The Design of Multi-sport Dog Competitions

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Multi-sport dog competitions such as triathlons and versatility competitions present wonderful opportunities to test the versatility of dogs. But how can these competitions be designed and scored to ensure fairness even though the sports are so varied in terms of rules, difficulties, and the scoring used for each individual sport? There are a wide variety of formats used in multi-sport dog events such as using raw scores, using the number of dogs defeated, using points tables, and using a combination of these methods. How are non-qualifying scores handled in sports like agility, obedience, and rally? How are sports with different levels or classes scored? In the article, we examine different multi-sport dog competitions, classify their scoring systems, and analyze the pros and cons of different scoring systems.

Competition Types

Multi-sport dog competitions frequently take place at national specialty shows for certain breeds of dogs. Others take place yearly at the same location. Sighthounds enthusiasts, in particular, seem to offer many of these competitions.

Some sports offered in multi-sport dog competitions are:

- Conformation - traditional dog shows where a judge examines dogs compared to a breed standard,
- Lure coursing - traditionally for sighthounds only, dogs are judged on factors such as speed, agility, follow, and enthusiasm as the chase a lure around a large field,
- Obedience – dogs and handler teams do exercises such as heeling, retrieving dumbbells, doing recalls, sits, and stays as a judge evaluates the performance,
- Agility – handlers direct their dogs around a obstacle course consisting of jumps, tunnels, and contact obstacles such as A-frames,
- Rally obedience – handlers direct their dogs through a course designed by the judge consists of various obedience type stations such as pivot 90 degrees left.

Scoring Systems

Scoring systems used for multi-sport dog events vary greatly. They can be classified as follows:

- raw scores,
- ranking,
- dogs defeated,
- weighted scores,

- hybrid scoring.

Raw Scores

In a competition that uses raw scores, the scores from each event are added together and the dog with the highest score wins. In some competitions, handlers can make choices about which sports are scored. Raw score systems work well only if the sports are scored in a similar manner and the scores are distributed in a similar manner. Typically, this is not the case and raw score systems do not weigh the sports equally. Note that scores may or many not have the same maximum value for each sport. For example, in the American Whippet Club Triathlon, lure coursing scores have a maximum value of 400, agility and obedience have a maximum value of 200, and conformation has a maximum value of 100.

Ranking

In a ranking system, the top performing dog in a sport receives a one, the second highest dog receives a 2, etc. The ranks are added together and the lowest total score for all the ranked events determines the winner. A ranking system has a strong advantage of tending to ameliorate differences in scoring in different sports or even on judging on particular days. The disadvantage of a ranking system is that numeric differences in how much one dog beats another dog are lost. Ranking systems can be configured to handle different class and NQ scores.

Dogs Defeated

With a dogs defeated system, the score for each sport is calculated, based on the number of dogs defeated. For example there were 100 dogs competing in a sport, the winning dog receives 99 and the last place dog receives a zero. This provides an advantage over a ranking system if there are different numbers of dogs in the different sports. Say there were 5 dogs performing in obedience and 10 dogs in agility, the winning obedience dog would get 5 points and the winning agility dog would get 10 points. The disadvantage of a dogs defeated system is that the top performance, which may very well be equally worthy, could be rated much differently depending on how many dogs compete in that particular event. In essence, less popular sports are penalized.

Weighted Scores

In a weighted system, scores from different sports are multiplied by a factor to either count more sports heavily or to try and make them count equally when there are differences in how the sports are scored. There are 2 types of weighted score systems, linear and discrete. In a linear system, raw scores are multiplied by a number to obtain weighted scores. The sum of the weighted scores is used as the final score for the team. For example, lure coursing scores might be multiplied by 1.5 while conformation scores are multiplied by 1 (i.e., no multiplier).

In a discrete system, point tables are devised to determine the scores. For example, this is part of a table from the Dachshund Club of America's triathlon competition.

Obedience	Utility	Open	Veteran	Novice
Class Score	A or B	A or B	Novice	A or B
194.5 to 200	10	8	6	6
188.5 to 194	9	7	5	5
182.5 to 188	8	6	4	4
176.5 to 182	7	5	3	3
170 to 176	6	4	2	2

The advantage of a discrete weighted system is that clear and exact scores can be determined for different levels of performance including NQ scores. The disadvantage is coming up with precise measures of equal performance for each sport, class, and score within the class across many different sports.

Linear weighted systems do not solve the problem of different score distributions as well as ranking systems since differences in judging on a particular day are not ameliorated. Also, ties are likely depending on the granularity of the table entries. This is because a range of scores will result in the same numeric score. In the example above, utility scores from 194.5 to 200 receive 10 points. This may be manageable if a suitable system is created to address tie scores.

Hybrid Scoring

Some clubs mix different systems together to create a hybrid system. For example, they might use a scoring table for one sport (discrete weighted system) and raw scores for another sport. Hybrid systems have the disadvantage of being very difficult to analyze for fairness.

Other Factors

There are other factors that need to be addressed in devising a fair and equitable scoring system.

- *Non-qualifying scores.* Are they counted? How are they ranked in a ranking system? Are the counted equitably for each sport?
- *Differences in classes*. Does the scoring system take different classes into account? For example, if the event includes AKC Agility, do the rules account for the difference in difficulty between the novice, open, and excellent classes?
- *Rules and judges.* Since these are not AKC events per se and are typically handled by breed and local clubs, how are the rules and judges decided upon to ensure fairness?

- *Sport Venue Selections.* There are special scoring considerations if a handler can choose from different sports. There are 2 ways to do this. In the first method, handlers can pick one sport from a selection of sports ahead of time. Typically, the handler may have a choice of obedience, agility, or rally. In the second method, they choose after the fact, that is, pick the highest scoring sport if they entered multiple sports. For example, in the old AWC Triathlon rules, handlers would receive the higher agility or rally score if they entered both agility and rally.

American Whippet Club Triathlon

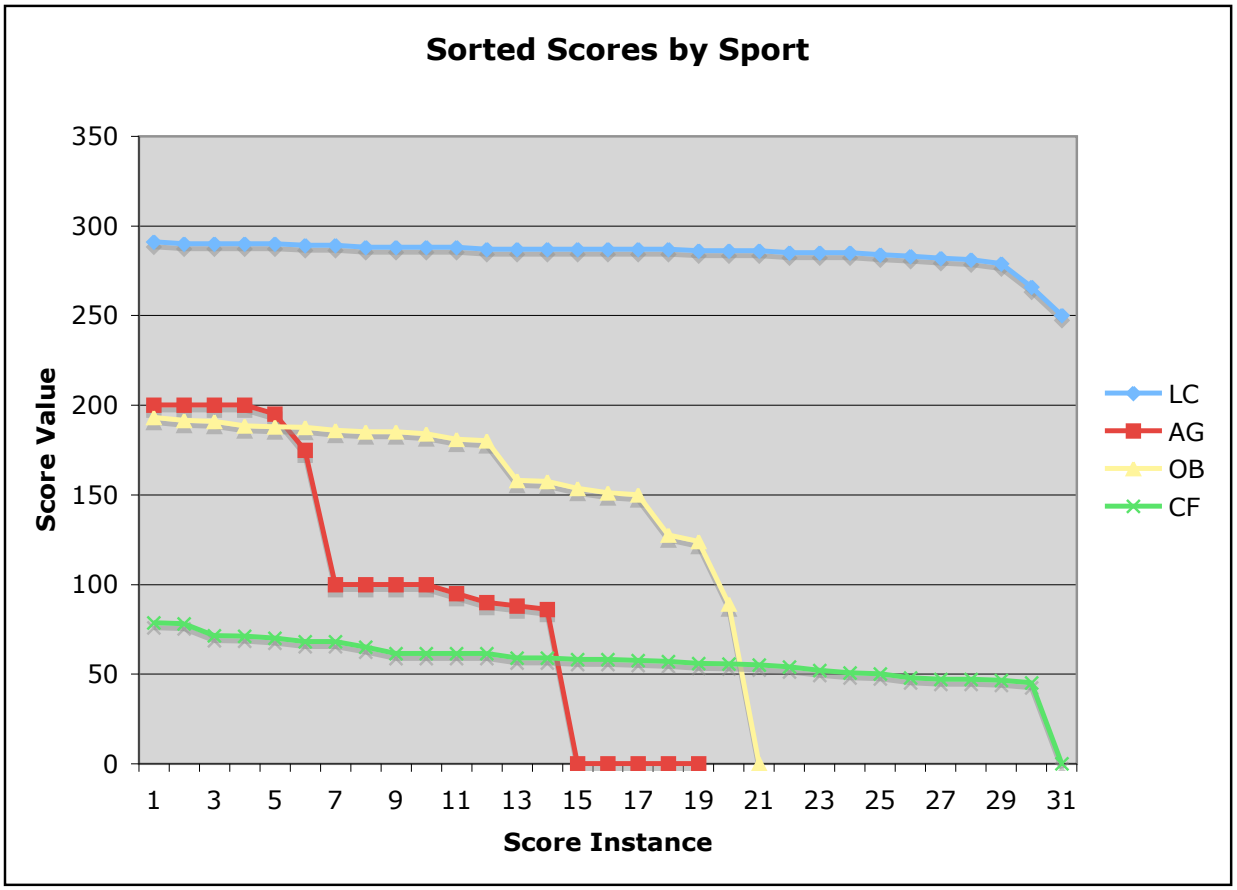
Rules

The American Whippet Club has a triathlon competition held annually at its national specialty. Until 2008, the triathlon consisted of lure coursing, agility and/or obedience, and conformation. Agility was dropped for the 2008 triathlon and a new Versatility Competition (see below) was started that includes agility and rally. Lure coursing scores for each judge are added together to get a maximum of 400 points. Obedience raw scores, whether qualifying or not, are added to the lure coursing scores. Finally, a special conformation class is held. The judge gives each dog a score from 0 to 100. The 3 scores are added together to determine the overall placements in the triathlon competition. Dogs entering higher level agility or obedience classes are not given any added weight. So a dog getting a 195 in novice obedience scores the same as a dog getting a 195 in utility. Note that the Rhodesian Ridgeback Club has an almost identical competition.

Comments

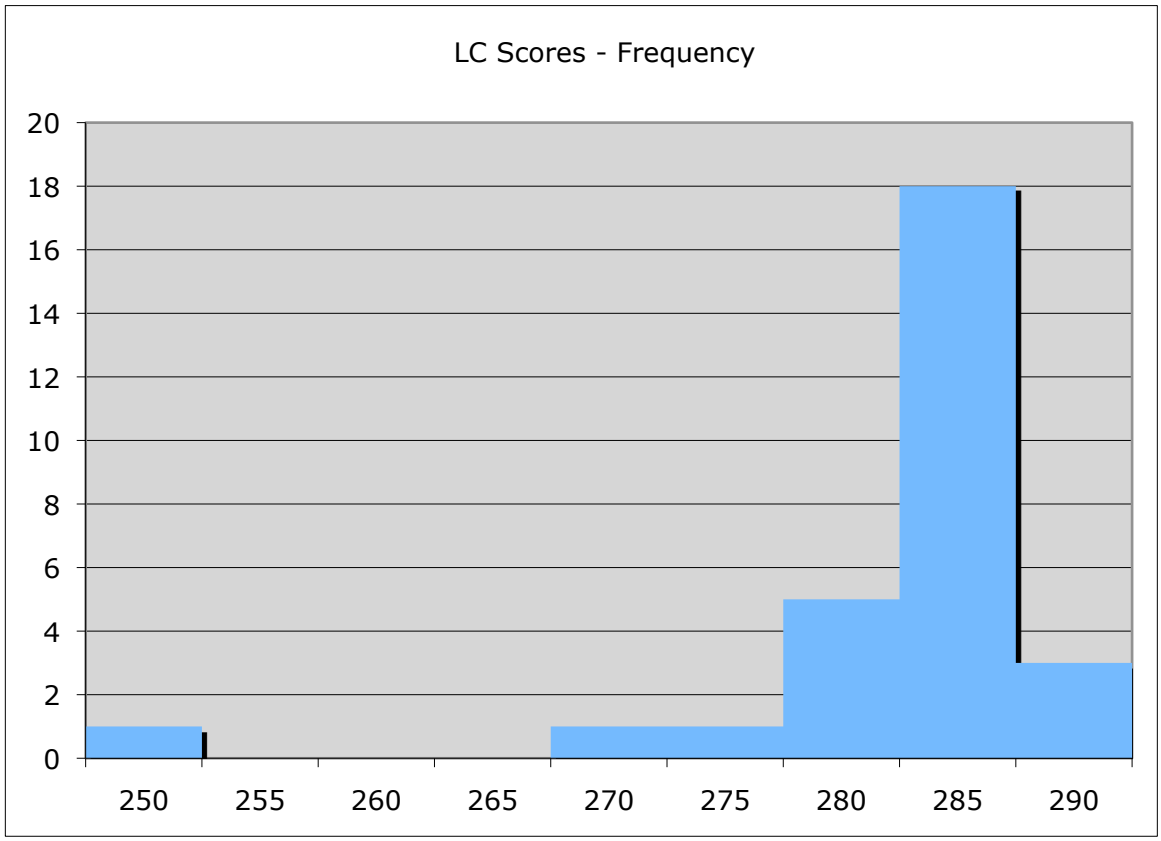
With the rules as described above, many initially assume that lure coursing is given the most weight in this competition. However, an analysis of data from 2007[1] shows that lure coursing is, in fact, weighted much less than the other sports. This is because lure coursing scores are tightly bunched around a median score with the vast majority falling within a 10-point range of 281 to 291. See the graph **LC Scores – Frequency** below. The agility and obedience scores are more of a linear function with a wide range of values and the conformation scores are also more a linear function with the majority of scores falling within a 35-point range. See the graph **Sorted Scores by Sport** below for details.

[1] However, data from previous years is very similar. 2008 data is considered later in this section.



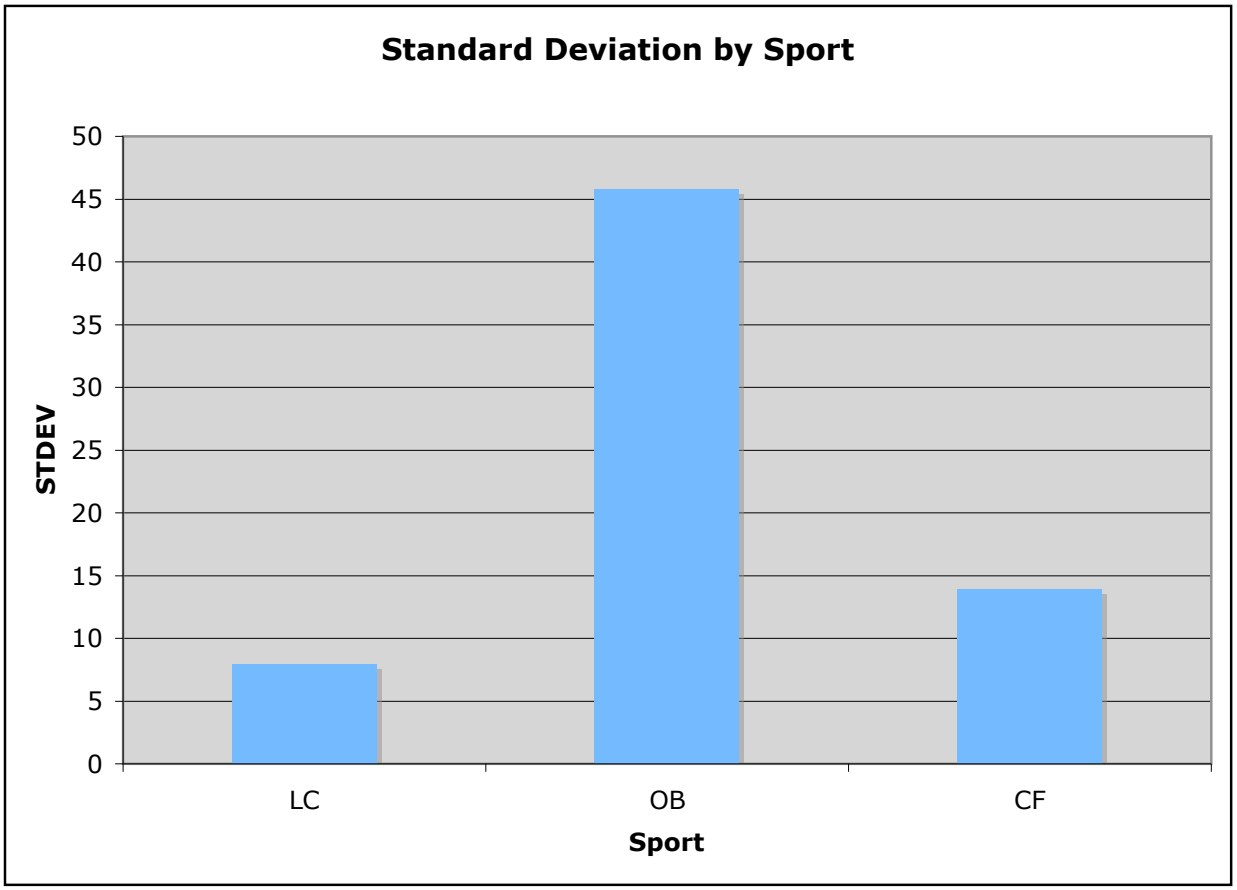
Legend: LC lure coursing; AG agility; OB Obedience; CF Conformation

2007 AWC Triathlon Scores



2007 Lure Scores in the AWC Triathlon

When these scores are added together, the difference in scores is the most critical factor in winning rather than the raw score value. The standard deviation is a measure of the variance in a data distribution. The chart below shows the **Standard Deviation by Sport**. It appears that lure coursing is very lightly weighted with conformation worth about twice as much and obedience weighted much more heavily. It should be noted with obedience that some low scores really increased the standard deviation. However, these dogs would be out of contention for the top ten so would not be a factor in terms of fairness to the leading dogs. Agility is not included in the graphic due to an inconsistency in the rules that did not count NQ scores in agility even though they were counted in obedience. This causes an anomaly in calculating the standard deviation since NQ scores in agility are counted as zero.

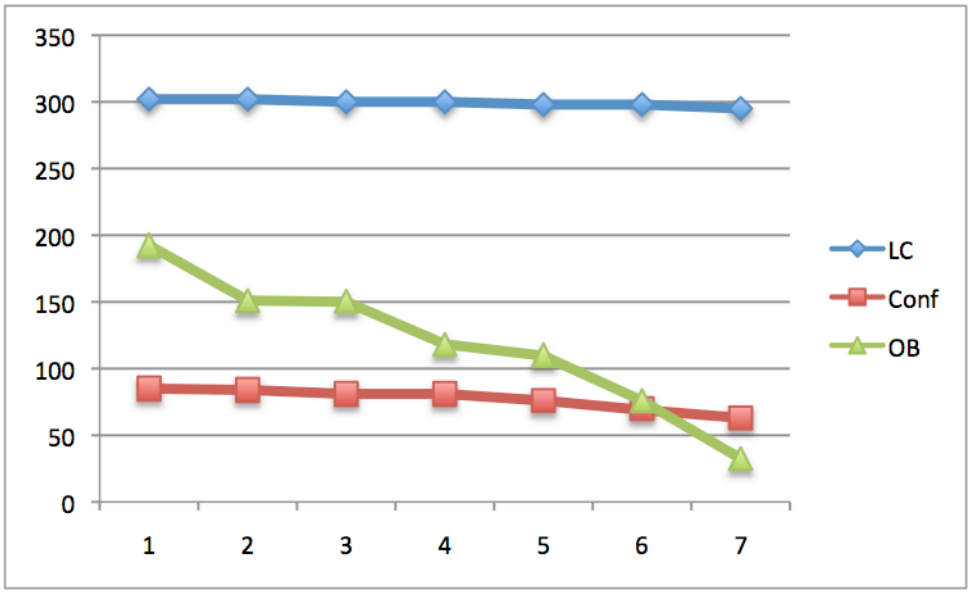


2007 AWC Triathlon Standard Deviation in Scores by Sport

Data from 2008 shows the same issues. Lure coursing scores showed a range of 7 and a standard deviation of 2, conformation scores showed a range of 8 and a standard deviation of 22 and obedience scores showed a range 160 of and a standard deviation of 52. We see that the obedience scores, and to a lessor extent conformation scores determine the winner and the placements with lure coursing playing a neglible role in the results.

	LC	Conf	OB	Total	Placement
Dog 1	298	70	192.5	560.5	1
Dog 2	302	81	150.5	533.5	2
Dog 3	295	63	151	509	3
Dog 4	300	81	118	499	4
Dog 5	300	85	110	495	5
Dog 6	298	76	76	450	6
Dog 7	302	84	32.5	418.5	7
AVG	299.29	77.14	118.64	495.07	
STD	2.50	8.07	52.96	48.07	
RANGE	7	22	160	142	

2008 AWC Triathlon Scores – Average, Standard Deviation, and Range



2008 AWC Triathlon Scores

An even better measure of how much each sport is actually weighted in the average difference between sorted scores by sport. Using the average difference between scores as a measure and using 2008 data, conformation counts 3 times as much as lure coursing and obedience counts 23 times as much as lure coursing.

LC	DIFF	Conf	DIFF	OB	DIFF
302		85		192.5	
302	0	84	1	151	41.5
300	2	81	3	150.5	0.5
300	0	81	0	118	32.5
298	2	76	5	110	8
298	0	70	6	76	34
295	3	63	7	32.5	43.5
AVE DIFF	1.17		3.67		26.67
RATIO			3.14		22.86

2008 AWC Triathlon Scores – Average Difference and Relative Weighting

The difference in scores in different sports (i.e., their distribution) is more important than the maximum values. While it may appear that lure coursing has the most weight, it actually has the least weight since lure coursing scores are distributed very closely around a median value versus conformation and obedience scores, which have a more linear distribution (with larger differences in scores) from 0 to 100. Hence, when adding these three scores together, conformation and obedience counts more towards determining the winner based on the total points obtained. Raw score systems also have the disadvantages of not being able to handle different class levels easily (for example, utility, open, and novice obedience).

While the simple raw score format is easy to understand and tally, it appears that the various sports are not actually weighted evenly even though it is commonly assumed that they are. Also, the simple format does not take into account the difference in difficulty in the different obedience and agility classes. Note that the AWC recently eliminated agility from the triathlon. One of the reasons given at the time was the fairness in evaluating agility and obedience scores against each other. While perfect scores are more common in agility, this issue could have been handled by a ranking or weighting system. However, that issue is minor compared to other scoring issues in the AWC triathlon. Using standard deviation as the measure, it appears that lure coursing is weighted – at a minimum – 50% less that conformation and even more compared to obedience.

In the author's opinion, the AWC addressed the elimination of agility from the triathlon by creating a new versatility competition that includes agility and rally. Now there are two very nice competitions that teams can enter. Teams may also enter both competitions. Though the use of a ranking system could also have solved this problem, having two competitions is certainly another good solution. However, the AWC many want to take a look at the triathlon scoring data and see if lure coursing can be given more of an equal weight as conformation and obedience.

Saluki Club of America Triathlon

Rules

The Saluki Triathlon consists of scores from an AKC Lure Coursing Trial, an independent conformation class, and the handler's choice of obedience, agility or rally. The handler must identify the obedience, agility, or rally class on the Triathlon entry form before competing.

For lure coursing, the base score is one half (1/2) of the total course awarded by one judge or one quarter (1/4) of the total score by two judges for 100 points maximum. The Base Score will be multiplied by a factor of 1.5. 1 bonus point is awarded for each dog defeated in a stake.

For obedience, the base score is one half (1/2) of the total points earned in any regular obedience trial class or 100 points maximum. For pre-novice, the maximum possible score will be 80 points because there is no off-leash heeling. 1 bonus point is awarded for each dog defeated in a class.

As an option to obedience, an agility score (any jumpers or any standard class) of 100 maximum total points can be used instead of an obedience score.

A numeric score of 30 is used towards the Triathlon if the entrant does not qualify in agility, to recognize the effort. Unlike obedience and rally, there are no partial scores earned if a dog does not qualify in agility. 1 bonus point is awarded for each dog defeated in a class.

As an option to obedience, a Rally score can be used instead of an Obedience Score. Because Rally allows the handler to give multiple commands and verbal encouragement, Rally uses the following scoring:

Rally Novice – 50% of the score for a maximum of 50 points

Rally Advanced – 60% of the score for a maximum of 60 points

Rally Excellent – 80% of the score for a maximum of 80 points

1 bonus point is awarded for each dog defeated in a class.

The highest score of agility, obedience, or rally can be chosen by the handler after the fact.

Conformation scores are determined by judge's evaluation of dogs and are recorded on Conformation Score Sheet with a 100 points maximum. The Saluki will not need to be entered in regular classes.

If a dog qualifies in more than one bonus point category in any of the events, he will only awarded the higher bonus points. Example: A dog wins first in lure coursing stake (12 Points) and first in an Obedience class (4 Points), he is awarded the higher points (12 Points)

Comments

The Saluki Club has created an exciting event with a total of 5 sports. The club uses a linear weighted system for the most part but has bonus points that use a dogs defeated system. We call this a hybrid scoring system. Raw scores from the different sports are normalized to a score of 100 with lure coursing received more weight (1.5 multiplier) and rally and pre-novice obedience receiving less weight. Let's look at an example to see how it works.

Saluki Sample Data

Dog	LC	OB	Rally Exc	Rally Adv	Rally Nov	Rally Final	AG	Ob Final	LC Final	CF	Total	Place
1	291		100			80			109	90	279	3
2	289				86	43			108	85	236	12
3	287			100		60			108	80	248	10
4	287						100		108	70	278	4
5	285				100	50			107	60	217	14
6	280		65			52			105	50	207	16
7	284			90		54			107	95	256	9
8	285						80		107	85	272	7
9	281		98			78.4			105	75	259	8
10	286			70		42			107	65	214	15
11	284	190.5						95.25	107	45	247	11
12	283	180						90	106	95	291	1
13	290	160						80	109	87	276	6
14	287	185						92.5	108	84	284	2
15	280	180						90	105	82	277	5
16	286						30		107	95	232	13

For the sake of simplicity, I did not use bonus points in the example above. We see that in the case of the Saluki Club of America's triathlon, they have attempted to weigh lure coursing above other sports. Note that when scores are normalized to 100, this actually further contributes to the problem of lure coursing scores being tightly distributed in a bell curve around the median score. If using a raw score, the difference between dog 1 and dog 13 and lure coursing would have been one while it is zero with the formula used (due to rounding). Further, the difference in raw scores of 290 and 280 would be ten but only 4 with the formula. So, compared to other sports, the

normalizing process and weighting process actually decreases the weight of lure coursing compared to other sports.

The Saluki Club has applies different weights for different rally classes. However this is not the case for obedience and agility, which is inconsistent. A dog in higher agility and obedience classes would not be rewarded for competing at a higher level. Further, note that the 30 points for an agility NQ makes no difference in placements. It is worth noting that agility NQ scores are very easy to calculate from the agility scribe sheet and this should be done if obedience NQ scores are used for fairness and consistency.

Due to the differences in score distribution the Saluki Club should investigate using a ranking system if the intent is to weight the sports equally.

Dogs defeated bonus points for salukis presents challenges in scoring and maintaining fairness by simply adding these scores. For example, dog competing is some of the easier and more popular sports and classes will receive the most bonus points. A hybrid system is not recommended because of the added difficulty of ensuring fairness. The Saluki club openly and regularly revises its rules and includes new sports to encourage participation.

Dachshund Club of America Triathlon

Rules

Any dachshund qualifying in three or more different performance and/or companion events plus the Triathlon Conformation Evaluation is recognized by the Dachshund Club of America (DCA) with a Certificate of Achievement. The highest combined scoring dog receives the title "DCA Triathlon Dog of the Year".

SCORING OF THE EVENTS
Obedience and Rally - Triathlon points awarded based on score earned

Obedience	Utility	Open	Veteran	Novice
Class Score	A or B	A or B	Novice	A or B
194.5 to 200	10	8	6	6
188.5 to 194	9	7	5	5
182.5 to 188	8	6	4	4
176.5 to 182	7	5	3	3
170 to 176	6	4	2	2

Rally	Excellent	Advanced	Novice
Class Score	A or B	A or B	A or B
95 to 100	4	3	2
90 to 94.5	3	2	1
83 to 89.5	2	1	1
70 to 82.5	1	1	1

Dogs competing in more than one Obedience or Rally class may use only their highest points earned in one class. Dogs competing in both Obedience and Rally may use only their highest points earned in one class.

Field Trial - Triathlon points awarded for placement/NBQ/AOM

Stake	1st	2nd	3rd	4th	NBQ/AOM
FC Stake	10	9	8	7	6
OAAD	5	4	3	2	1
OAAB	5	4	3	2	1

At the discretion of the judges, a maximum of 5 dogs from each Stake may be awarded an Award of Merit for Triathlon recognition.

Agility - Triathlon points awarded based on class level placement/qualification

Class	1st	2nd	3rd	4th	Q
Excellent	10	9	8	7	6
Open	8	7	6	5	4
Novice	5	4	3	2	1
Excellent Preferred	9	8	7	6	5
Open Preferred	7	6	5	4	3
Novice Preferred	4	3	2	1	1
FAST Excellent	5	4	3	2	1
FAST Open	4	3	2	1	1
FAST Novice	3	2	1	1	1
FAST Excellent	4	3	2	1	1

Preferred					
FAST Open Preferred	3	2	1	1	1
FAST Novice Preferred	2	1	1	1	1

Earthdog - Triathlon points awarded based on test passed

	ME	SE	JE
Test pass	6	4	3

Tracking - Triathlon points awarded based on test passed

	VST	TDX	TD
Test pass	10	10	5

Conformation Evaluation - Triathlon points awarded

	Excellent	Very Good	Good	Average	Unsound
Evaluation Average	5	4	3	2	1

Additional Rules and Administration

- Dogs competing in more than one Agility class may use only their highest points earned in one class.
- The Triathlon Committee will select three judges to complete the Conformation Evaluation. The total judges' scores will be divided by the number of judges and rounded to the nearest whole number. Two or more judges rating the dog "Unsound" will disqualify the dog from the Triathlon competition.
- Neutered/spayed dachshunds are eligible to compete.

Comments

The Dachshund Club of America has created an event where dogs can compete in up to 7 different sports. Total scores are added together rewarding the most versatile dogs. A discrete weighted system is used and takes into account the differences between sports and differences in the classes in each sport. An issue with the scoring is that in some cases placements are used and in others raw scores are used to obtain the point values. This penalizes dogs in field tests that score out of the top 5. The situation is similar in agility. For all dogs that qualify but are not in the top 4, they receive the same score. The Jumpers with Weaves class was not included in agility.

While the system is reasonable and well thought out, a ranking system would reduce differences in judging on a particular day within and between sports. A system like this is more difficult if lure coursing was a venue for this breed. It would be hard to assign points based on scores since different judges tend to have different ranges of scores. A point value based on placement could be used but would also present problems:

1. Different stake winners might receive the same scores even if the competition in that stake was very different. This may be the case in a field champion stake, for example.
2. Dogs not placing in the top 5 would receive 0 points depending on how the table was constructed.

American Bullmastiff Association Triathlon

Rules

The event is comprised of competition in the regular classes of Obedience, Rally and Standard Agility.

All dogs entered in a regular class for Obedience, Rally, and Standard Agility are automatically eligible for the triathlon awards. Dogs will compete at the levels they are eligible for and additional points are awarded for upper level classes. The same team of dog and handler must complete all three phases of the competition and dogs must be owner handled. To be eligible to participate, dogs must compete in a regular Standard Agility class, a regular Obedience class and a Rally class.

Placements are determined by the total points earned and calculated as follows:

Obedience:

Novice: Score divided by 2
Open: Score + 10 divided by 2
Utility: Score + 20 divided by 2

For dogs competing in both Open and Utility, the highest score earned will be used.

Rally

Novice: Score
Advanced: Score + 10
Excellent: Score + 20

For dogs competing in both Excellent and Advanced, the highest score earned will be used.

Standard Agility – Regular and Preferred Jump Heights

Novice: Score
Open: Score + 10
Excellent: Score + 20

Faults scored as follows:

Failure (F) = 10 points;
Refusal/run out (R) = 5 points;
Wrong course (W) = 5 points;
Table fault (T) = 5 points;
Excusal (E) = No score (eliminating in ring, judge determines dog is out of control, leaving ring, course not completed);
Time faults = 1 pt per second/Novice, 2 pts per second/Open, 3 pts per second/Excellent.

Comments

The ABA triathlon has a fairly simple and straightforward linear weighting system that takes into account different classes. Also, NQ scores are treated equally among the sports and the ABA is the only club to score NQ agility scores fairly. Since there is no conformation or lure coursing, the score distributions are similar across the different events. Note that obedience scores are normalized since the maximum value is 200 and not 100 like agility and rally.

Australian Cattle Dog

Rules

A versatility competition is held in conjunction with their national specialty show to recognize those dogs best demonstrating combined herding ability, trainability, and representation of the breed standard.

To be eligible for a Versatility competition placement, each dog entered must compete in the Versatility Conformation Class, must qualify in a regular Herding Trial class, and must qualify in at least one of obedience, rally, or agility.

Ribbons are awarded for 1st through 6th place and cash prizes are also awarded for 1rst through 4^{th} place based on the entry fees collected ($25).

Ties for placements are broken using the highest Herding score as calculated for Versatility points. If a tie still exists, the dog with the highest number of scores in all events will prevail. If the tie is still not broken, duplicate placements shall be awarded.

Only the dog's highest computed versatility score from each of the performance divisions

(herding, obedience, rally, and agility) are used for versatility calculations at full point value. Any and all additional qualifying scores within the same performance division will be valued at 5 points each.

Like other versatility competitions, the versatility conformation is a special class available to competing dogs including spayed and neutered dogs.

The entries are placed with points scored as follows:

- 1st 100 points
- 2nd 80 points
- 3rd 70 points
- 4th 60 points
- 5th 50 points
- 6th 40 points
- 7th 30 points
- 8th 20 points
- 9th 10 points
- 10th 5 points

For herding, the highest qualifying score from the Advanced, Intermediate, or Started trial classes are used to compute Versatility points as follows:

- Advanced – score plus 6 %
- Intermediate - score plus 3%
- Started – score

The highest score in the Herding performance division is defined as the score that will result in the highest number of Versatility points. All other qualifying scores in the Herding performance division result in an additional five points.

For regular obedience, the highest qualifying score from the regular trial Utility, Open, or Novice classes are used to compute Versatility points as follows:

- Utility- score plus 3 % less 100
- Open – score less 100
- Novice- score less 3 % less 100

For Versatility scoring purposes, scores of 170 or more from the Veterans obedience class will be considered “qualifying” and Versatility points will be computed as follows:
Veterans – score less 5 % less 100

The highest score in the Obedience performance division is defined as the qualifying regular obedience score or the veteran’s obedience score over 170 that results in the highest number of Versatility points. All other qualifying scores in the Obedience performance division will result in an additional five points. Note: obedience scores have 100 points deducted to equate to attainable scores of the other performance divisions (that is, scores are normalized to a base

value of 100.)

The highest qualifying score from the Excellent, Advanced or Novice Rally trial classes shall be used to compute Versatility points as follows:

- Excellent – score
- Advanced – score less 3%
- Novice – score less 6 %

The highest score in the Rally performance division is defined as the qualifying rally score that will result in the highest number of Versatility points. All other qualifying scores in the Rally performance division will result in an additional five points.

The highest qualifying score from either the Standard or Jumpers with Weaves agility trial classes, whether regular classes or preferred classes, shall be used to compute

- Versatility points as follows:
- Clean Excellent Standard or Clean Excellent JWW – 100
- Faulted Excellent Standard or Faulted Excellent JWW – 95
- Clean Excellent Standard Preferred or Clean Excellent JWW Preferred – 95
- Faulted Excellent Standard Preferred or Faulted Excellent JWW Preferred – 90
- Clean Open Standard or Clean Open JWW – 90
- Faulted Open Standard or Faulted Open JWW – 85
- Clean Open Standard Preferred or Clean Open JWW Preferred – 85
- Faulted Open Standard Preferred or Faulted Open JWW Preferred – 80
- Clean Novice Standard or Clean Novice JWW -80
- Faulted Novice Standard or Faulted Novice JWW – 75
- Clean Novice Standard Preferred or Clean Novice JWW Preferred – 75
- Faulted Novice Standard Preferred or Faulted Novice JWW Preferred – 70

The highest score in the Agility performance division is defined as the qualifying agility score that will result in the highest number of Versatility points. All other qualifying scores in the Agility performance division will result in an additional five points.

Comments

The ACDCA contest has a weighted system with a combination of linear and discreet point values. It is similar to other competitions in that conformation is required as well as a breed specific sport (in this case, herding) and a choice of handler sports (rally, obedience, or agility). The club encourages a variety of sports to showcase Australian Cattle Dog versatility. Scores are normalized to 100 with linear multipliers used for more (or less) difficult classes. The biggest issue with the ACDCA versatility award competition is the scoring between sports. Conformation uses placements with very large (and different) point values between sports. Note that the difference between first and second place is 20 points while the difference between the remaining placements is 10 points.

Herding, obedience, and rally use raw scores with a linear multiplier to account for class difficulty. Obedience and rally are weighted the same even though rally is considerably easier. Agility uses a discrete weighted system with clean runs being 100 for excellent and faulted but qualifying scores of 95 for excellent. Only qualifying scores count. However, additional qualifying scores earn an additional 5 points. This could happen, for example, if a dog qualified in standard and jumpers agility classes. To determine fairness of this scoring system it is necessary to analyze past events to see if the system has been fairly scored from sports that are handled differently. It is very likely that conformation is weighted more heavily than other sports. The dog winning the conformation class will have a 20-point advantage over the number 2 dog, which is very likely to be much bigger than in other sports.

Jersey Rag Racers (Whippets) Versatility Weekend

This event held every year on July 4 weekend in Delaware.

Rules

The Versatility Trophy is awarded to the whippet with the best average score for the event – consisting of the ASFA field trial, WRA straight race, NOTRA U-val race and a minimum of one of the two matches (obedience and/or conformation). An exhibitor may enter both matches, but must declare before the matches which one (or both or the highest) of the matches they wish to use to determine their versatility score. If the team enters both matches, both scores are used - this means the total score is divided by 5 instead of 4.

Each event provides the competitor with a score from 0 to 10. This individual score is calculated using the whippet's placement in the event and the number of whippets it competes against. At the conclusion of the last event, an overall average of the events entered is computed which determines the most versatile whippet.

Comments

This system is basically a dogs defeated system with the scores normalized to 10. The rules posted on the JRRA web site leave many questions. How are lure coursing scores calculated? Are raw scores used to determine the number of dogs defeated? How are class differences handled in obedience and conformation? How are NQ scores handled in obedience? Using the dogs defeated system does handle differences in score distributions. However, without knowing more about the rules, it is difficult to say if this system treats differences in class and NQ scores fairly.

Northwest Versatility Weekend (Sighthounds)

Rules

Any hound may be entered in any one event or combination of events, but only hounds that compete in all four areas of competition are eligible for versatility awards.
The versatility awards are determined by the following method.

- To be eligible, hounds must complete all events, without dismissal or disqualification, in all four events. Hounds that scratch from any event, for any reason, are not eligible for versatility awards.
- For straight racing, each hound competing in either the NAWRA or the LGRA receives all NAWRA or LGRA meet points. (Whippets must compete as adults.)
- Each hound competing in the NOTRA receives all NOTRA meet points.
- Each hound competing in the ASFA trial receives 1 point for each dog defeated in its own stake. In addition, placements are rewarded as follows: 1st place in each stake = 10 points, points 2nd = 8 points, 3rd = 6 points, 4th = 4 points, NBQ = 2 points. Best of Breed will receive an additional 5 points.
- Each hound competing in the conformation match receives 1 point for each dog defeated in its own class. In addition, placements will be rewarded as follows: 1st place in each class = 10

Comments

This event is a hybrid system that uses a dogs defeated, placements, and raw scores for final placements. Due to differences in the ways these scores are distributed, it is unlikely that the sports are weighted evenly. The bonus points for lure coursing, best of breed, and best in class for conformation are huge advantages. It is not clear from the rules how a class is defined. However, for conformation, this will be especially unfair since the number of dogs in each class is random and not related to accomplishment or quality.

American Whippet Club Versatility Competition

Rules

This is a new competition that will be tried at the AWC National Specialty Show in 2008 designed by the author. Dogs compete in 4 sports: lure coursing, conformation, rally, and obedience. Dogs must compete in all 4 sports with an owner-handler. Scores are computed with a ranking system. The highest scoring lure coursing dog receives a 1, the second a 2, etc. In the case of tie, dogs receive the same rank but next lowest dog skips a rank. For example, if dogs Able, Bo, Charlie, and Dan has lure coursing scores or 291, 291, 290, and 285 respectively, their corresponding ranks would be 1, 1, 3, and 4. The combined conformation and triathlon conformation judge gives dogs a score from 100 to zero and dogs are ranked using this individual score. For rally and agility, ranks are computed by qualifying/non-qualifying first, then class, then score. For example, for agility, all dogs qualifying in excellent are ranked first

by score, then qualifying dogs in open, then novice. Non-qualifying scores are ranked next with all dogs in a class (excellent, open, or novice) receiving the same rank. For agility, the ranks in standard and jumpers with weaves are averaged to obtain the final agility ranking. Finally, the ranks from conformation, lure coursing, rally, and agility are averaged to receive a final rank.

Comments

The ranking system has the advantage of negating any differences in how individual sport's scores are distributed and determined. The ranking system also ameliorates any differences in how different judges might score on any given day. For example, if the rally judges tends to judge strictly with lots of deductions compared to other judges, it would not penalize dogs that do well in rally since the top rally dog receives a 1 just like the top conformation judge. It would also be easy to add additional sports using whatever scoring system that sport uses. One feature of a ranking system is that the difference in sports in not important. So a dog that really shines in one sport will have the same advantage as a dog that closely beats dogs in a different sport. Also, since NQ scores are not that far apart from qualifying scores, there is some chance that a dog with an NQ could win if a very small number of dogs are entered. We did, in fact encounter this issue in the first competition in 2008. The solution was to start ranking the NQ dogs at the bottom but a more permanent solution is under investigation for 2009. However, the ranking system did appear to weight the sports equally.

DOG	LC		AGILITY STD			AGILITY JWW			AGILITY	RALLY		
	RAW	**RANK**	RAW	CLASS	RANK	RAW	CLASS	RANK	**AVG RANK**	RAW	CLASS	**RANK**
1	297	**4**	NQ	NOV	5	NQ	NOV	5	**5**	0	NOV	**5**
2	299	**3**	NQ	NOV	5	Q	NOV	1	**3**	80	NOV	**2**
3	0	**5**	NQ	NOV	5	NQ	NOV	5	**5**	76	NOV	**4**
4	301	**2**	NQ	EXC	4	NQ	EXC	4	**4**	90	NOV	**1**
5	304	**1**	NQ	EXC	4	NQ	EXC	4	**4**	80	NOV	**2**

DOG	CONFORMATION		FINAL	FINAL
	RAW	**RANK**	AVG	PLACE
1	72	**5**	4.75	5
2	73	**3**	2.75	2
3	83	**1**	3.75	4
4	72.5	**4**	2.75	2
5	74	**2**	2.25	1

Conclusion

What general principles should be used in designed scoring systems for multi-sport dog competitions?

1. Explicitly state your scoring goals. In most cases, the goal is that sports be weighted equally. However, in some cases, it is not. But, in any case, be explicit.
2. Do not use hybrid scoring. It is extremely difficult to analyze the fairness of hybrid scoring systems, and hence ensure fairness. Avoid using bonus points for placements.
3. Account for different classes. Dog competing at higher and more difficult levels of rally, obedience, and agility should get credit for it.
4. Use a ranking system if score distributions or scoring systems are different. Ranking systems ameliorate differences in scoring distributions and even differences in individuals judges.

5. Handle NQ scores consistently in each sport. Everything should be handled consistently across sports and NQ scores are no exception.
6. Stay clear of conflicts of interest. Publish rules clearly in the premium and don't change them after the premium is published. Have an inclusive process in place for rule changes. Find an objective and representative group of people to consider competition changes and to select special conformation judges.
7. Be consistent. Avoid special cases. The best systems, whether they are scoring systems or computer systems and specifications, avoid special cases.
8. Continually analyze and adjust as needed. Use math and logic and not opinions to evaluate your rules.
9. Use the ***simplest possible*** scoring system to ensure fairness. It can be tempting to use overly simple scoring systems but, if the system is not fair, the benefit is lost.
10. Be careful when handlers can choice among sports. Avoid choices if you can but if you do, use a ranking or dogs defeated system so differences in scoring between sports is minimized.

How does each competition cited in this paper compare in terms of their scoring systems?

Competition	Basic Type	Hybrid ?	Different Classes Handled?	Bonus Points	Scores Normalized ?	Choices Among Sports?	NQs Handled Consistently ?
AWC Triathlon 2007	Raw Score	No	No	No	No	Yes	No
AWC Triathlon 2008	Raw Score	No	No	No	No	No	NA
AWC Versatility	Ranking	No	Yes	No	NA	No	Yes
Bullmastiff	Weighted	No	Yes	No	Yes	No	Yes
Cattle Dog	Weighed (mixed)	Yes	Yes	No	Yes	Yes	Yes
Dachshund	Discrete Weighted	No	Yes	No	NA	Yes	Yes
Jersey Rag Racers	Dogs Defeated	No	???	No	Yes	Yes	???
Northwest VW	Mixed	Yes	NA	No	No	No	NA
Saluki	Weighted	Yes	Yes	Yes	Yes	Yes	No

It is very important to realize that no multiple sport scoring system will be perfect. But it should be the best one possible and subject to evaluation and improvement over time. In general,

ranking systems will provide the best overall scoring system these wonderful multi-sport dog events

Author Information

John Heffernan is the co-owner (with his wife Dawn) of 2 whippets, C-ATCH Wyatt of Dodge City, AV, CD, RAE, SC, NA, NAJ, OAC, EJC, OCC, TN-E, TG-N, WV-N, CL4-R, CL5-HSF, CGC and AWC Triathlon Winner C-ATCH Ch Seaspell's Concord Point, CAV, CD, SC, OA, OAJ, RN, CR, OTR, NJC, NAC, TG-N, TN-N, WV-N, CGC "Patriot". John serves as Versatility Chairman of the American Whippet Club, which gives yearly awards to versatile whippets. John is focusing on NADAC agility and is also training Wyatt for open and utility obedience. Wyatt recently finished his rally advanced excellent (RAE) title and is starting in tracking. John's web sites are http://jheffernan.com/ and http://goodwhippet.blogspot.com/. John is an elementary school teacher currently teaching technology. Previously, he was a software engineer and holds masters degrees in both Computer Science and Elementary Education.