#### Episode 12 - Wednesday August 17, 2022, 3PM EDT

All matches are equal, but some matches are more equal than others.

Episode 12-1

The MatStats gang dives into a statistical approach on recommended changes in dual meet scoring. The stats are from Men's NCAA D1 Championship Tournaments from 1988-1992 & 2017-2022. The margin of victory for all matches in these 10 tournaments were used to formulate the recommended experimental changes.

# MatStats used a statistical analysis to see if the current dual meet scoring is the best system or should there be some changes?

- This show is the opinion of MatStats and does not necessarily reflect any opinions of the NWCA.
- There has been some scuttlebutt in the past decade or more that perhaps we should change the dual meet scoring system.
- Wrestling legend, Wade Schalles, has spoken of the need for scoring changes for years. In 2014, Wade refences a 1955 story from DC that states "team scoring doesn't make any sense."
- MatStats has heard this loud and clear and did some investigation.
- MatStats has used the scores of all bouts in the Men's NCAA D1 tournaments from 1988-1992 & 2017-2022. MatStats viewers saw many stats from those tournaments in our July 2022 show (Episode 11).
- MatStats has used the margin of victories and analyzed these to start the discussion on what might be done with dual meet scoring.

### The Current scoring system

- Match won by 0-7 points = 3 team points
- Match won by 8-14 points = 4 team points
- Match won by 15+ = 5 team points
- Match won by pin, default, or forfeit = 6 team points
- Unsportsmanlike Conduct = -1 team point

#### Changes in the past to dual meet scoring

- Superior decision (12+ margin) was added in 1976. 5 Points.
- Tech fall was added in 1985. It started as 6 points and later to 5 points.
- Ties were worth 2 points for each team for years and in the 90's, dual meets started including OT.
- In the post war era, a pin was worth 6 points if the pin was in the 1st period and 5 if in the 2nd or 3rd period.
- Before the 70's a major was 10+, it was later changed to 8+.
- Referees used to decide the winner before we had OT in case of a tie.
- There have been many scoring changes in individual matches in the last 100 years.
- The sport has evolved through the years.
- Is it time to experiment with another change?
- MatStats says yes.
- The only thing permanent is change Heraclitus (Ancient Greek Philosopher).
- MatStats believes there is one other permanent Wrestling is the world's oldest and greatest sport!

### It would help the sport to experiment and discuss possible changes in dual meet team scoring.

- MatStats is not saying the current dual meet scoring system is broken.
- MatStats is saying that it will help the sport to experiment with some possible changes in the dual meet scoring system.
- This could lead to possible changes in the tournament scoring.
- MatStats does believe that changes to the tournament scoring system are needed.
- Not all change is good, but never changing is not always good either.

## Should we give team points based strictly on each match margin of victory?

- MatStats is suggesting margin of victory scoring, where you get team points based on how much you win each individual bout by.
- If we do, how would we handle the points for a pin, default, and forfeit?
- The largest margin of victory you can tech an opponent is 21.
- How do we handle a 0-point victory. The winner needs to score some team points.
- What should a pin, default, and forfeit be worth?

## Positives of the margin of victory scoring include the possibility of big comebacks and more scoring in bouts.

- Easier for the fan to understand.
- Each point counts in every match.
- Margin of victory scoring could produce more team parity.
- More scoring by teams.
- Big comebacks.
- Scoring last 30 seconds of a match that would not happen in current scoring system.
- Puts a premium on scoring.
- In the MatStats book we learned that in the last 15 seconds of all periods only 0.45 points/match were scored. This is lower than the normal points per minute. We could see more action in these 45 seconds+ (3 x 15 seconds + OT).
- It could increase individual bout scoring.
- We learned in Episode 11 of MatStats in July 2022 that the scoring in NCAA tournaments has decreased 15% from 1988-1992 to 2017-2022. This will not affect the tournament (unless there is scoring changes in tournaments as well) but could help curb the decreased scoring in individual bouts in dual meets.

MatStats sees possible Negatives of margin of victory scoring including an extreme bias with a pin over the most common margins in bouts (2,1,3), less aggressive come from behind attempts.

- In a strict margin of victory system, a pin would have to be worth at least 22 to be above the tech fall margin of victory.
- That would be equal to 22 1-point matches.
- Winning is important for each match, hard to value a pin that much in many minds.
- We would see less risky throws at end of a match (when losing by 4-5 points) to come from behind since the risk far outweigh the reward here with the margin of victory scoring. In the MatStats book we learned that in the NCAA Men's 2017-19 quarters, semis, and finals there were only 0.07 Hail Mary points per match and were all scored defensively.

#### MatStats is here to discuss the possibilities

- MatStats digs deep into the numbers and analyzes them to give wrestlers, coaches, fans, and parents some information and data to help them form better arguments and opinions.
- MatStats is all about gathering and analyzing stats.
- MatStats is some old wrestlers and coaches just trying to use numbers to help the sport.
- MatStats is the Moneyball of Wrestling.

#### What are the distributions of matches by margin of victory from 1988 to 1992?

As the margin gets larger, the % of matches decline. Correlation of margin (w/o pin) & number of bouts = -0.776. Control for ties correlation = -0.896.

|        | 1988   | to     | 1992    |        |        |
|--------|--------|--------|---------|--------|--------|
| Margin | Number | %      | Margin  | Number | %      |
| 0      | 33     | 1.15%  | 12      | 46     | 1.61%  |
| 1      | 441    | 15.42% | 13      | 34     | 1.19%  |
| 2      | 414    | 14.48% | 14      | 20     | 0.70%  |
| 3      | 298    | 10.42% | 15      | 81     | 2.83%  |
| 4      | 223    | 7.80%  | 16      | 22     | 0.77%  |
| 5      | 200    | 7.00%  | 17      | 4      | 0.14%  |
| 6      | 197    | 6.89%  | 18      | 1      | 0.03%  |
| 7      | 120    | 4.20%  | 19      | 0      | 0.00%  |
| 8      | 145    | 5.07%  | 20      | 0      | 0.00%  |
| 9      | 109    | 3.81%  | 21      | 0      | 0.00%  |
| 10     | 70     | 2.45%  | Pin     | 286    | 10.00% |
| 11     | 64     | 2.24%  | Default | 51     | 1.78%  |
|        |        |        | Sum     | 2859   | 100%   |

#### What are the distributions of margin of victory from 2017-2022?

## Correlation of margin (w/o pins) & Number of bouts = -0.762. Control for ties correlation = -0.889

|        | 2017   | to     | 2022    |        |       |
|--------|--------|--------|---------|--------|-------|
| Margin | Number | %      | Margin  | Number | %     |
| 0      | 23     | 0.72%  | 12      | 42     | 1.31% |
| 1      | 426    | 13.32% | 13      | 27     | 0.84% |
| 2      | 523    | 16.35% | 14      | 14     | 0.44% |
| 3      | 335    | 10.48% | 15      | 73     | 2.28% |
| 4      | 308    | 9.63%  | 16      | 28     | 0.88% |
| 5      | 232    | 7.25%  | 17      | 14     | 0.44% |
| 6      | 203    | 6.35%  | 18      | 11     | 0.34% |
| 7      | 113    | 3.53%  | 19      | 1      | 0.03% |
| 8      | 198    | 6.19%  | 20      | 0      | 0.00% |
| 9      | 126    | 3.94%  | 21      | 0      | 0.00% |
| 10     | 79     | 2.47%  | Pin     | 311    | 9.72% |
| 11     | 68     | 2.13%  | Default | 43     | 1.34% |
|        |        |        | Sum     | 3198   | 100%  |

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For the 10 tournaments, the correlation between margin (w/o pins) number of bouts = -0.772. Control for tie scores correlation = -0.896.

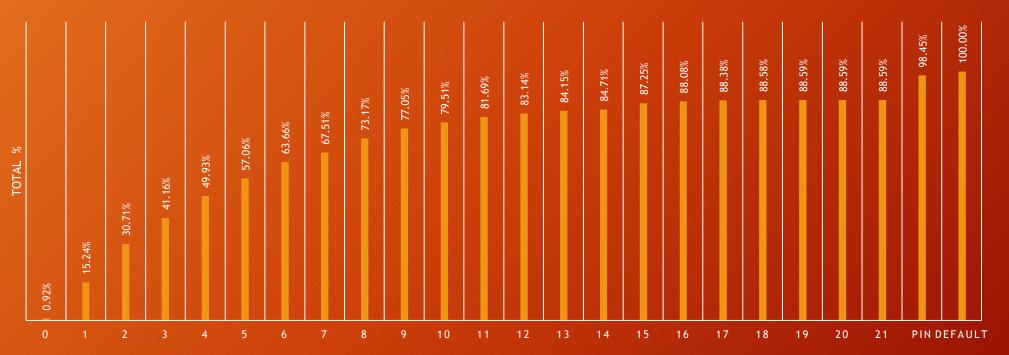
|        | 1988-1992 | &      | 2017    | -2022  |       |
|--------|-----------|--------|---------|--------|-------|
| Margin | Amount    | %      | Margin  | Amount | %     |
| 0      | 56        | 0.92%  | 12      | 88     | 1.45% |
| 1      | 867       | 14.31% | 13      | 61     | 1.01% |
| 2      | 937       | 15.47% | 14      | 34     | 0.56% |
| 3      | 633       | 10.45% | 15      | 154    | 2.54% |
| 4      | 531       | 8.77%  | 16      | 50     | 0.83% |
| 5      | 432       | 7.13%  | 17      | 18     | 0.30% |
| 6      | 400       | 6.60%  | 18      | 12     | 0.20% |
| 7      | 233       | 3.85%  | 19      | 1      | 0.02% |
| 8      | 343       | 5.66%  | 20      | 0      | 0.00% |
| 9      | 235       | 3.88%  | 21      | 0      | 0.00% |
| 10     | 149       | 2.46%  | Pin     | 597    | 9.86% |
| 11     | 132       | 2.18%  | Default | 94     | 1.55% |
|        |           | Sum    |         | 6057   | 100%  |

## This is a chart to help viewers see how the frequency decreases as the margin of victory increases.

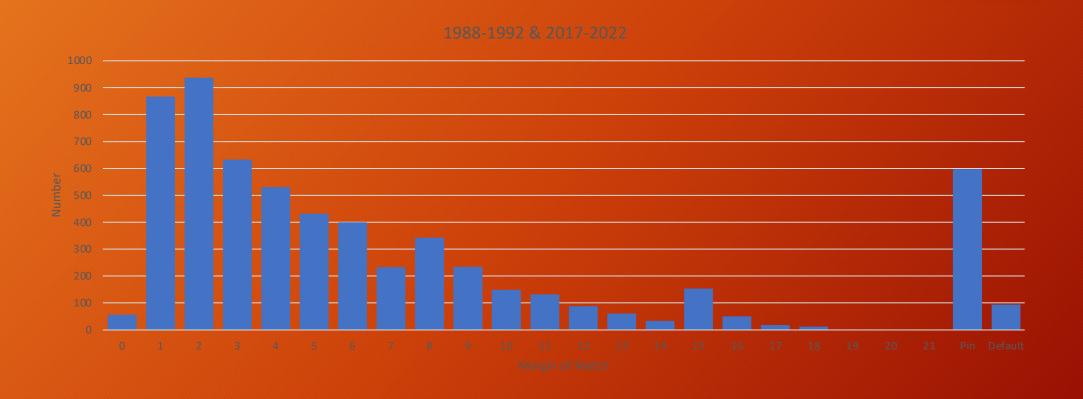
|        | 1988-1992  | & |         | 2017-2022    |
|--------|------------|---|---------|--------------|
| Margin | Cumulative | % | Margin  | Cumulative % |
| 0      | 0.92%      |   | 12      | 83.14%       |
| 1      | 15.24%     |   | 13      | 84.15%       |
| 2      | 30.71%     |   | 14      | 84.71%       |
| 3      | 41.16%     |   | 15      | 87.25%       |
| 4      | 49.93%     |   | 16      | 88.08%       |
| 5      | 57.06%     |   | 17      | 88.38%       |
| 6      | 63.66%     |   | 18      | 88.58%       |
| 7      | 67.51%     |   | 19      | 88.59%       |
| 8      | 73.17%     |   | 20      | 88.59%       |
| 9      | 77.05%     |   | 21      | 88.59%       |
| 10     | 79.51%     |   | Pin     | 98.45%       |
| 11     | 81.69%     |   | Default | 100.00%      |

# Another way for the viewer to see the high negative correlation between margin and frequency.





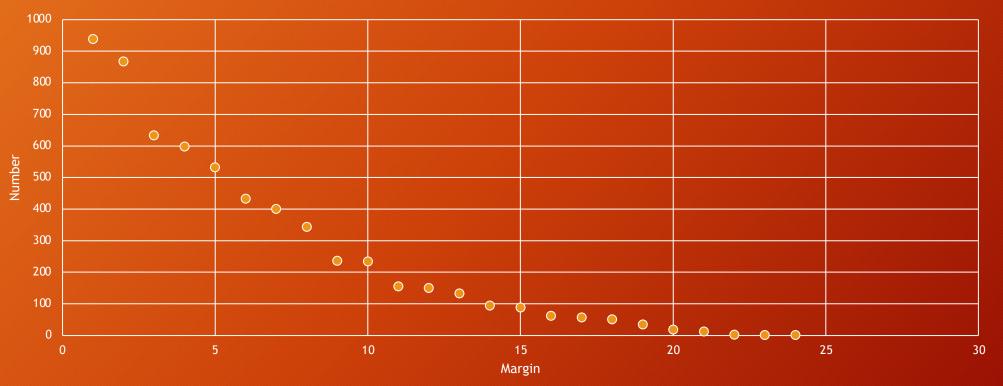
### Perhaps an easier way to see the negative correlation between margin and frequency.



#### What about a dot graph for margin of victory for 198-1992 & 2017-2022?

And one more graph to show the same. We all see/learn from different charts/graphs better than others.

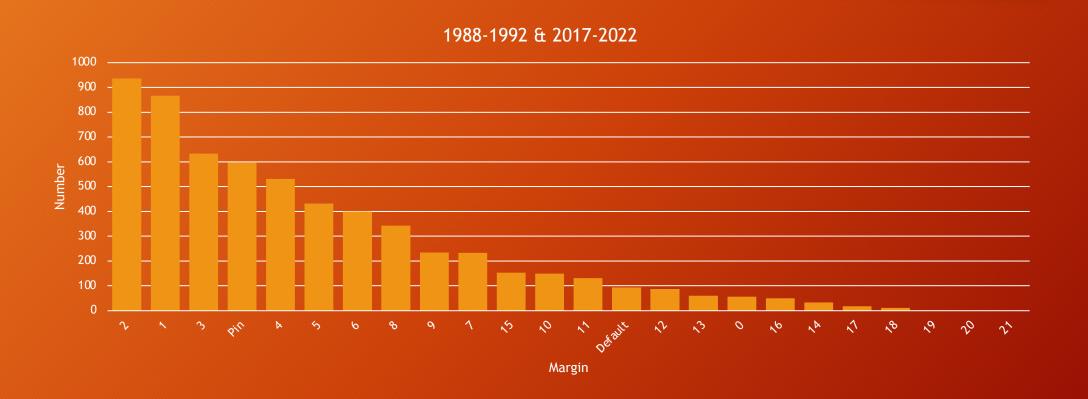




## Surprisingly to many, a Pin is ranked 4<sup>th</sup> in frequency by margin of victory.

| 1988-1992 | &      | 2017-2022 | Ranked |
|-----------|--------|-----------|--------|
| Margin    | Amount | Margin    | Amount |
| 2         | 937    | 11        | 132    |
| 1         | 867    | Default   | 94     |
| 3         | 633    | 12        | 88     |
| Pin       | 597    | 13        | 61     |
| 4         | 531    | 0         | 56     |
| 5         | 432    | 16        | 50     |
| 6         | 400    | 14        | 34     |
| 8         | 343    | 17        | 18     |
| 9         | 235    | 18        | 12     |
| 7         | 233    | 19        | 1      |
| 15        | 154    | 20        | 0      |
| 10        | 149    | 21        | 0      |
|           |        | Sum       | 6057   |

### This bar graph shows the rankings of margin of victory.



## 8- & 15-point victories jump ahead of other numbers. Does this show signs that the wrestlers kept working after virtually clinching a win to get extra team points.

- If this is indeed the case, does this not then mean that if additional team points are always on the line that their will be more action at the end of matches that have already been decided?
- This would translate to more action and more scoring all through the 7-minute match.
- No more "kneeling on the football."
- 8-point victories jump 7. 15-point victories jump 14,13,12,11, & 10-point victories.
- Since a TD is worth 2 points, we see the same for 9 & 16-point margin victories. They jump 7 & 14 respectively in the ranked order.
- This is potentially a good sign for margin of victory scoring.
- This is another reason that margin of victory scoring could help change the 15% decrease in scoring we learned about in Episode 11 in July from the 1988-1992 & 2017-2022 NCAA Men's D1 Championships.

The "tie" match has decreased drastically due to the new OT rules. A TD in the first OT period ending the match, leads to less "tie" matches.

|        | Change from 1988 | -1992 to 2017-2022 |          |
|--------|------------------|--------------------|----------|
| Margin | %Change          | Margin             | % Change |
| 0      | -37.69%          | 12                 | -18.37%  |
| 1      | -13.64%          | 13                 | -29.01%  |
| 2      | 12.94%           | 14                 | -37.42%  |
| 3      | 0.50%            | 15                 | -19.43%  |
| 4      | 23.48%           | 16                 | 13.78%   |
| 5      | 3.70%            | 17                 | 212.90%  |
| 6      | -7.88%           | 18                 | 883.40%  |
| 7      | -15.82%          | 19                 | N/A      |
| 8      | 22.08%           | 20                 | N/A      |
| 9      | 3.34%            | 21                 | N/A      |
| 10     | 0.89%            | Pin                | -2.79%   |
| 11     | -5.01%           | Default            | -24.62%  |

# This is the difference between each weight class and the overall arithmetic mean. It is not a % change it is reflected in change of percentage.

| Margin  | 118/125 | 126/133 | 134/141 | 142/149 | 150/157 | 158/165 | 167/174 | 177/184 | 190/197 | 275/285 |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0       | 0.40%   | -0.59%  | 0.22%   | -0.12%  | -0.60%  | -0.26%  | 0.06%   | -0.10%  | -0.42%  | 1.42%   |
| 1       | -3.04%  | -1.39%  | 2.16%   | 3.05%   | 5.23%   | 0.94%   | -3.80%  | -3.55%  | 1.35%   | -1.10%  |
| 2       | -0.21%  | -2.38%  | -1.93%  | 0.13%   | 1.28%   | -0.54%  | 4.23%   | -2.06%  | 0.36%   | 1.09%   |
| 3       | 1.16%   | 0.62%   | -1.32%  | 1.12%   | -0.60%  | 0.33%   | -2.40%  | -0.19%  | 0.55%   | 0.75%   |
| 4       | -1.64%  | -1.38%  | 0.04%   | 2.81%   | -0.72%  | 0.52%   | 1.25%   | 0.17%   | -0.77%  | -0.41%  |
| 5       | 0.99%   | 0.75%   | -0.61%  | -1.02%  | -2.86%  | 0.00%   | -0.56%  | 0.48%   | 2.03%   | 0.89%   |
| 6       | 0.36%   | -1.23%  | -0.57%  | -0.66%  | -0.04%  | -0.47%  | 0.79%   | 2.34%   | 0.06%   | -0.58%  |
| 7       | 0.96%   | -1.16%  | 0.72%   | -1.11%  | -1.55%  | 1.29%   | 0.92%   | 1.29%   | -0.18%  | -1.17%  |
| 8       | 0.14%   | 1.38%   | 1.51%   | -1.48%  | 0.58%   | -0.36%  | 0.08%   | -0.70%  | 0.00%   | -1.15%  |
| 9       | -0.23%  | -0.02%  | -0.13%  | -0.18%  | 0.06%   | 0.43%   | 0.23%   | -0.40%  | 1.12%   | -0.87%  |
| 10      | 0.36%   | 0.22%   | 0.31%   | -0.53%  | -0.65%  | 0.03%   | 0.00%   | 0.35%   | 0.04%   | -0.12%  |
| 11      | 0.31%   | -0.33%  | -0.06%  | 0.07%   | 0.45%   | 0.64%   | -0.54%  | 0.80%   | -0.68%  | -0.67%  |
| 12      | -0.29%  | 1.06%   | -0.15%  | -0.33%  | -0.14%  | -0.13%  | -0.47%  | 0.70%   | 0.21%   | -0.45%  |
| 13      | -0.18%  | 0.84%   | 0.46%   | -0.20%  | -0.02%  | -0.18%  | -0.35%  | -0.18%  | -0.17%  | 0.00%   |
| 14      | 0.43%   | 0.78%   | 0.09%   | -0.08%  | -0.07%  | -0.56%  | 0.10%   | 0.10%   | -0.23%  | -0.56%  |
| 15      | 0.77%   | 0.65%   | -0.26%  | -0.29%  | 0.41%   | 0.61%   | -1.06%  | 0.93%   | -1.88%  | 0.13%   |
| 16      | -0.16%  | 0.35%   | 0.15%   | 0.14%   | -0.33%  | 0.00%   | 0.00%   | 0.17%   | 0.01%   | -0.32%  |
| 17      | 0.20%   | 0.04%   | -0.13%  | 0.02%   | 0.20%   | 0.20%   | -0.30%  | 0.20%   | -0.30%  | -0.13%  |
| 18      | 0.47%   | -0.20%  | 0.13%   | -0.04%  | -0.20%  | -0.20%  | 0.13%   | 0.13%   | -0.20%  | -0.03%  |
| 19      | -0.02%  | -0.02%  | -0.02%  | -0.02%  | -0.02%  | -0.02%  | -0.02%  | 0.15%   | -0.02%  | -0.02%  |
| 20      | 0.00%   | 0.00%   | 0.00%   | 0.00%   | 0.00%   | 0.00%   | 0.00%   | 0.00%   | 0.00%   | 0.00%   |
| 21      | 0.00%   | 0.00%   | 0.00%   | 0.00%   | 0.00%   | 0.00%   | 0.00%   | 0.00%   | 0.00%   | 0.00%   |
| Pin     | -0.40%  | 1.05%   | -0.39%  | -0.69%  | -0.50%  | -2.39%  | 1.15%   | -0.09%  | -1.02%  | 3.35%   |
| Default | -0.39%  | 0.96%   | -0.25%  | -0.59%  | 0.09%   | 0.11%   | 0.58%   | -0.56%  | 0.11%   | -0.05%  |

### MatStats recommends a modified margin of victory scoring system for all dual meets.

- All individual bouts would be using the same scoring system.
- The team points would change for dual meets.
- The team would score points based on the margin of victory in each bout.
- There would be three modifications explained below.

### The team would get points based on each match margin of victory with a few modifications.

- The three modifications would be -
- 1) 1 point for the winning team in a match that ends with a tie score, but the one wrestler wins on criteria.
- 2) Cap all Tech falls at 15 points.
- 3) A Pin (default & Forfeit also) is 20 points. Note there are most likely more defaults at the end of the NCAA tournament than there are in dual meets. There is very little team scoring at stake at that point.

### The 3 modifications are both needed and would make things easier for fans to follow.

- The winner of a match that ends in a tie score needs to score some team points.
- It would be best to cap tech falls.
- A Pin (the object of the sport) should have a meaningful bonus over tech falls.

#### How often do the matches end in a tie score with a winner?

In the 10 years we analyzed 0.92% ended in a tie, but with the OT rule changes, the 0.72% from 2017-2022 with new rules is the best number to use. The winner needs to score team points (1).

|        | 1988 |       |        | 2017 |       |        | 1.0   |       | 0/      |
|--------|------|-------|--------|------|-------|--------|-------|-------|---------|
|        | -    |       |        | -    |       |        | 10    |       | %       |
| Margin | 1922 | %     | Margin | 2022 | %     | Margin | Years | %     | Change  |
|        |      |       |        |      |       |        |       |       |         |
|        |      |       |        |      |       |        |       |       |         |
|        |      |       |        |      |       |        |       |       |         |
| 0      | 33   | 1.15% | 0      | 23   | 0.72% | 0      | 56    | 0.92% | -37.69% |

#### What does the math tell us about the Tech falls and Pins?

There are 9.86% Pins, 3.88% Techs, and 1.34 16+ point Techs. There are 2.5X as many Pins as Techs.

| 1988-1992 | &      | 2017-2022 |
|-----------|--------|-----------|
| Margin    | Number | %         |
| 15        | 154    | 2.54%     |
| 16        | 50     | 0.83%     |
| 17        | 18     | 0.30%     |
| 18        | 12     | 0.20%     |
| 19        | 1      | 0.02%     |
| 20        | 0      | 0.00%     |
| 21        | 0      | 0.00%     |
| All Techs | 235    | 3.88%     |
| 16+ Techs | 81     | 1.34%     |
| Pin       | 597    | 9.86%     |

## MatStats thinks it would be best if all Techs are 15 points & a Pin is 20 points.

- Currently the tech is worth 5 and pin 6. That is a 20% bonus for a pin. With margin scoring the bonus would be 33%.
- If we score tech all the way to 21, the bonus for a pin (22 points) would only be 4.7%.
- If we make all Techs worth 15 points and Pins worth 20 points, we would not be holding up our system for 1.34% of bouts.
- We would also have easy numbers for fans to remember (15 & 20) and a lot easier for them do math on what was needed for their teams to win the dual meet as matches progress.

### The average total team points under the current scoring system is 35.9 points per dual meet.

| Margin of |             | % in numeric | Team Pts * % in | Margin of  |                | % in numeric | Team Pts * % in |
|-----------|-------------|--------------|-----------------|------------|----------------|--------------|-----------------|
| victory   | Team Points | form         | numeric form    | victory    | Team Points    | form         | numeric form    |
| 0         | 3           | 0.009246     | 0.027737        | 15         | 5              | 0.025425     | 0.127126        |
| 1         | 3           | 0.14314      | 0.429421        | 16         | 5              | 0.008255     | 0.041275        |
| 2         | 3           | 0.154697     | 0.464091        | 17         | 5              | 0.002972     | 0.014859        |
| 3         | 3           | 0.104507     | 0.313522        | 18         | 5              | 0.001981     | 0.009906        |
| 4         | 3           | 0.087667     | 0.263001        | 19         | 5              | 0.000165     | 0.000825        |
| 5         | 3           | 0.071322     | 0.213967        | 20         | 5              | 0            | 0               |
| 6         | 3           | 0.066039     | 0.198118        | 21         | 5              | 0            | 0               |
| 7         | 3           | 0.038468     | 0.115404        | Pin        | 6              | 0.098564     | 0.591382        |
| 8         | 4           | 0.056629     | 0.226515        | Default    | 6              | 0.015519     | 0.093115        |
| 9         | 4           | 0.038798     | 0.155192        |            |                |              |                 |
| 10        | 4           | 0.0246       | 0.098399        | Aver       | age points per | bout         | 3.591877        |
| 11        | 4           | 0.021793     | 0.087172        |            |                |              |                 |
| 12        | 4           | 0.014529     | 0.058115        | Total mean | points for the | dual meet    | 35.91877        |
| 13        | 4           | 0.010071     | 0.040284        |            |                |              |                 |
| 14        | 4           | 0.005613     | 0.022453        |            |                |              |                 |

## The average total dual meet points with the margin of victory system will be 66.8. Almost 2x the total under the current system.

|           |             |              | Team Pts * % |            |                |              | Team Pts * % |
|-----------|-------------|--------------|--------------|------------|----------------|--------------|--------------|
| Margin of |             | % in numeric | in numeric   | Margin of  |                | % in numeric | in numeric   |
| victory   | Team Points | form         | form         | victory    | Team Points    | form         | form         |
| 0         | 1           | 0.009246     | 0.009246     | 15         | 15             | 0.025425     | 0.381377     |
| 1         | 1           | 0.14314      | 0.14314      | 16         | 15             | 0.008255     | 0.123824     |
| 2         | 2           | 0.154697     | 0.309394     | 17         | 15             | 0.002972     | 0.044577     |
| 3         | 3           | 0.104507     | 0.313522     | 18         | 15             | 0.001981     | 0.029718     |
| 4         | 4           | 0.087667     | 0.350669     | 19         | 15             | 0.000165     | 0.002476     |
| 5         | 5           | 0.071322     | 0.356612     | 20         | 15             | 0            | 0            |
| 6         | 6           | 0.066039     | 0.396236     | 21         | 15             | 0            | 0            |
| 7         | 7           | 0.038468     | 0.269275     | pin        | 20             | 0.098564     | 1.971273     |
| 8         | 8           | 0.056629     | 0.45303      | def        | 20             | 0.015519     | 0.310385     |
| 9         | 9           | 0.038798     | 0.349183     |            |                |              |              |
| 10        | 10          | 0.0246       | 0.245996     | Avera      | age points per | bout         | 6.683507     |
| 11        | 11          | 0.021793     | 0.239723     |            |                |              |              |
| 12        | 12          | 0.014529     | 0.174344     | Total mean | points for the | e dual meet  | 66.835       |
| 13        | 13          | 0.010071     | 0.130923     |            |                |              |              |
| 14        | 14          | 0.005613     | 0.078587     |            |                |              |              |

# MatStats will try and spice up our shows with some fun. It's trivia time. Iowa, Oklahoma, or Pennsylvania?

- Gorms will name three former All-American NCAA D1 Men's wrestlers or "NCAA" women or NAIA women's wrestlers All-Americans.
- Kevin & Jason must guess if the college they wrestled for are in Iowa, Oklahoma, or Pennsylvania.
- All 3 of these wrestlers placed this century.
- Our listeners can join at home.

### MatStats largest concern is the Pin far outweighing many tightly contested victories.

- In the current scoring system, a pin is worth 2X (6 vs 3 team points) a normal victory.
- In the margin of victory scoring system, a pin would be worth 20X a 1-point victory.
- This is a huge change and will cause some concern from many.
- A pin would even be worth 2 10-point decisions or any combination there
  of
- In football a defensive back that gets beat deep like a Dawg many times can lose the football game for his team. In this analogy 1 > 10. The WR beating the DB deep outweighs what the other 10 guys do. To prevent this the D tries to get to the QB before the WR can beat the DB deep.

### Stats and Margin of Victory Scoring. Can 1>9? Part 1

- We have learned earlier (Slide 12-29) that the average dual meet points scored in each match is 6.68 when the margin of victory system is used. If we control for pins and defaults, it is 4.40.
- So, a 20-point pin is worth (20/4.40 = 4.54) 4.54 average individual matches without a pin or default.
- In the current scoring system, the pin is worth (6/2.9 = 2.07) 2.07 individual matches without a pin or default. This doubles the arithmetic mean value of a pin.
- So, the new scoring system would have a 2.19X more value of a pin over a match without a pin or default.
- It is not the extreme of a 20X value as a 1-point victory.

### Stats and Margin of Victory Scoring. Can 1>9? Part 2

- The 4 most common margins of victory we learned in slide 12-17 are in order 2, 1, 3, Pin.
- Under the proper conditions 9 matches with a margin of victory being between 0 and 3 points for one team could add up to less than 20 points. The probability of one team having a pin and the other having 9 0-3 wins is 1 in 29,912 dual meets. But not all of 0-3 will add up to less than 20, so it is longer odds to add up to under 20.
- If we say 9 victories between 0-2 points for one team and 1 pin for the other team that will happen 1 in 417,450 dual meets.

### Stats say the extreme bias of a pin over 9 close matches is not something to keep you up at night.

- In the NCAA & NAIA there are currently 348 announced men's teams.
- They average about 15 dual meets/per team.
- 348 \* 15 / 2 = 2610 dual meets/year.
- O-3 29,912/2610 = 11.5 years.
- 0-2 417,450/2610 = 159 years.
- The odds are so long that either one happens are so long are we going to not try the margin of scoring method to make sure this doesn't happen to one unlucky team this year.
- But then again, statistics say if you gave Joe DiMaggio 4,000 years, he would never have a 56-game hitting steak. But he sure did it in 1941. That stat was in MatStats master in stats thesis.
- Let's try the margin of scoring and see how it goes. MatStats hopes it puts crazy scenarios to bed.

#### Can 2 > 8? Yes!

- From what we have learned in this episode, if a team does not get any pins their average dual meet score with 8 wins is 8 \* 4.4 = 35.2.
- So yes, it would not be crazy for a team with two pins to win the dual meet.
- However, if you take the average score for winning 8 bouts (8 \* 6.68 = 53.4), the team with 8 wins will usually win the dual meet.
- It many minds, this will be a downside in margin of victory scoring.
- Other NCAA sports are chock full of examples of 1-3 athletes so far above the mean that their team can go far in March Madness or Track Championships.

# Three pins will usually win the dual meet with margin of victory scoring if the other team doesn't get a pin.

- Three pins = 60 points.
- Without a pin for the opposing team, they would get 7 \* 4.4 = 30.8 in the average scenario.
- In other words, if you get pinned 3 times, you better get a pin to win the dual meet.
- In Cross Country if your team places 1,2,3 in a dual meet, you will win.
- In our current scoring system, 7 is always > than 3.
- 7 \* 3 = 21 > 3 \* 6 = 18.
- There is clearly more of a bias towards select individuals in margin of victory scoring.
- Will this prevent teams from resting their best wrestler at that weight in many dual meets.
- In football if one team scores 3 TD's and the other team kicks 7 FG's, we go OT. This has not hurt football's TV ratings.

# A Picture is worth a 1,000 words. Three huge NCAA Men's D1 side by side with the old scoring and the proposed margin of victory scoring.

| Penn S<br>2022 | tate vs | lowa  |  |       |        |  | Ohio State vs Penn<br>State 2018 |             |     |             | Oklahoma State vs<br>Iowa 1998 |     |             |       |             |        |
|----------------|---------|-------|--|-------|--------|--|----------------------------------|-------------|-----|-------------|--------------------------------|-----|-------------|-------|-------------|--------|
|                |         |       |  |       |        |  |                                  |             |     |             |                                |     |             |       |             |        |
|                | Old Sc  | oring |  | New S | coring |  |                                  | Old Scoring |     | New So      | coring                         |     | Old Sc      | oring | New So      | coring |
|                | Iowa    | PSU   |  | lowa  | PSU    |  |                                  | Oh<br>State | PSU | Oh<br>State | PSU                            |     | Ok<br>State | lowa  | Ok<br>State | lowa   |
| 125            | 0       | 4     |  | 0     | 9      |  | 125                              | 4           | 0   | 9           | 0                              | 118 | 3           | 0     | 8           | 0      |
| 133            | 0       | 7     |  | 0     | 10     |  | 133                              | 7           | 0   | 10          | 0                              | 126 | 4           | 3     | 8           | 1      |
| 141            | 0       | 10    |  | 0     | 12     |  | 141                              | 10          | 0   | 11          | 0                              | 134 | 4           | 9     | 8           | 21     |
| 149            | 3       | 10    |  | 3     | 12     |  | 149                              | 10          | 5   | 11          | 15                             | 142 | 10          | 9     | 28          | 21     |
| 157            | 6       | 10    |  | 5     | 12     |  | 157                              | 15          | 5   | 26          | 15                             | 150 | 13          | 9     | 34          | 21     |
| 165            | 10      | 10    |  | 13    | 12     |  | 165                              | 15          | 9   | 26          | 24                             | 158 | 16          | 9     | 41          | 21     |
| 174            | 10      | 13    |  | 13    | 13     |  | 174                              | 15          | 12  | 26          | 26                             | 167 | 16          | 12    | 41          | 23     |
| 184            | 10      | 16    |  | 13    | 18     |  | 184                              | 15          | 16  | 26          | 34                             | 177 | 19          | 12    | 48          | 23     |
| 197            | 10      | 19    |  | 13    | 23     |  | 197                              | 15          | 19  | 26          | 37                             | 190 | 19          | 18    | 48          | 43     |
| 285            | 13      | 19    |  | 18    | 23     |  | 285                              | 18          | 19  | 31          | 37                             | 275 | 22          | 18    | 49          | 43     |

#### Will margin of victory scoring enable more parity?

## Margin of Victory scoring opens the door for more parity.

- Clarion State in the 70's & Edinboro in 2015 (3<sup>rd</sup> in NCAA's) are great examples of smaller schools doing great with less.
- A lot of the March Madness revolves around a small school upsetting a big guy. St Peter's beating Kentucky in 2022 is just one of many.
- The big schools have a better chance of building a solid 2-3 deep line up, the smaller schools can't match that. With margin of victory scoring smaller schools could find just a few and make a splash.
- One, two, or three can make a difference.
- The NY media is still upset that Peyton Manning spurned the NY Jets being the #1 draft pick in 1997 when he came back to college at Tennessee to finish his college career.

## Like most rule changes this should be done voluntarily on a small level and/or an exhibition level.

- Perhaps the NWCA All-Star match would be a great place to start.
- There has never been a team score at the All-Star Match and there would not be any coach or school winning or losing, so there would not be a huge backlash. Stress is nothing more than the fear of change.
- In 2015 The All-Star match experimented with new scoring rules for individual bouts. TD's were worth 3 points for that All-Star match.
- We currently do not have a team scoring at the All-Star match. What would it hurt by trying the margin of victory scoring system in Austin, TX in the Fall of 2022?
- These experimental rules were approved by the NWCA which sponsors the All-Star match.
- Another option would be a match that was not a "huge" match like the dual meet national championships or lowa vs Penn State.
- Two coaches would need to agree to try this out. Two smaller schools could agree for some PR. This is why the Cowboys always play on Thanksgiving day. In the 60's they were a new franchise.
- We could all see what the reactions to the potential changes were received.
- Except for the NCAA Men's D1 championships and "huge" Big 10 matches, we need as a sport to try and get more fans to dual meets. Perhaps this will help. No reason to not try and see what happens.

### MatStats will next look into tournament team scoring. Yes, it is confusing to many fans!

- The logical next step after discussing dual meet team scoring and experimenting with it is to see how it is received.
- If it is well received the possibility of changing tournament team scoring is next.
- MatStats has been going with a group to the Men's NCAA D1 championships since 1986. Every year someone in the group asks MatStats how the team scoring there works.
- If your loyal fans don't all understand it, it needs some help.
- At our biggest event, every year many fans in the seats and on TV at home don't know how the tournament team scoring works.
- We learned on Episode 11 in July 2022 that the last couple of rounds of consolations have 3.35X as many defaults as the average round. There are so few team points at stake, that the default skyrocket. This is not good for the fans.

### YES!!! We want feedback. Hit us up on Twitter, Instagram, Facebook. @NWCAMatStats

- MatStats is anxious to hear feedback and we hope this show generates many conversations with our idea on margin of victory scoring.
- MatStats is here to use numbers and stats to help grow the world's oldest and greatest sport.

## Next MatStats Episode Wednesday September 21<sup>st</sup>, 2022, 3PM EDT.

- Episode 13 will deal with tournament team scoring.
- Episode 13 will use the data collected from 10 NCAA Men's D1 Championships and the information gathered for Episode 12 on dual meet team scoring and see the possibilities for potential changes in tournament team scoring.
- Episode 13 will offer suggestions to help make tournament team scoring easier to understand for the casual and most loyal fans.