions that proceeded after initial sentiment often delved into the challenges associated with attempting to integrate these analytics into daily reporting. A third general response was sport journalists’ simple inability for many to understand what the advanced statistics represent.

Arkansas sports journalists’ inability to comprehend advanced analytics as a group reflects a chronic aversion to mathematics in the industry. This may seem illogical to anyone outside the reporting realm, but the lack of numerical literacy in journalism is a persistent theme in media studies (Scanlan, 2004). John Allen Paulos, a mathematics professor at Temple,



attributed this to innumeracy, or “an inability to deal comfortably with the fundamental notions of number and chance” (1989). Scanlan wrote that reporters need to know math so they “won’t be easily fooled” and to “sort fact from fantasy” (2004). “Deploying numbers skillfully is as important to communication as deploying verbs, but you won’t find many media practicing that philosophy,” wrote Max Frankel, a former executive editor at the *New York Times*, said in Silverman’s book, *Regret the Error* (2009). “Most schools of journalism give statistics short shrift, and some let students graduate without any numbers training at all,” Frankel said.

To test that claim, a survey was conducted in the University of Arkansas’ three sports journalism classes. Of the 45 students, 23 said they are planning on working in the sports journalism field. Of those 23, five said they are interested in math, and three said they have the ability to calculate advanced stats and metrics. Because many of the reporters on the Razorback beat went to the UofA and took the same classes, this was important in representing the types of students going through the program.

The UofA’s importance to the Razorback beat cannot be understated, as five of the 12 interviews conducted for this study were with individuals who either graduated from the university or will receive their degrees in 2019. In fact, Hutchinson and Bordelon, two reporters actively utilizing advanced statistics whilst covering Arkansas athletics, both graduated from the UofA. Of the three major public universities in the state (Arkansas, Arkansas State, and UCA), only the first two offer sports journalism courses, and only the UofA has a course dedicated to data journalism. The data journalism class is discussed later in this section. Because of UA journalism’s direct impact to Northwest Arkansas’ coverage, limiting the exploration scope to just the UofA’s sports journalism classes seemed to depict an accurate representation of the state as a whole. Of the 45 students who responded at a 100 percent rate, 23 said they are planning on

working in the sports journalism field. Of those 23, five said they are interested in math, and three said they have the ability to calculate advanced stats and metrics.

### *UofA – Training Sports Journalists*

Through the *Traveler*, the UofA's student newspaper, Hutchinson and Bordelon got their respective starts in media. During the period in which they wrote for the publication, they had not yet started using advanced statistics in their writing. This was due to three factors each referenced in their interviews: infantile skill relative to other reporters in the business, deadlines that seemed more difficult to meet at the time than they truly were, and no directives from their superiors to include sports analytics. Alex Nicoll, the *Traveler*'s editor-in-chief in the Spring 2019, said the newspaper's sports journalists still overlook advanced statistics. "We're not equipped [to use analytics] right now at all, at least not through student media," Nicoll said. "We have the one sports journalism class [about newspaper reporting techniques], and when I took it, we never went over sports analytics at all. It was more about just focusing on writing rather than anything else" (Nicoll, 2019). He said the fluid nature of reporters to come and go without staying to build their skills also restricted the ability to discuss and ultimately utilize sports analytics. Student editors' inability to understand formulas and numbers handicaps the discussion in the first place. "We can read and I guess somehow derive these figures, but I don't know the formulas off the top of my head that I could quickly analyze [numbers]," Nicoll said. "I'm not entirely sure how long they take to do. I'm sure Scottie [Bordelon] and Andrew [Hutchinson] have them down to a science where they can quickly derive those numbers" (2019).

Through the University of Arkansas' Advanced Reporting course, offered to undergraduates, honors and graduate students, enrollees develop skills to code, perform data

analysis, create graphs that can represent numerical reporting, and introduce mathematics into journalism techniques regardless of prior or past knowledge. This information is backed up by my own enrollment and completion of the class. While the course is based in news coverage rather than sports, many of the principles derived from the in-class lessons can be applied to sports with research or guidance. Still, the course is not a requirement for degree completion, and, as described by Paulos, the likelihood that reporters will seek out math is small. With that in mind, it would require an internal decision by a student journalist to enroll in the course. For full disclosure purposes, it should be noted that Advanced Reporting is taught by Professor Rob Wells, who served as the thesis director for this project. The information supplied throughout the Spring 2018 semester influenced many of the ideas that culminated in this paper's topic. The course description is included to counter the excuse that students do not have any reasonable resources to learn how to use analytics. Even prior to this course's initial enactment in the Fall 2016 semester, there were steps students could take to fashion a makeshift study in analytics.

In Hutchinson's case, he used UA courses from outside the journalism department to count toward a math minor. Since the Advanced Reporting course was not yet implemented, he gravitated toward the university's other numbers-based classes to pick up those skills. Bordelon went against the grain and developed a passion for advanced statistics after graduating. Through self-taught research in the meanings behind certain efficiency ratings, he learned how to explain seemingly-complex statistics to a readership that has shown receptivity to their inclusion (Bordelon 2019).

In the current local sports media realm, the majority of interviewees explained that they were "numbers people," but they also acknowledged that a large portion of the local sports media claims that without truly adhering to the description. "I think a lot of people in this industry

won't admit they shy away from numbers because you need to come off as an expert, and that's how you're being marketed, too, by your own agency that you work for in terms of sports reporting," Kuester said. "You need to come off as an expert, and to say you don't care about the numbers, well, you must not really love the game that much. There's definitely that feeling that's out there, I think." Another reporter said the majority of Arkansans simply would not comprehend the statistics and noted that it would be a waste of his time to learn the meanings himself if his viewers did not care. "It's very relative to geography, from state to state, your viewership and what they want," said Drew Amman, a television sports reporter and anchor for KNWA-Fox 24. "You kind of feed them whatever they're looking for the most. Obviously, in my line of work, you're trying to cater to the masses...I think you have to keep those factors in mind in my line of work." He said viewership numbers indicate what the masses want to watch. With the information shared in interviews and literature, it is apparent that a true understanding of mathematical and analytical principles is not a widespread industry standard, therefore making it difficult for sports analytics themselves to evolve into a more-heralded position in sports journalism departments.

#### *Implementation as a Challenge: Readership and Viewership*

Some who grew up with this style would rather continue with traditional writing rather than make analytics a focal point in stories. Chip Souza, the sports editor of the *Northwest Arkansas Democrat-Gazette*, said his reverence for the classic, quote-centered style of storytelling is based in the notion that people are more important than numbers. "I just don't want to see a story full of stats...maybe in a midweek story or something like that, but I want to feel like I'm there," Souza said. "That's what quotes and narrative do for you that stats just

can't" (2018). He went on to explain that stories "bogged down" by stats can sometimes be unreadable simply because intended readers do not often have a clear understanding of the information that is presented to them in such a situation. "I like the magazine-style stories with quotes from players," Souza said. "I want to know about people and let the story be about that. Numbers are good, but they take away from the people" (Souza, 2018). Nate Kuester, who worked as a sports director at KTRV-TV and KLEW News in Boise and Lewiston, Idaho, respectively, concurred with Souza's sentiments. Similar to Arkansas media's focus on a singular college athletics program in the majority of its coverage, Kuester's sportscasts were geared toward Boise State fans. "The ones that care the most about numbers are typically recruiters and maybe agents," Kuester said. "When you look at numbers, all that is...is marketing. You have no actual real benefit to whether you win or lose games. It's all about how you market the individual or team, and that's where those numbers come in." He went on to state that many sports journalists do not care about these analytics but simply act like they do to generate an expert appearance (2019) When working as a sports director, Kuester said he purposely promoted his sportscasts as "numberless" to capture a wider audience.

#### *Implementation as a Challenge: Time Constraints and Deadlines*

Aside from some sports journalists' inability to comprehend or formulate next-level statistics, many said deadlines and space constraints in their daily work made it difficult for regular implementation of sports analytics. First, gathering and calculating these statistics is time consuming. Second, the journalists face word limits for print and broadcast slots. Reich and Godler described time constraints as a "notorious inhibitor of journalistic performance" (2014).

In newspaper print, another added obstacle is the deeply-rooted tradition of narrative, quote-centered writing. “The best advice I ever got was to write simply,” said one veteran reporter covering the Razorback beat. “You’ve gotta learn, hey man, you want to write a solid story, but at the end of the day, get the news up high. It doesn’t need to be *War and Peace*, just make it readable” (Reporter #1, 2019). He went on to say that deadlines are the most important part of the writing process, and readily-available sports analytics can add to a story in certain instances, but they should be left at the chopping block if they take too much time to gather. Other reporters expressed a view that advanced statistics had a place in modern journalism but only if there were still words needed to fill or space needed to be taken up after the “crucial” elements of a story. “I want to provide a glimpse into the key elements of the game, who were the top performers and the top plays, for people who didn’t see it on TV to get a good feel for how the game went,” said another reporter (Reporter #2, 2019). In a 1,000-word story for the next day’s paper, advanced statistics theoretically would take away from the narrative-based story that could give that he described. This backs up Souza’s earlier comments about midweek stories being more suitable for analytics-based text.

The four television journalists complained about time restraints more than the print representatives. The inability to conglomerate useful advanced statistics in a reasonable period makes it nearly impossible to do so on a nightly sportscast. “That would not be in my time frame,” said one reporter. “That would definitely be a cool additive, but no.” The sheer nature of broadcast television restricts the use of numbers on air, meaning a feature story or typical VOSOT, a 45-second broadcast story with b-roll and an interview quote, will be used in place of analytics. “If you’re searching for content, the numbers are your best friend,” one reporter said

(Reporter #3, 2019). He indicated that “dry days,” or the days in which little to no notable events take place, are really the only days that he focused on advanced metrics.

One television sports reporter said departmental size, time allotment for each member of a particular sports casting group, and ease in which the analytics can be obtained each play a factor in how or if they are utilized at all. To truly place a seminal focus on analytics, stations would need to front the money for either subscription-based services or hire an in-house employee with analytical expertise. “That’s only going to make your department better, but it is a difficult thing because in my situation in the local news realm, you go from local news station to local news station, [not] many actually have someone who is strictly devoted to that,” he said (Reporter #4, 2019). “I would maybe say there’s one station I could think of off the top of my head that might have somebody who has the time to go into that and really break it down to where you can then convey or relay that to the people who do the television work.” Without that individual in the newsroom, time-crunched journalists must do the work themselves, decipher the information in a way that tells a story as effectively as a feature or typical package, and then properly broadcast that information to the public in a three-minute sportscast. Each interviewed television journalist described a similar sentiment in this regard, as the time to explain the methods in which these statistics were generated would take up more time than they were worth, in many instances.

When asked about the cost of such data, sports journalists did not think that was a major issue for lack of adoption of sports analytics. “I know if we asked for it, [my bosses] wouldn’t have a problem paying for it,” one television reporter said (Reporter #5, 2019). With many of the low-cost and free avenues through which analytics could be sourced, it becomes even clearer that

the decisions to shy away from implementation are attributable to factors other than money, even if that component is applicable in some cases.

*Unanimous Hope: Future Implementation as a Probability*

Though sports journalists from print and television fields laid out numerous problems for current widespread implementation at a local level, many believed that sports analytics would eventually be adopted in newsrooms, even if it was just a supplement to reporting. Mainly, this was due to the evolution of advanced statistics from a niche audience in the sports realm to a widespread need for teams and athletes to gauge their own perceived success (Albert, Glickman, Swartz, and Koning, 2017). The majority of interviewees said the most-likely platform through which these analytics can be prominently displayed is through digital platforms, where reports can delve deeper into the numbers than surface-level writing in newspapers and on television. While *FiveThirtyEight* and *The Athletic* are popular because of their compelling, well-written stories, they are fundamentally digital. On a local level, Hutchinson's work is on in that realm.

While local digital platforms were cited as future implementation groups by nearly all of the reporters included in this study, some said they think analytics will also penetrate regular newspaper writing and television sportscasts. "In this television market, I don't see that happening for two to four years," said one reporter who covers the Razorback beat (Reporter #4, 2019). "Beyond that, maybe." The growing need to differentiate oneself from other reporters' coverage styles opens the door for the type of utilization Bordelon employs in many of his basketball stories. "Anybody can tell you how many points a player scored, how many rebounds a player grabbed, but I think if you go a step farther and what you're writing is a little bit different than surface level, then I think that maybe sets you apart a little bit," Bordelon said. "It



makes what the reader is reading a little more interesting, a little bit more in depth, and I feel like they'll be more informed for it." As the numbers continue to rise in popularity and viewers grow in their understanding of these numbers' importance, that could directly correlate to an increased focus on these analytics as a crucial reporting tool. "If more readers and more viewers contact the media outlets, and they click more on the stories that have analytics, then that's proof positive that people like them," one reporter said (Reporter #2, 2019). Through Hutchinson's and Bordelon's respective work, the two have seen that analytics-heavy stories are well-received by a certain niche audience and that people appreciate the attention to basing information in numbers-based techniques.

### *Discussion*

One theme emerging from interviews was that certain workplace factors restrict the use of sports analytics in print and television for most local reporters in Arkansas. Bordelon represents a small minority of the group who would pay for his own subscriptions to paid services that supply these advanced statistics, and Hutchinson's company pays for his access to *ProFootballFocus*. Both chose to begin using these analytical tools and were not prompted to do so from their superiors. Still, there are websites like *College Basketball Reference* that host a number of free analytics.

Analytics could be viewed as another aspect of traditional reporting and verification. As Rosenstiel and McBride stated, looking for any elemental backing to support statements through fact checking and evidence is key to being an ethical journalist (2014, 66-67). When applied through that lens, the rewards outweigh the risks and eliminate the budgetary excuses, particularly when free information is available. In certain instances, interviewees said athletic

departments at high schools and colleges provide a weekly statistics sheet that includes analytics. Plus, one television reporter from a smaller market than Northwest Arkansas area said station executives would be willing to pay the cost of subscription-based services if a case was made that they were fundamentally needed to adequately document what was taking place. Instead of budget being a main factor, the decision was simply made that these analytics would be too difficult to include in the sportscasts because of the time it would take to explain their relevance and viewers' unlikelihood to resonate with stories that are focused on something other than human interest.

The UofA and other state universities in Arkansas do not require sports journalism students to learn analytics. But there are other avenues through which to learn the necessary skills to begin use in reporting. The lack of using these different paths, such as enrolling in Advanced Reporting or upper-level math courses, however, can be attributed to the simple fact derived from the survey given to students in sports journalism classes and the literature describing a widespread issue: many of these students want to avoid math. The survey's second question was simply, "Are you interested in mathematics?" Only five of the 23 respondents who claimed to be on the path pursue a career in sports journalism checked yes. Without making these courses a requirement for graduation, the likelihood that these students would make the internal decision to add them to their schedule is slim unless they had an innate fondness for mathematical principles. Going back to Howard's description of self-atrophy, one can determine that it is unlikely these students will develop these skills once they leave the university setting. Therefore, once they make it to the employment realm, they will continue to avoid sports analytics. Even for the ones who claimed interest, student media at the UofA has lacked in providing resources like subscription-based analytics services to its student journalists.

Sports analytics' numerous benefits serve as an adequate rebuttal to Werth's qualms, and recent developments in stories published in major magazines prove Souza's opinion to be flawed. In fact, articles increasingly include both narrative-based storytelling and analytics in their copy. This "double-edged reporting," or the ability to use both literary journalism and analytics-based reporting techniques in the same story, seems to be a probable trend for sports reporting not just locally but nationwide. In the December 3, 2018, edition of *Sports Illustrated*, the headline article was about Saints quarterback Drew Brees. The piece, written by Greg Bishop, included the typical narrative journalism seen in all successful magazine writing, including bits about Brees' family life, quotes from those close to him, his involvement in starting and coaching a youth flag football league, and in-depth personal information when he broke the NFL's all-time passing yardage mark. This certainly would have been seen in similar articles written decades ago before the evolution of advanced analytical statistics. Unlike what would have been written back then, the piece also included advanced statistics in "measured efficiency"—a metric that takes into account several clear indicators of successful quarterback play—to explain why Brees should be considered among the greatest to play the quarterback position even though he is often forgotten about among his contemporaries in the Patriots' Tom Brady and the Packers' Aaron Rodgers, who actually measure worse than him in that particular stat (Bishop, 2018). This shift perfectly represents how, even in a career that has historically been approached in the same way for years, humans' increasing need for supported claims through mathematical concepts is changing how everything is done, including in reporting tactics (Borba and Villarreal, 2006). At this point, many of the individuals who track the type of information included in the Vecenie and Bishop pieces sell their research to teams and organizations, so it would either require journalism entities to simply pay for the statistics or for

the researchers themselves to make the statistics readily available. At high schools or small colleges, it is reasonable to determine that other expenses are more important and pressing than sports analytics services.

Carver worked as a remote analytics consultant for the NBA's San Antonio Spurs, player tracking supervisor for the Razorback men's basketball team, and authored an analytics-based book titled *Ranketology* (2015). He never did any sports journalism work of his own, as he was entirely based in the sports analytics side. Still, he essentially had to report information to his superiors in a way that made sports analytics parcels of information, and this somewhat connects the two job descriptions. In Carver's opinion, the only way to adequately state how a team operates is by using the same tools coaches and players use to aid in their own knowledge (Carver, 2019). "If you want to dig a little deeper, you can track stats yourself or there's a number of other places you can look," Carver said. Through his work, he has come across numerous for-pay subscription services, including *KenPom*, that take the groundwork out of collecting usable sports analytics that accurately display why certain things happen out on the court or field. He also noted that the website *College Basketball Reference* contains advanced statistics that can be used once a viewer begins to understand how they are laid out. "We have free access to some of these numbers now," Carver said. "Are they as perfect as you would like in comparison to some of the pay accounts? No."

As Regan writes, most media companies were either losing money or just barely hitting the bottom line even before rapid personal technologies expanded in the mid-2000s, so budgets are an obvious issue for editors or journalists deciding whether to purchase such services (2000). Carver said the investment is worth it considering readers and viewers are increasingly looking

toward statements that can be supported, and solidified statements mean more than those judged by “common sense” or assumptions.

The research conducted for this study found that the problems associated with current analytics implementation were widespread and noted without leading questioning or prior prompts, but there is also a unanimous thought that they will one day become much more prominent than they were at the time of this paper’s defense. The benefits laid out by the Razorback beat’s two true users, Hutchinson and Bordelon, were referenced by many of the interviewed individuals. With that in mind, it is plausible that a rise in local digital journalism will result in a shift from standard writing styles for print and broadcast to an emphasis on niche content, like sports analytics, that follow suit with the major developments in sports as a whole. Future research should be conducted on how certain college-based coverage entities are gathering information from national publications to further this digital trend and determine the scope of implementation for sports analytics.

### **Disclosure Statement**

Though Dr. Wells served as the committee chair for this paper and influenced many of the topics discussed and analyzed throughout its pages, he did not encourage me to mention his courses in any way. A description of Advanced Reporting was included to show an alternative to the idea that students have no resources through which to develop analytics-based reporting techniques.

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**Appendix**

<https://advancedsportstats.weebly.com/>