

**WESTERN AUSTRALIAN
THOROUGHBRED RACING
HANDICAPPING AND PROGRAMMING REVIEW
2018**

DOMINIC BEIRNE

CONTENTS

- 1. EXECUTIVE SUMMARY 2
- 2. WA OFFICIAL HANDICAP RATINGS 8
- 3. HOW MUCH DOES IT MATTER IF WINNERS ARE PENALISED MORE THAN CURRENT PRACTICE? 12
- 4. MERIT BASED VERSUS FIXED WIN AND PLACE PENALTIES 16
- 5. MAIDEN RACES 25
- 6. DUAL RATING SYSTEM (METRO AND COUNTRY) 30
- 7. MINIMUM & MAXIMUM WEIGHTS 35
- 8. GROUP RACES IN WA 45
- 9. APPLICATION OF HANDICAP POLICY 46
- 10. LIFETIME MINIMUM RATING FOR HORSES THAT HAVE REACHED CERTAIN PRIZE MONEY 53
- 11. WHAT SYSTEMS OF PROGRAMMING AND HANDICAPPING ASSISTS IN MAXIMISING FIELD SIZES? 55
- 12. FUTURE PROGRAMMING: 58

1. EXECUTIVE SUMMARY

I was commissioned by the Thoroughbred Racing Committee from Racing and Wagering WA in March 2018, to conduct a review of thoroughbred racing Handicapping and Programming in the State.

In providing this service, I have relied upon data provided by RWWA and my own database sourced from The Rating Bureau; as well as Australian Racing Board Fact Books. I have taken much care in producing the statistics tabled, and the conclusions drawn. If there's an error anywhere in my review, I apologise in advance.

Daniel O'Sullivan, of the Rating Bureau conducted one survey for me. I requested Rob Waterhouse to search his own database to cross-reference with my own as study on the strength of Maiden races in WA.

The section I've written on Merit-based versus Fixed penalties has been read by a number of official handicappers with employment experience in NSW, Great Britain, Hong Kong and New Zealand. Some sections I've written have been read by private handicappers Daniel O'Sullivan, Rob Waterhouse, Marc Lambourne and Paul Daily.

The staff at RWWA with whom I've had contact has been outstanding in their assistance providing me data and historical context. I am indebted particularly to Ian Malpass, David Hunter and Tim Beaver, without whose full cooperation my task would have been far more difficult.

I am also indebted to the many West Australian racing participants who took time to submit written opinions or be interviewed by me. Whilst I tried to communicate with as many as possible, there were still many I didn't contact as time was of the essence to review, research, form opinion, and produce my report. I apologise to anyone who expected to be contacted, but I believe that I heard or read every possible point of view. Many of the topics have participants of equal intelligence diametrically opposed. Therefore my reports will contain facts and recommendations that are bound to be contrary to someone's opinion. Don't take it personally.

By virtue of the scope of works provided, below is an overview of my findings and recommendations in the various areas.

HANDICAPPING

"Official Handicap Ratings (OHR) go up too quickly, and come down too slowly" is the mantra I heard and read often in the submission stage of my review. Neither claim is true.

The data shows that OHR go up too slowly, and go down at an adequate rate. Handicappers are limited to how much relief they can apply, since relief is proportional to the penalties. In such an environment the overall population of ratings must descend—this problem is not unique to WA.

WA racehorse owners and trainers have demanded consistency and fairness in the post-race treatment of winners' OHR—winners to be penalised a standardised amount. Their egalitarian expectation has fashioned handicapping policy, but the result has been to work against the majority, since 90% of runners lose each race of standard field size.

Compared to many other countries, Australian handicappers penalise winners by a smaller amount. I conducted a study to see how last-start handicap winners perform if they run in another handicap race at next start. Under comparable circumstances, WA handicap winners outperform last-start winners in other

States. The marketplace knows this. Consequently, such horses start at shorter prices in Perth, and wagering may be impacted.

The amount by which OHR descended in the period from 2008 to today was about ½ point per year. But the descent has slowed significantly since 2012.

As a result of descending OHR, programming has kept in step, with races being graded lower today.

If all OHR had descended in parallel, there would be fewer problems for programming, but that's not been the case. The post-race assessment of Maiden winners has remained constant over the period. The result is that there is a large cluster of horses rated near the "unraced-runner" rating. This polarisation of OHR around the maiden rating has acted like a brick wall, a backstop, causing race classes to descend at a decreasing rate: for example, at Provincial A courses since 2008, Class 5 have descended by 6 points, Class 3 by 4 points, Class 1 by 2 points. This has resulted in narrowing of the differential between classes.

Descending OHR lead to a larger number of horses being out of the handicap (OOTH—defined as $OHR < \text{Minimum Weight}$) in the higher grade, open company races. When an OOTH runner wins such a race, it is penalised more points, since penalty = [standard penalty + the amount by which OOTH].

Descending OHR may increase risk to Black-Type status of WA Group races.

Overseas countries occasionally revise ratings en-masse when there has been slippage or a concertina of OHR. I'd prefer initially to see how the recommended strategies play out in an attempt to stretch the ratings back onto a desired curve.

The WA handicapper might take a higher profile by being interviewed on radio, or posting blogs to discuss the past week's highlight performances, and to explain reasoning behind various OHR he's assigned.

Access to handicappers might be limited to certain times of the day, rather than ad-hoc interruption to his productivity. Approaches to handicapper might be in writing via email, handicapper to follow-up having considered the complaint or enquiry.

MERIT-BASED VERSUS FIXED PENALTIES

WA participants have grown used to standardization: 4-point Metro winners' penalties and set OHR assigned to maiden winners. I am opposed to standardization. A mathematically based discernment is the handicapper's duty.

WA winners may be amongst the most favourably treated anywhere in the world. WA handicapping is kinder to winners than you'd find in the Eastern states of Australia. Australia is kinder to winners than many other countries.

There is a consequent negative impact to competitiveness of racing, and wagering markets.

The WA handicapper would prefer to penalise more appropriately than he does currently.

It is appropriate to place a cap on the penalty to handicap winners, provided that they are "in the handicap" (allocated a weight at or above the minimum weight).

Beaten horses shouldn't be treated literally to the merit of their rating. I provide a formula as guidance to calculate the post-race OHR.

Many place getters in feature races produce a huge spike Personal Best (PB) performance rating. This PB may be repeated with future success, after which the handicapper can catch up. But oftentimes, such horses

revert to their mean rating, and the “merited” OHR that they might have been assigned puts them in an unwinnable position, until they run off the many points by which they have been over-rated. That might take 12 months or more.

The OHR is meant to be a recently weighted measure of the horse’s career—not a reflection of a single spike rating, if that spike PB was when being beaten.

Merit-based handicap rating will result in average winning penalties about 1 point more than currently—not that onerous. In order to quantify the impact of higher penalties on owners and wagering, I have produced models tracking the difference in prize money earned, and the shape of betting markets. The models compare penalising place-getters a total of 9 points to 5 points—extreme difference to display better the impact.

I looked into handicap races where all but one runner is out of the handicap. The current handicapping practice across Australia is extremely onerous, in some cases leading to a long, expensive and unfair hiatus of non-return to the owner. It ought to be changed.

Merit-based handicapping is the optimal system to deliver the best and fairest racing product in WA

PROGRAMMING

My study of the programming that has been available to participants over past 2 seasons tells me that the department is doing a pretty good job. It is apparent that classes have been changing with demand, the lowering over time of OHR, and the expectations of trainers. Naturally there are some holes in the system—periods of time wherein a race class doesn’t have a race distance.

I was surprised how few submissions I received concerning programming. As an outsider to WA racing, I recognise that local participants have extensive knowledge and experience. Not many shared that knowledge, or their opinions at the submission stage, April 2018. Perhaps they’re mostly satisfied.

I was provided the race programmes for seasons 2016/17 and 2017/18. I have rearranged these data by jurisdiction, racecourse, class and distance. These will be made available to all racing participants on RWWA CRIS website in order that participants may take a closer look. If there are deficiencies in opportunities in any region, locals may remit feedback that would be addressed if practicable.

As to the future: Race classifications (the BM+ number) at Metro Prime meetings will remain low for the time being, to ensure most runners are in the handicap.

Race classifications (the BM+ number) should be able to head north with the elevation of OHR.

Due to WA’s isolation, there isn’t regular immigration (border-hopping) from other States as there is elsewhere in Australia. Subsequently, it’s unreasonable to expect that programming would include perennial opportunities for the higher rated horses. Strategic planning by connections is essential.

Next year’s programme will provide 3 additional open races (non-Group and Listed). There will be at least 12 more BM78+ races programmed, mostly in the 2nd-half of the season. The number of Group and Listed races is maintained at 78.

There may be room to programme a 9th race at Metro Prime, except in winter when days are shorter. The race would offer lower than standard prize money, as it would be for lower than standard Saturday class.

ALL MAIDEN WINNERS AREN’T EQUAL.

All maiden races in WA are under Set Weight (SW) conditions. This is also the case in Victoria. In NSW and QLD, about half of the maiden races are SW and half are under handicap conditions.

In the submissions I've read and heard at interviews, it was almost unanimous that a maximum be placed on the OHR that a handicapper could assess a Maiden winner. Once that was adopted as policy, it became convenient and seemingly "fair" to standardize the OHR of all maiden winners, differing only by the jurisdiction (higher OHR if Maiden was at Ascot, compared to Leinster, for example).

With limited number of personnel, any handicapping department would welcome standardization, since Maiden races represent more than a quarter of all races in WA—hence a lot of work

Standardization of SW Maiden winners is regularly unrepresentative of their various abilities. Standardization is a flawed concept, and works against owners.

The problem with assessing all maiden winners the same is that some will take many months to have their OHR descend to a realistic level at which they may be able to win again. Ownership is expensive, and meant to be fun. Ideally, maiden winners should graduate to higher class with a reasonable chance of winning.

SW Maiden races are hard to win for a horse that is some lengths below the standard required in its jurisdiction. If it can't win at SW, it needs to find weaker company. The owner is faced with the decision of either:

- Traveling long distances to race,
- Transferring to a trainer in a weaker region, or
- Selling into a weaker region.

Alternatively, if Maiden Handicap races were programmed, owners could keep their horse within their own jurisdiction, and try to win with the advantage of a lighter handicap weight.

WA ownership and wagering would benefit by the introduction of handicap races for maidens, because maiden handicap winners would regularly be allocated OHR lower than currently assessed under SW. The maiden handicap winner will enter its next race much closer to the minimum weight than it does currently, and would have a better chance of winning.

Maiden handicaps assist the owner, and boost RWWA revenue, as the tote will hold more money on the horse at its following start, due to it being a shorter price / higher winning chance.

DUAL RATINGS FOR PROVINCIAL & COUNTRY HORSES

West Australia adopted a dual rating system many years ago. It's the only way to simultaneously address these two issues:

- Creating competitive handicaps in all sectors.
- Accurately re-assessing horses who travel across sectors

WA handicappers took a further measure to differentiate between the strength of Metro racing, and the weakness of regional racing. They adopted a policy to raise winners by 4 points at Metro, 3 points at Provincial B and 2 points for a Country win.

I conducted a study of how regional horses performed when racing at Metro prime. The result is that they significantly underperform their representation and require larger allowance than currently provided.

MINIMUM WEIGHT

Every handicapper would love to apply a wide range of weights. By definition, handicapping is meant to equalize the chances of runners, but betting markets confirm that's a myth in practice. The most palatable way to stretch the handicaps is to lower the minimum weight.

However, the industry has to have access to jockeys that are light enough. A few years ago, the Australian Racing board raised the minimum weight across Australia, in response to OH&S studies that showed an increased concern that Caucasian male jockeys weren't coping well. WA Jockeys Association opposed the decision, on the grounds that once the body gets used to being a bit heavier, it's hard to shed that weight.

My review includes a number of scientific papers and opinions on bodyweight and the stress of wasting. Before I had read these studies, I was strongly in favour of lowering the minimum weight at Metro Prime to 53kg. The papers and opinions provide a sobering read.

MAXIMUM WEIGHT

Many owners and trainers are convinced that a horse "can't" win when burdened with big weight. In my review I studied the impact of carrying high weights, specifically > 59kg. Horses with high weights outperform horses with low weights—in WA similarly to the rest of Australia.

Programming is designed to provide choice for trainers who are concerned about carrying weight: the choice being to choose a race of higher class to earn weight relief.

AGE ALLOWANCE FOR YOUNG HORSES RACING OPEN-AGE RACES OVER MIDDLE-LONG DISTANCES

There is merit in providing greater relief for 3yo in Metro Prime races of 1800m+. Due to a lack of demand, there are fewer races programmed for 3yo over middle distances, thus minimizing opportunities. Increasing the age allowance will encourage trainers to take on the older horses, thus increasing field sizes.

RECLASSIFYING BM# AT ACCEPTANCES

I propose the reclassifying of BM# at acceptances, when the bottom weight exceeds 55kg. The lowering of BM# would give relief equally to all runners. There may be some occasional disadvantage to connections when a jockey can't reduce weight to ride at 55kg, but the occasions would be rare, and I believe connections would grow accustomed quickly.

GROUP RACES IN WA

I am comfortably satisfied that West Australia has the appropriate number of Black Type races, as measured by the horse population as a % of all the horses in Australia. WA represents 11%-12% of the nation's racing activities by a number of measures. WA has 13% of the black type races, albeit that the majority are Listed Grade.

LIFETIME MINIMUM RATING

I don't see a justification for such a policy. There is a concern in some quarters that such a horse that has descended in OHR but won a lot of prize money has an advantage over horses with an inferior overall record—fewer wins, less prize money earned. I conducted a study that I believe dispels this theory.

The policy suggestion would have unfair impact on the new owner of a horse that's been sold later in its career.

AVAILABILITY OF ADEQUATE LEAD UP RACES TO FEATURE GROUP RACES

I received scant submissions complaining of gaps in programming en-route to feature races.

I've reviewed many of the feature races and I conclude that there are reasonable lead-up races available.

With regard to the 3yo Classic races, the Derby and Oaks, a larger WFA allowance for 3yo at 1800m+ Metro Prime provides more choice to WA Derby and Oaks candidates, since some horses may be suited by longer or shorter lead-up time and alternative distance of the current lead up races. Nominees aged 3yo might be prioritised in the ballot in Metro Prime 1800m+ 3yo+ BM+ and Restricted races in March and April.

Dominic Beirne
June 2018

2. WA OFFICIAL HANDICAP RATINGS

Season	2008/09	2012/13	2016/17
% OHR rated \geq 90	2 %	1.5 %	1 %
% OHR rated \geq 80	6 %	4.5 %	3.5 %
% OHR rated \geq 70	17 %	12 %	10 %
% OHR rated \geq 60	48 %	36 %	33 %

Season	2008/09	2012/13	2016/17
Ave of top 1000	90	89	86
OHR starter ranked 1000	83	79	78
OHR starter ranked 2000	76	72	71
OHR starter ranked 3000	72	68	67
OHR starter ranked 4000	69	66	64
OHR starter ranked 5000	67	64	62
OHR starter ranked 7500	63	60	59

The rank is the order from top Official Handicap Rating (OHR) of all the starters in a season. There are approximately 22,000 starters in a season.

These tables prove that ratings have descended. The amount by which OHR descended in the period from 2008 to today was about $\frac{1}{2}$ point per year. But the descent has slowed significantly since 2012.

Why have they descended?

In a number of the submissions I received, there was a push from racing participants for two things:

1. Limiting the lifting of winners' ratings by a fixed amount.
2. Lowering more quickly the ratings of losers.

Put another way—I heard this often: “OHR go up too quickly, and come down too slowly”. Neither claim is true. By my observation, ratings go up too slowly, and go down at an adequate rate.

In an environment where ratings are lowered adequately, and winners are lifted inadequately, the overall population of ratings must descend, even if we account for the likelihood that attrition of horses is more likely amongst the tail-enders of a race (slow horses are more likely to be retired than fast ones).

Re 1: The current practice is to lift most Metro winners by 4 points, and the remainder of most winners in other jurisdictions by 3 points. The WA handicappers take a fairly consistent approach, but that approach lags behind other States when it comes to imposing rating rises on winners.

Re 2: WA handicappers have been doing their best by my observation. Whilst I have seen examples where out-of-form horses could have been relieved more quickly, WA handicappers are relieving horses at a rate equivalent to or faster than other States. Importantly, handicappers have been limited in the amount of relief they can give beaten runners, because they haven't been penalising place getters adequately.

In order to achieve stable ratings over time, handicappers try generally to follow a principle of net-neutral point change. Stable OHR over time is achieved by delivering similar number of penalty points and relief points. In small fields, the points distributed will be positive; in large fields the points distributed is extremely likely to be negative. There is also attrition to consider—horses falling out of the system, due to retirement for whatever reason. Attrition is more likely at the lower end of OHR. Attrition allows for slightly negative point distribution (more relief than penalty points), the amount of which is dependant upon the average field size

in a jurisdiction. In Hong Kong for example, due its healthy average field size, a few points per race is tolerable whilst maintaining consistent spread of OHR.

In WA, the average field size is ~10. Handicappers could deliver provide slightly more relief than penalties. If penalties only sum to 5 (4-1-0), there's not much relief available to the beaten runners.

In many overseas countries, OHR are revised. The revision may occur months after a race had been rated, or in the off-season. Revision may take place on an individual level—altering the OHR of individual horses. Revision may be for all the runners in a race. Revision may be en-masse: a study may show slippage or inflation of the entire population, or of certain cohorts.

In South Africa a few years ago, all horses from a certain district were relieved 10 points. In New Zealand in 2012, when a new handicapper took over the reins, OHR were moved differently depending age, sex, number of starts, and how long ago the horse raced. In Great Britain, regular revisions of an age group are conducted. A lightly raced horse may be rerated whilst sitting home in its box, simply because a horse that it raced against some months earlier has gone on to bigger success.

Overseas countries have revised ratings en-masse when there has been slippage or a concertina of OHR. Altering en-masse is extremely complicated, and would be seen as unfair by most connections, who'd consider their horse poorly treated compared to the average—which of course is unrealistic: average is average. RWWA may prefer initially to see how the recommended strategies play out in an attempt to stretch the ratings back onto a desired curve:

1. Broader range of maiden winner's OHR
2. Higher win penalties based on merit.

Penalty points to winners: How does WA compare?

One way to measure this was to investigate how did last start handicap winners perform when running in another handicap race at its next start?

A very large sample size populated this study. The field sizes were identical at a median of 10 runners, thus not distorting the results.

The study showed that the median WA horse finishes more than 3/4length closer to the winner (Lengths behind winner column) than the median horse under identical circumstances in the other States. In other words, compared to other States, **the last-start handicap winner in WA could be considered to be "in a couple pounds light."**

By ranking all the LBW of the qualifiers this study, how many lengths was the middle-ranked horse beaten?

2014-date	Count	Median LBW
WA	5300	2.3
Non-WA	40000	3.0

So I investigated if there is a trend over time. I found that the LBW in WA is shrinking. *The data shows other States' handicappers may need to be aware similarly.*

Season(s)	Where	Count	Median L.BW
2014/17	WA	4300	2.4
	Non-WA	32000	3.1
2017/18	WA	1000	2.0
	Non-WA	8000	2.8

I also fragmented the study into longer distance races. When I looked into this data, I found a slightly higher differential between WA horses and non-WA winners: that WA handicap winners that raced in a handicap at next start finished almost 1 length closer to the winner than in the other States.

Then I looked at the strike-rate to win, and to finish placed 1-2-3.

2014-date	Count	Win	Place 1-2-3
WA	5300	18%	44%
Non-WA.	40000	15%	40%

The average penalty to a winner in Hong Kong and Great Britain is greater than 6 points. The recent average in NSW Metro is > 5 points. The average in WA is just over 4 points.

WA handicapping is kinder to winners than the Eastern states of Australia. Australia is kinder to winners than many other countries. Therefore, WA horses may be amongst the most favourably treated anywhere in the world.

Other problems caused by descending ratings are that:

1. A larger number of horses are out of the handicap (OOTH—defined as OHR<Minimum Weight) in the higher grade, open company races. When OOTH runner wins, it is penalised by [standard penalty + the amount by which they are OOTH].
2. There is an increased risk to Black-Type status of WA Group races.

Back in the day:

Here is a table displaying the penalties and relief that handicappers used to dish out nearly 40 years ago, according to Don Scott, *The Winning Way*, 1982.

This start	Next start in same class
Winner	+2.5 to 3kg
2 nd horse	+ 1 to 1.5kg
3 rd horse	+0.5 to 1kg
4 th horse	0
5 th horse	-0.5kg
Remainder	-1 to -1.5kg

Unraced rating

The methodology of rating horses early in their careers hasn't changed over the period since 2008. This is the presumed rating of a first starter:

	2008/09	2012/13	2016/17
OHR first start Metro + Prov. A	60	60	60
OHR first start Prov. B	58	58	58
OHR first start Country	56	56	56

The starting point OHR hasn't changed over this period of time, but the ratings above 60 have slipped by about ½ point per year.

What has occurred in WA is that horses that have raced in the class races (BM#, RB#, Class 1 etc.), with the same sort of record in 2008 and 2016 are rated significantly lower in 2016. Subsequently, class races are

run off lower and narrower bases. Yet over this period since 2008, the first starter's rating has remained constant, and so too has the OHR of Maiden winners.

Historical shrinking of class figures:

As a consequence of ratings falling, race classes have had to be lowered in order to meet the ratings of the population, otherwise field sizes would have decreased, and many runners would be OOTH. There would be no point programming BM80+, if there weren't enough horses rated > 79 to nominate for the race. There were enough horses rated > 79 in 2008, but not in 2016.

The impacts of having fewer horses rated highly enough are:

1. There aren't enough horses to fill open handicaps and Listed handicaps
2. Too many horses are out-of-the-handicap in open handicaps and listed handicaps
3. Emigration of WA horses to other States where higher rated horses are accommodated.
4. The risk of some WA races losing their Black Type. Over the years WA has been fairly represented by number of black Type races, but there is a risk of some coming under threat.

Re 3: There are other reasons why highly rated horses leave WA, including sales to the East or Asia, seeking higher prize money in East, seeking Black Type in East, wider diversity of races due to easy accessibility to all carnivals if based in Eastern State.

Losing good horses is not unique to WA. Nearly 200 of Australia's most promising horses are transferred to Hong Kong every year.

The gaps between classes in WA Provincial A changed in this 9-year period as shown:

Provincial A	2007/08	2016/17	Lowered by
Class 5	66+	60+	6 points
Class 4			
Class 3	60+	56+	4 points
Class 2			
Class 1	54+	52+	2 points

Column 4 displays the shrinking difference as the Class# descends: Class 5 have descended by 6 points, Class 3 by 4 points, Class 1 by 2 points.

Why? I believe it's due to the fact that the unraced runner rating remained constant. The closer the race class is to the Maiden rating, the less the ratings had to fall.

To put it another way, there has been a narrowing of the differential between classes. As a result, there is a polarisation of OHR around the maiden rating.

The gaps between classes in WA Provincial B changed in the 8 years as shown:

Provincial B	2007/08	2016/17
Class 5	64+	58+
Class 2	55+	52+

The gaps between classes in WA Country changed in the 8 years as shown:

Country	2007/08	2016/17
Class 3	54+	52+
Class B	53+	50+

3. HOW MUCH DOES IT MATTER IF WINNERS ARE PENALISED MORE THAN CURRENT PRACTICE?

I built these models to show the impact of penalizing winners by more than the WA standard 4 points. The result of the exercise is that there is a relatively small difference in prize money earned by the better horses if they are penalised more for their wins.

It's important to acknowledge that the better horses are the ones most likely to win the higher prize money SW black type races.

And it's really important to recognise that 90% of connections lose a race, so 90% of connections benefit by the winner being penalised more highly. They will meet it better at the weights when next they meet.

The first table displays how the model works.

Model #1 9 points awarded to place-getters (6-2-1)							
Horse	Ability Lengths	Ability Points	OHR Race 1	Finish Position	Prize \$	Re-rated OHR	Perform Race 2
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
A	0	115	100	1	60	106	109
B	1	112	100	2	19	102	110
C	2	109	100	3	9	101	108
D	3	106	100	4	4	100	106
F	4	103	100	5	2	100	103
F	5	100	100	6	1	99	101
G	6	97	100	7	1	99	98
H	7	94	100	8	1	99	95
I	8	91	100	9	1	98	93
J	9	88	100	10	1	98	90
K	10	85	100	11	1	98	87

Column 2 displays the incremental differences in abilities of the runners: 1 length from one to the next.

Column 3 the model presumes 1 length = 3 points = 1.5kg. The 11 horses' abilities are averaged across 100.

Column 4 the horses debut with equal OHR (100) assigned by the public handicapper.

Column 5 naturally the horses finish in rank order of their ability in Race 1, since they are racing at level weights.

Column 7 displays the post-race rerated OHR: the model presumed the handicapper will deliver points 6-2-1 to the place getters, unless dead heats, in which case points will be shared evenly. The handicapper then has 9 points to relieve the beaten runners. Whilst handicappers tend to relieve by slightly more points than they penalise, I chose this rule for the models in order to maintain consistency.

Column 8 displays the impact of the handicap rerate on the result of race 2. Since horse B meets horse A 4 pounds better for being beaten 1 length, and since the model presumes 3 points = 1 length, **horse B wins Race 2**. Horse A runs 2nd, then horse C, D, E... the rank order of Column 8.

I ran a similar model #2 but in this model the handicapper allocates points 4-1-0 to the place getters, as is the regular practice in WA.

Model #2 5 points awarded to place-getters (4-1-0)							
Horse	Ability Lengths	Ability Points	OHR Race 1	Finish Position	Prize \$	Re-rated OHR	Perform Race 2
A	0	115	100	1	60	104	111
B	1	112	100	2	19	101	111
C	2	109	100	3	9	100	109
D	3	106	100	4	4	100	106
F	4	103	100	5	2	100	103
F	5	100	100	6	1	100	100
G	6	97	100	7	1	99	98
H	7	94	100	8	1	99	95
I	8	91	100	9	1	99	92
J	9	88	100	10	1	99	89
K	10	85	100	11	1	99	86

Prize \$ earned after Race 7		
Horse	Model #1	Model # 2
A	160	197
B	145	156
C	99	139
D	97	92
E	48	74
F	45	7
G	46	7
H	24	7
I	24	7
J	7	7
K	7	7

The table left displays the impact of the handicapper's more aggressive policy in model #1. Model #1 has redistributed the winning chances across the field in such a way that prize money is distributed more equitably. Horse A wins less money, but it's not catastrophic. And it's important to note that as the margins get narrower, the reality is that horse "A" would receive less than 6 points for winning. Model #1 allocates the winner 6 points, regardless of the margin spread and race time.

Model #1 is working well. By lifting higher the OHR of place getters by 6-2-1 points, the handicapper is evening the field more quickly.

The following tables take a closer look at the cumulative prize money flow each model.

Model #1 (points 6-2-1) prize money accumulated				
Horse	Race 1	Race 3	Race 5	Race 7
A	60	119	146	160
B	19	83	104	145
C	9	58	85	99
D	4	17	78	97
E	2	6	33	48
F	1	3	30	45
G	1	3	5	46
H	1	3	5	24
I	1	3	5	24
J	1	3	5	7
K	1	3	5	7

Model #2 (points 4-1-0) prize money accumulated				
Horse	Race 1	Race 3	Race 5	Race 7
A	60	114	160	197
B	19	73	119	156
C	9	78	101	139
D	4	12	81	92
E	2	6	10	74
F	1	3	5	7
G	1	3	5	7
H	1	3	5	7
I	1	3	5	7
J	1	3	5	7
K	1	3	5	7

The models also tracked the public market that would be offered in each race.

This table displays the market that would be offered by bookmakers in Race 4 and Race 5.

Public market Race 4		
Horse	Model #1	Model #2
A	\$ 7	\$ 3.8
B	\$ 5.5	\$ 3.8
C	\$ 7	\$ 6
D	\$ 4.4	\$ 5
E	\$ 7	\$ 9
F	\$ 7	\$ 19
G	\$ 14	\$ 24
H	\$ 28	\$ 38
I	\$ 28	\$ 76
J	\$ 66	\$ 120
K	\$ 154	\$ 191

Public market Race 5		
Horse	Model #1	Model #2
A	\$ 6	\$ 6
B	\$ 7	\$ 6
C	\$ 6	\$ 5
D	\$ 15	\$ 4
E	\$ 6	\$ 7
F	\$ 6	\$ 15
G	\$ 12	\$ 19
H	\$ 15	\$ 24
I	\$ 15	\$ 47
J	\$ 29	\$ 60
K	\$ 59	\$ 117

Model #1 results in a betting market wherein the chances are more concertinaed—outsiders have better winning chance—enticing turnover on tote exotic pools, and encouraging owners to believe that their turn will come.

As I wrote above and underlined, 90% of runners don't win; 90% of connections benefit by the winner being penalized more points, since that would increase their own chance of turning the tables when next they compete. Yet In my interviewing stage, I heard many comments that focused on the penalty to the winner as if the interviewee regularly owned or trained the winner. It's a human phenomenon to park oneself in the shoes of the 10% as if that's the "average" experience. But if connections could see it more clearly that they are in fact one of the beneficiaries, 90% of the time, there would be far more ready acceptance of higher penalties.

What is the impact on the dominant horse "A" that has 4 lengths on the field, if re-rated more closely to the way handicappers re-rate in Eastern States and overseas?

Model #1 9 points awarded to place-getters (6-2-1)							
Horse	Ability Lengths	Ability Points	OHR Race 1	Finish Position	Prize \$	Re-rated OHR	Perform Race 2
A	0	112	100	1	60	106	106
B	4	100	100	2	19	102	98
C	5	97	100	3	9	101	96
D	6	94	100	4	4	100	94
F	7	91	100	5	2	100	91
F	8	87	100	6	1	99	88
G	9	84	100	7	1	99	85
H	10	81	100	8	1	99	82
I	11	78	100	9	1	98	80
J	12	75	100	10	1	98	77
K	13	72	100	11	1	98	74

Model #2 5 points awarded to place-getters (4-1-0)							
Horse	Ability Lengths	Ability Points	OHR Race 1	Finish Position	Prize \$	Re-rated OHR	Perform Race 2
A	0	112	100	1	60	104	108
B	4	100	100	2	19	101	99
C	5	97	100	3	9	100	97
D	6	94	100	4	4	100	94
F	7	91	100	5	2	100	91
F	8	88	100	6	1	100	88
G	9	85	100	7	1	99	86
H	10	82	100	8	1	99	83
I	11	79	100	9	1	99	80
J	12	76	100	10	1	99	77
K	13	73	100	11	1	99	74

Prize money impact:

Model #1 (points 6-2-1) prize money accumulated			
Horse	Race 1	Race 3	Race 5
A	60	180	206
B	19	57	83
C	9	27	53
D	4	12	63
E	2	6	36
F	1	3	32
G	1	3	5
H	1	3	5
I	1	3	5
J	1	3	5
K	1	3	5

Model #2 (points 4-1-0) prize money accumulated			
Horse	Race 1	Race 3	Race 5
A	60	180	269
B	19	57	100
C	9	27	70
D	4	12	20
E	2	6	10
F	1	3	5
G	1	3	5
H	1	3	5
I	1	3	5
J	1	3	5
K	1	3	5

Betting impact:

The betting market tracks the runner's ability versus the handicap weight.

The comparative betting markets for race 3 and race 4 are shown here:

Public market Race 3		
Horse	Model #1	Model #2
A	\$ 2	\$ 1.4
B	\$ 5	\$ 6
C	\$ 6	\$ 7
D	\$ 8	\$ 14
E	\$ 13	\$ 30
F	\$ 20	\$ 60
G	\$ 40	\$ 90
H	\$ 80	\$ 150
I	\$ 125	\$ 300
J	\$ 200	\$ 600
K	\$ 400	\$ 900

Public market Race 4		
Horse	Model #1	Model #2
A	\$ 5	\$ 2.2
B	\$ 5	\$ 4.4
C	\$ 5	\$ 4.4
D	\$ 5	\$ 9
E	\$ 8	\$ 17
F	\$ 10	\$ 34
G	\$ 20	\$ 50
H	\$ 40	\$ 80
I	\$ 50	\$ 140
J	\$ 80	\$ 200
K	\$ 150	\$ 330

Model #1 results in a betting market wherein the likelihood of winning is spread better across the chances, thus assisting betting turnover, and encouraging owners to believe that their turn will come.

Participants' acceptance of policy:

I'm confident that owners and trainers won't recoil from higher win penalties once they are delivered with consistency. Complaints I heard and read from WA participants were accompanied with: "I don't mind so much, as long as everyone's treated similarly". Convincing naysayers should be a matter of convincing them that their horse will benefit 90% of the time.

Back in the day:

In Australia in 1982, the average win penalty was > 5 points. The average penalties per race may have been > 8 points.

Overseas:

In UK and HK the average win penalty is > 6 points.

4. MERIT BASED VERSUS FIXED WIN AND PLACE PENALTIES

WA participants have grown used to standardization: 4-point winners' penalties and set OHR assigned to maiden winners.

I am strongly opposed to standardization. A mathematically based discernment is the handicapper's duty.

I recognize that mathematical "merit" shouldn't always be applied literally. Some performances would merit literal penalty of 12 points (a 10 lengths winner in record time), but all participants accept that it is healthy for there to be a more modest cap on winners of handicap races that are "in the handicap" (carrying a weight at or above the minimum weight).

I envisage that the overwhelming percentage of win penalties at Metro Prime in the near future will be between 4 and 6 points. I'd expect the mode and median to be 5, averaging >5 points.

There's a big difference between rating winners on merit, and rating beaten horses on merit. Merit of the win should be taken into account for winners, but beaten horses shouldn't be treated literally to the merit of their rating. Connections of beaten horses, even place getters in major races, haven't banked the big cheque, and the owners face considerable ongoing bills, and need their turn in the winner's stall.

Many place getters in feature races produce a huge spike PB on the day. This PB may be repeated with future success. But oftentimes, such horses revert to their mean rating, and the "merited" OHR that they were rated puts them in an unwinnable position, until they run off the many points that they've been over-rated. That might take 12 months or more.

I advocate a % of the mathematical merit of a performance to be used when rerating OHR. If the horse wins immediately thereafter, its OHR will then be lifted accordingly. And three cheers for the owner.

The OHR is meant to be a recently weighted measure of the horse's career—not a reflection of a single spike rating, if that spike was when being beaten.

In many countries, I'm sure handicapping practice has been shaped by the reaction of connections. That is certainly the case in Australia. If I've spoken to or read 100 opinions on the matter, I've yet to find anyone who'd be satisfied with the treatment of a 4th placed horse in the following circumstance, if full merit 20 points was applied.

Full merit would be applied to the 4th placed "D" if the race that I've mocked up below were run in Great Britain.

SET WEIGHT RACES

Horse	LBW	OHR	Perform Rating	Perform minus OHR	Penalty / Relief	New OHR	Prize money earned
A	0	95	100	5	5	100	90,000
B	1	93	97	4	2	95	30,000
C	2	94	94	0	0	94	15,000
D	3.3	70	90	20	0 to 10	70-80	8,000
E	4.5	85	87	2	0	85	3,000
F	6.3	94	81	(-13)	-2	92	1,000
G	8	90	76	(-14)	-2	88	1,000
H	8.5	91	74	(-17)	-2	89	1,000
I	12	80	64	(-16)	-2	78	1,000

- The “base” of this Group 3 Set Weight race was 95.
- The “drag” applied was 3-points per length.
- The strength this race has been calculated as 5
- Column 2 displays the beaten margins, the Lengths Behind Winner.
- Column 3 displays the runners’ pre-race Official Handicap Rating
- Column 4 displays the performance ratings—calculated as:
- $PR = \text{Base} + \text{Strength} - (\text{drag} * \text{LBW})$
- Column 5 displays the amount by which the horse performed compared to pre-race OHR.
- Column 6 displays the penalty or relief that might be applied by an Australian handicapper
- Column 7 displays the consequent new post-race OHR.

The OHR for the 4th-placed runner “D” is the one in question. The range amongst our handicappers might be anywhere from 70 to 80.

Handicappers have a term for the “softer-than-merited” rating applied to the 4th placed horse. They call it penalising “back in its own grade”. The presumption being that the horse is very likely to return to its own grade, and if it does, it mustn’t be handicapped out of the race. When horse D returns to an easier race next start, say a BM70+, it would be likely to be rated 75 by some Australian handicappers. That’s a 2.5kg rise “back in its own grade”. Fair enough!

Some would argue that D deserves more than 75. They’d argue that D’s performance rating is far superior to 75, (I’d agree, it was 90) and the post-race OHR needs to reflect this (probably all racehorse connections in Australia and I would disagree with this view).

Some would argue D deserves less than 5 points. Their case would be that D has only won \$8,000 in prize money, and 5 points amounts to a full winning penalty in a BM70+, where D would win \$50,000.

The owner of D took a gamble that D might win this high prize money race, or gain black type by finishing in the placings. Compare D to another “70” rated horse who chose not to take this gamble—that horse stayed home protecting its rating.

D produced a significant PB on its previous form. In UK it would be penalised 20 points. D must be penalised.

I agree with the 5-points penalty allotted D. It is a safe sensible middle ground.

On the former side of the argument to penalise nearly the Full Monty sit the British and Hong Kong handicappers. On the latter side of the argument sit many Australian owners, and some Australian handicappers. In the middle sits the NSW handicapper.

Let's look at a couple of overseas examples.

In the 2017 Epsom Derby, British handicappers rerated GLENCADAM GLORY up from 100 pre-race to 106 post-race. GG finished midfield 9th, beaten 8 lengths, and earned no prize money. The winner was rated post-race 120. In UK they apply 1.5 points per length at 2400m. In Australia, connections of GG would be up in arms to be elevated from an already high 100, to 106, for what would be considered in Australia as a classic "herd-horse" performance: sitting at the rear and passing tired horses into midfield, winning no prize money.

At his next start, GG again finished midfield, but closer, and was elevated a further 4 points, again a literal translation of his performance rating. Now there's nothing to say that GG won't run to 110 some time in the future. But does that make the post-race assessment fair to connections? If GG is entered back into a handicap race, he has effectively incurred a 10 pounds rise in weight for earning 6,000 quid prize money. (FYI: at its next start, admittedly 10 months later, GG won a lowly SW race, requiring a rating of > 84 to beat a very ordinary 5-horse field. He did so by a narrow margin as \$1.20 favourite. In 2 subsequent starts, GG has finished beyond midfield.)

In HK recently, PAKISTAN STAR was lifted 10 points (113 to 123) for running 4th. All three place-getters in that WFA race were rated pre-race 126. So PAKISTAN STAR, beaten 1.2 lengths, definitely did performance-rate at least 123, since the winner rated 127. Would Australians tolerate an unplaced horse's OHR being lifted to 123 in such circumstances?

Australian handicappers would also calculate the performance rating at least 123. But in Australia, PAKISTAN STAR would have been likely to have been elevated to ~117 by most Australian handicappers.

At its following run after being lifted 10 points, PAKISTAN STAR raced in a handicap and finished unplaced. In Australia, had he raced off 117—6 pounds lighter and had he won, he'd be entitled to 123 thereafter. Same result, one run later.

Whilst the system in HK is almost pure merit-based handicapping, there are some constraints, one of them being that there is a cap of 10 points on the OHR penalty for a horse placed 2nd-5th. But it's rare for horses to be OOTH in HK due to the HK classes being stacked (40-60, 60-80 etc.) and rarely is a horse permitted to run out of its handicap range, unless it's a really major race—the H.K Derby for example. Other occasions may be when the class is extended 90-115, or 60-85, and the base in my terminology would be correspondingly 95 and 65, thereby some runners slightly OOTH.

It's reasonable to conclude that NETTOYER would have been lifted 10 points in HK.

When WEEKEND HUSSLER won a restricted midweek 3yo handicap early in his career, private handicappers assessed him >100. His OHR was in the 70's, The Victorian handicapper himself would have known WEEKEND HUSSLER had rated through the roof that day—2 starts later he walked in the Gr1 Caulfield Guineas as even-money favourite. In United Kingdom, the British handicappers may have given WEEKEND HUSSLER >100 for his midweek success, but it's not how it's done in Australia. Elevating prematurely the promising horse is anathema down under, unless the class of the race allows it—Graded black-type races.

I've never met an owner or trainer who is happy with an unplaced horse being hammered to its literal performance rating. Investing in racehorses is an expensive business, or pleasure. Owners need to have proper chance for return on investment. But there exists much naivety in Australia surrounding the merit of a performance, and its subsequent OHR. Many official handicappers try to get the message out about how they rate horses, but perhaps more could be done to inform the public.

Let's look at an example of a performance similar to the one in my table above, (where I claim that Aussie handicappers are in disagreement as to the rating to assign "D" post-race).

NETTOYER gained a lot of publicity for its OHR assessment after finishing 4th in Group 2 SWP race, at Randwick on 3rd March 2018. Racing NSW handicappers penalised NETTOYER 14 points—she went into the race with a rating of 67 and her post-race OHR was 81.

The “base” of that race implied that NETTOYER ran off a rating of ~100 (I write about 100 because that’s my best guess, since handicappers don’t publish post-race performance ratings, or explanations as to how they derive their answers). Effectively NETTOYER was ~33 points below the base. Her performance rating in the race may have been calculated as ~97.

Was the Racing NSW handicapper’s assessment OHR 81 inaccurate? The handicapper’s perspective would be: “NETTOYER pre-race was 67, this performance 97, so I will elevate it about halfway. NETTOYER didn’t gain “realistic” black type, finishing out of the top 3. (*At some stage Sales books and bloodstock players started recognising 4th place getters as Blackish Type*). Neither did NETTOYER win much prize money. 14 points equates to about 3 Saturday wins, which in NSW equals \$180,000. NETTOYER pocketed \$9,000 for her 4th placing.

The connections of NETTOYER took a huge risk racing in this event. She was 33 points light of the base. Her following start was a Group 3 with a base that was 24 points lower, 76—sounds extraordinary doesn’t it! It was due to the 2nd race being a handicap, the first being SWP. Had NETTOYER waited for this race 7 days later, she’d have been handicapped on the minimum, and would have won. In fact, had NETTOYER not been lifted 14 points, but a more modest lift, she would have been handicapped on the minimum, and would have won this second race. (NETTOYER carried 2.5kg above the minimum in the second race, and was beaten 0.3length).

Importantly, if treated harshly, connections will become very wary of running when OOTH, and Saturday field sizes will be impacted.

What would a more modest lift to NETTOYER’s post race OHR have looked like, and would a more modest lift be justifiable?

As I wrote earlier, handicappers across Australia differ in practice how they apply post-race OHR for horses in such a circumstance: not beaten far, when way out of the handicap.

My own view is that the following formula is fair and reasonable; and it fits closely with many of the examples I’ve seen applied by Australian handicappers:

Post race OHR = OHR + ((Performance Rating – OHR) / Finish Position).

(With a maximum finish position=8 when calculating penalty).

It is easy to make a case that a maiden horse that performance-rates highly without winning in a Black Type race should be lifted by a lesser amount.

In the case of NETTOYER, the formula would have equated to an 8-point lift in rating to 75. Had she returned a performance rating of ~97 and finished second, 15 points would be applied (30/2); had she finished 3rd, 10 points (30/3); if 5th, then 6 points (30/5).

The RWWA Board scope of review included the topic: Maximum rating penalty for racing outside of class.

RECOMMENDATION: There is no need to pose a mandatory maximum penalty for racing out of class.

My formula, if used as a guide, would quantify the uplift, which would be inoffensive to most once understood and applied approximately and with consistency.

Obviously any horse that wins a race when out of its class must have produced a new Personal Best rating. Global handicapping practice would be to rerate such winner at its new PB. This conforms to the formula above, where finish position = 1. Hence there's no limit or maximum that should be, or needs to be applied. A winner of a feature race with a very low OHR must be lifted significantly—in line with its Performance Rating, this new PB, provided the "base" is established equitably (see sections below on Mingenew Cup and Quality handicaps).

Of course to quantify the Performance Ratings requires a formula of some sort. To many, handicapping is seen as more art than science, but I don't agree. Whilst handicapping can't be strictly formulaic, maths provides the governing tool.

Changing attitudes to handicapping

There are some striking older examples of merit-based ratings being imposed on beaten horses that may have contributed to the halting of horses' careers.

Two such examples finished 2nd in the AJC Derby off a low pre-race OHR.

BRAELOCH – up 30 points – was a class-2 horse that finished close 2nd at 100-1 in 2004 AJC Derby behind STARCRAFT. After the Derby he was post rated OHR 104. He raced 14 times subsequently, finishing on average 10th/12. He never finished closer than 5th. He retired rated low 80's.

TUPAC AMARU – up 30 points –was a class 1 horse that finished 2nd in 2014 ATC Derby behind Criterion. After the Derby he was post rated OHR 100, up from 70. He raced 8 times not finishing closer than 6th, average finish 11th/14. He retired rated 87.

A different attitude was applied in 2017:

HARPERS CHOICE – up 15 points – was a class-2 horse that finished 2nd in the 2017 ATC Derby and was lifted from 74 to 89. This was a change in attitude that I applaud. HARPERS CHOICE's official performance rating in the Derby may have been about 106, based on the winner rating 108. Thus 89 is pretty much halfway between 74 and 106, fitting closely the formula:

Post race OHR = OHR + ((Performance Rating – OHR) / Finish Position).

British and HK handicappers would rate HARPERS CHOICE ~106. By rating him 89, the NSW handicapper gives the owners a chance, but more importantly, they are recognizing that this performance may be a spike in his form. It won't take long to prove the point. If HARPERS wins soon after, the handicapper can deal with him then. From experience creating opinion probabilities for more than 40 years, I can assure you that HARPERS CHOICES of the world are no certainty next start if handicapped off 89. Also, at 106 HARPERS CHOICE would beat into the ballot some far more deserving candidates in future major staying races—unfairly in my opinion.

For the record, these 3 horses raced subsequently 30 times, 23 of the races were handicaps, for zero wins, one minor placing.

Whilst UK handicappers have harsher approach to the horse that is out of the handicap / running out of its class, yet finishes close to the winner, West Australian owners and trainers expect and in my opinion deserve more leniency.

HANDICAP RACES:

Whilst determining the amount by which a horse is out of the class is more difficult in SW or SWP races, it's easily determined in handicap races.

WA handicapper publishes the base on CRIS site.

The degree to which a horse is out of the handicap is:

$$\text{OOTH} = \text{Race Base} - \text{OHR}.$$

When it comes to post-race assessment of OOTH performances, the same formula is applicable.

$$\text{Post race OHR} = \text{OHR} + ((\text{Performance Rating} - \text{OHR}) / \text{Finish Position})$$

An interesting situation arises when many horses in a race are OOTH. If a race has most of the horses OOTH, should it be adjudged equally to a race that has all the runners in the handicap? If the race base (its BM+ number) is false, should the winner be bounced off that base?

Let's look at an example in Country WA: the MINGENEW Cup.

1	2	3	4	5	6	7
BM62+	OHR	Hcp kg	Actual base, based on this runner	Presumed base, based on race class BM62+	LBW	Post Race OHR
GALAXY BLAZE	56	55	56	62	0	65
STARRY DANE	70	59	62	62	0.5	69
SKY RHYTHM	52	55	52	62	1.5	52
SMALLAMOUNT	56	55	56	62	2.2	56
BLAZING AMM	56	55	56	62	2.7	56
SCENIC LORD	60	55	60	62	6.7	60
MIGHTY TORI	47	55	47	62	7.5	47

The practice across Australia is to presume all OOTH horses race off the advertised base—in this case the base is 62. See Column 5 above.

Post-race, the winner therefore received 3-point penalty above 62 to be rated 65. So the WA handicapper is conforming to common practice. The reason that handicappers lift the winner's OHR to the "base + standard win penalty" is to ensure that the winner meets these other horses worse at the weights next start if they meet in the same class, or weaker.

However, if GALAXY BLAZE races these same horses next start in a BM56+, you could easily calculate his significant disadvantage: he would meet all of them 4.5kg worse, and that's not fair in a jurisdiction where the standard winning penalty is 1kg – 1.5kg.

The MINGENEW Cup clearly wasn't as strong as another BM62+ where every horse is in the handicap. Racing participants know the difference, and would recognise the fairness of this race being calculated off a lower base than 62. After all, only one entrant is in the handicap at that level. So how should the base be determined? The next highest rated runner is rated 60, that's 2-points < BM62. Off a base of 60, GALAXY may be rerated 63.

Even if STARRY DANE (the sole horse "in the handicap") won the MINGENEW Cup, he wouldn't have proven that he's any better on the day than he was pre-race, since he met every contestant favourably at the weights. For example, he has 7kg on GALAXY but only had to give him 4kg. STARRY DANE wouldn't have to rate above his pre-race 70 to win this race. However, if his opposition were "actual 62" rated, STARRY DANE would have to rate necessarily > 70. If STARRY DANE won this race narrowly, by my formula he may be lifted 1 point to 71.

Since the win in MINGENEW Cup, GALAXY has started 4 times, unplaced each time, average LBW 3.5 lengths, average market price 20-1.

OOZH winners are everywhere—BOXACHOCOLATES in NZ.

In New Zealand last year BOXACHOCOLATES won an open company handicap race that was not black type, and was handicapped as BM87+. At his next start, the Group 3 handicap was handicapped as BM79+. That sounds strange doesn't it—a Gr3 rating 4kg weaker than a non-graded race?

The reason for the anomaly was that the first handicap had a more highly rated runner than the second one. The highly rated horse was allocated the template weight, and forced up the base BM#. Consequently, the winner, BOXACHOCOLATES was 16 points out of the handicap, won the race, and post-race, he was lifted 17 points.

Connections needed to be aware the potential pitfall where their horse may end up significantly "out of the handicap", thus risking an excessive rerating should your horse win.

Mock Example Quality handicap:

Quality handicaps exist to provide racing opportunity to excessively rated horses, that under non-Quality conditions would be handicapped with extremely high weights.

Quality handicap maximum weight varies from state to state, and is altered from time to time. Let's use uniform maximum of 60kg for the mock example.

Horse "A" is a multiple Gr1 winner that usually runs in much harder, more highly graded races. However connections have chosen to nominate for this inferior race as part of his programme, usually to gain fitness for grand finals later in the season. *(In WA because there are fewer races for highly rated horses, "A" may need to race when an opportunity becomes available).*

1	2	3	4	5	6	7	8
	OHR Pts.	Weights declared if <u>race not a</u> Quality	Weights declared in Victoria if race a Quality	Final field in Vic if "A" doesn't accept	* Weights used to be declared in Victoria	Final field in WA if "A" accepts	Final field in WA if "A" doesn't accept
A	116	68	60			60	
B	96	58	58	59	58	54	59
C	94	57	57	58	58	54	58
D	92	56	56	57	58	54	57
E	90	55	55	56	58	54	56
F	88	54	54	55	58	54	55
	BASE:	88	88	88	96	104	88

* As would be the case in many other States

In Victoria, Quality handicap conditions were altered in 2017. Handicaps under quality conditions might now be declared in Victoria as per Column 4, if the classification of the race was considered an open handicap that equated, let's say, to 88+ on the template.

In WA, weights would be declared as per Column 7.

There are advantages and disadvantages in the two approaches.

In Victoria, horse "A" has a significant comparative weight advantage over all its rivals. However, all other runners have the appropriate handicap relative to each other. In Victoria, 5/6 runners are "in the handicap"

and hence incur the standard penalty if they win. "A" exceeds the handicap and wouldn't incur a penalty unless wins by huge margins.

In WA, horse "A" has a varying advantage over his rivals, but a lesser advantage over B, C, D, and E than he would have under the weight scale in Victoria. In WA, if horse "A" accepts, every other horse is out of the handicap and hence would incur a winning penalty in excess of the standard.

Comparing Columns 4 and 7, I like the Victorian approach. I recommend it to WA. The RWWA handicapping department wants the maximum set at 62kg to reduce the advantage "A" has. I agree with them.

I applaud WA introducing long handicap in 2009. By invoking the long handicap at acceptance time when "A" doesn't accept, the field would be declared as per Column 8.

Comparing Columns 5, 6 and 8—if A doesn't accept—Columns 5 and 8 are best.

What's the right base this race—and hence how should we rate the winner?

In WA and every State bar Victoria, if horse "A" accepts, the final field is declared approximately as per Column 7. The base in the case of Column 7 would be measured from the top down: $\text{base} = (116 - 2 \times (60 - 54)) = 104$. The base 104 would be consequent one runner, "A", which distorted the base for the remainder of the field. If any of the horses other than "A" won, the winner would be rated >104 .

The base would be considered as 88 if "A" did not run in the race, whether "A" accepted (Column 4), or not (Column 5, or final Column 8).

The base would be considered as 96 if "A" didn't accept as per Column 6—not relevant to WA but relevant to some States.

104-96-88 is a tremendously wide-ranging starting point from which to be adjudging the horses BCDEF post-race. These 5 horses would have had finite, calculable ability on the day. Yet due to the quirks of handicapping practice and the presence or not of "A", the 5 horses might be penalised across an 8kg range.

Current handicapping practice is to treat the field in Column 7 as base = 104. But what if horse A had earned its huge rating in 3200m events? What if this race is 1200m, and A is 100-1 in betting? One of the other runners is almost certainly going to win; and it is going to incur a ratings rise that is unjustifiable—a rise that resulted from the presence of one 100-1 shot. That's an extreme example of why I disagree with the prevailing attitude to this race. There's a more fundamental reason.

The sole reason for treating the race as base = 104 is to ensure that whatever horse wins will meet the remaining runners worse at the weights if they meet next start in the same grade of race, under same conditions.

The following table displays the base each horse ran off in parentheses, and the post-race rating each horse may be rated if it won.

1	2	3	4	5
	OHR	Weight allocated	Post-race OHR if this horse won Race Base 104	Post-race OHR if this horse won Race Base 96
A	116	60	(116) 116	(108) 116
B	96	54	(104) 106	(96) 98
C	94	54	(104) 106	(96) 98
D	92	54	(104) 106	(96) 98
E	90	54	(104) 106	(96) 98
F	88	54	(104) 106	(96) 98
	BASE:		104	96

- The average of the 6 runner's OHR = 96. (Sum Column 2 divided by 6)
- Column 4 race, the average of the 6 runners' OHR = 106 (Sum in parentheses)
- Column 5 race, the average of the 6 runners' OHR = 98 (Sum in parentheses).
- Clearly, the race base in Column 5 is far more accurately aligned to the runners competing in the race.
- Re the post-race rating of the winner if BCDE or F:
- Column 4 presumes base = 104, let's say add only 2 points for merit of win
- Column 5 presumes base = 96, let's say add only 2 points for merit of win. (*B might get more, but set that aside*).

The result of Column 5 is that no matter which one of BCDEF wins, the winner will meet all the others worse at the weights next time they meet, unless the winner meets A in a weaker race, which is extremely unlikely. "A" will be moving on to higher graded race. Every other possible next-race match up is satisfied by the post-race assessment in Column 5.

By using base as per Column 4, horse F might win and incur advance to 106. I can assure you that 106 would not be a reasonable account of F's career, no matter how much you focus on this most recent performance. If F were to be post-race 106, its future career opportunities are massively impaired. Its career going forward might be pointless.

Using Column 5, if F were to be post-race 98 it would be extremely unlikely to start favourite in the following race, because marketplaces know not to focus entirely on a single performance. Hence, at 98, F doesn't get any big favours—it's being lifted 10 points, or 5kg.

Some readers may think all of what I've written above is simply academic—that it is of no consequence to the majority of racing participants. However, the relevance to WA industry is that field sizes are important to wagering, and hence RWWA revenue. If horses continue to be over-rated post-race for winning OOTH (or Ex-class), or winning when all the other horses are OOTH (or Ex-Class), connections won't enter such races. Field sizes at risk would be SW, SWP and Handicaps run under Quality conditions, or run off a misleading base.

SUMMARY:

The current handicapping practice in the circumstances above has the potential to be extremely onerous.

In the Quality Handicap I mocked up where A is rated 116, official handicappers presume that the 5/6 runners that are OOTH raced off a higher rating (104) than they entered the race. I believe the 1/6 runner ran off a lower rating ($96 + 12 = 108$) and that the remaining 5 ran off 96.

That's the difference; and I hope this paper brings about some healthy dialogue that leads to change. If it does, there will be fewer horses over-penalised unfairly—penalties that can lead to a long, expensive and unfair hiatus of non-return to owners.

I make these recommendations:

Determine the race base in handicap races as the OHR of the highest rated horse that is on the minimum weight.

Declare weights in Quality handicap in line with the Template for this Grade of handicap (Racing Victoria style).

Maximum weight in Quality handicap = 62kg

	OHR	Weights declared under current WA Quality Conds.	Base 96 not 104	Final field if "A" didn't accept	Base	Weights declared in WA. Quality under proposed new Conds.	Base
A	116	60	96			62	88
B	96	54	96	59	88	58	88
C	94	54	96	58	88	57	88
D	92	54	96	57	88	56	88
E	90	54	96	56	88	55	88
F	88	54	96	55	88	54	88

5. MAIDEN RACES

About 6,000 runners per year compete in a WA maiden race, so it's important to review if the most is being gained from this very large cohort.

All maiden races in WA are under Set Weight conditions. This is also the case in Victoria. In NSW and QLD, about half of the maiden races are SW and half are under handicap conditions.

SET WEIGHT MAIDENS – Pre race

SW maidens are hard to win for a horse that is some lengths below the standard required in its jurisdiction. If it can't win one, it needs to find weaker company. The owner is faced with the decision of either

1. Traveling long distances to race,
2. Transferring to a trainer in a weaker region, or
3. Selling into a weaker region.

The methodology of “rating” horses early in their careers hasn’t changed over the period that I have studied, commencing season 2008/09. Column 2 is the presumed rating of a horse having first start.

	OHR at first start
Metro Prime	60
Metro Midweek + Prov. A	60
Prov. B	58
Country	56

I understand the convenience of having such a spread across narrow range of 4 points. However, the range doesn’t come close to the reality of the difference in abilities at the jurisdictions.

I consulted Rob Waterhouse to investigate his own database, as a cross-reference against my own database and the official numbers tabled above. Based on his time ratings, and class handicap ratings, Mr Waterhouse’s spread is many multiples of the official WA spread of 4 points (60-56); the spread on my own database of handicap ratings is not as steep as Mr Waterhouse’s but far steeper than the WA official range of 4 points. Racing NSW recognises 48 as the unraced rating in Country, and 60 as the unraced rating in Metro—3-times the spread that exists in WA.

It’s important to note that NSW handicappers may rate a Country maiden winner across a 14-point range: 47-61. In WA that would equate to the occasional maiden winner being rated in mid 40’s, not the standardised 58.

An example might be PAGO MINX that won at Leonora on 8 October 2016, or LIFE CHANGING, 2 June 2014. Standardised ratings—which are what the WA racing participants have urged—resulted in PAGO MINX being rated officially 58. A rating of 48 may have been more appropriate. My own database assessed these winners in the 30’s.

SET WEIGHT MAIDENS – Post-race

Post-race assessment of the horse—its OHR—is often not representative of the performance rating. I’m unsure what percentage of the industry favours standardized ratings, but the concept featured regularly in submissions I read.

It’s a flawed concept.

Columns 2 and 3 display the typical OHR given to a horse that wins on debut.

First career win	OHR male	OHR female
Prime Metro	66	62
Metro Midweek + Prov. A SWP	64	60
Maiden SW	62	58
Prov. B	60	56
Country	58	54

Standardized OHR

Maiden winners in WA are rated nearly all the same, varied only by the jurisdiction (Metro, Provincial or Country).

In the submissions I've read and heard at interviews, it was almost unanimous that a maximum be placed on the OHR that a handicapper could assess a Maiden winner. Once that was adopted as policy, it became difficult to rate other Maiden winners very differently—"OK what about rating them all the same, that's fair".

It's also easily justified mathematically, since it could be considered that all runners are racing off the same pre-race rating, due to the Set Weight conditions—since there is no pre-race OHR.

Hence the post-race OHR of the winner = Pre-race OHR of the unraced horse (a constant) + standard penalty this jurisdiction (4 points at Metro Prime, 3 points at Provincial B etc.).

I'm aware that NSW horse trainers many years ago requested, in fact insisted that all maiden winners in a jurisdiction be rated equally. Oscar Wilde wrote: "When the Gods want to punish us, they'll answer our prayers."

In Great Britain, nearly every Maiden race is SW, but that doesn't stop the BHA rating maiden winners across an extremely wide range.

Occasionally the standardized winning rating must be ignored, as some maiden winners may have placed in Group races before being brought back to win comparatively easier race. Such a horse may enter a Maiden race with an excessive OHR, and win comfortably. It is not in that horse's interest, or fair to others for such a horse to be rated lowly after winning its SW maiden. A lowly rating increases the risk of this better-than-average maiden winner being balloted from black type race, if condition of the black type race is to ballot based on OHR.

Weak SW maiden races

Some maiden fields are comprised of runners that have amassed scores of losses between them. Whilst the OHR of a maiden runner is not published, the implicit OHR of such horses would have been run down significantly lower than the unraced OHR.

If it takes a horse a while to break through, and/or when it does, it is against weak opposition, the horse should be afforded the possibility of winning immediately if placed in the right company. By assigning all Maiden winners a similar OHR, many can spend 6 months before they retreat to the realistic OHR—that's expensive for an owner, and unhelpful to wagering turnover.

Assigning realistic accurate OHR is not the same as "providing a free kick". It's appropriate handicapping; rating the horse closer to the merit of its performance.

There are many examples where WA Maiden winners should have been rated 4-6 points lower. The impact of being assessed too highly is that such a horse is badly handicapped by 2-3kg at its subsequent run in class 1 or whatever.

The most likely occasion that a lower-class horse might win a second race is the run immediately after its first win—it is obviously in decent form—provided that it isn't handicapped unfairly.

The race class most likely for a Maiden winner to enter next is dependent on the jurisdiction. In each jurisdiction, the class immediately up from a Maiden has its base about 4kg below the standardized OHR of a Maiden winner in that jurisdiction. In other words, if a Maiden winner receives the standardized OHR, the Maiden winner will be carrying 4kg over the minimum at its following start. The difference in price of a 2kg (4 points) handicap might equate to a horse being 10-1, not 20-1; or 7-1, not 14-1.

RWWA wants runners with a winning chance. So do owners!

Let's look at a couple examples.

ROLL ON JOHN won on 26th January 2017 at its 19th race start. By my maths—and likely the same answer that WA handicappers would arrive at if not affording standardized ratings—ROLL ON JOHN rated 55. He was assessed 62.

In 6 subsequent starts, on average ROLL ON JOHN was given a 3% chance of winning, and finished 8th / 11 starters. He was then retired with a rating of 54.

What about MAX—the horse?

When MAX won his maiden at Broome on 5th August 2017, there were 5 starters. Being generous, MAX probably could have been rated officially close to 54, but was rated 60. In 2 previous starts, and 3 subsequent starts, MAX hasn't finished closer than 8 lengths from the winner. He has started 66-1 on average at his 3 subsequent starts. He is now rated 56.

The day Max won, there were 3 races at 1300m. MAX ran 2 seconds slower than the other two races. One of those races was a BM58+. MAX was given a post-race OHR 60; thus the race was effectively assessed as BM57+. That's 1 point different to the BM58+ that was able to run 2-seconds quicker.

The problem lies in the facts that Maidens at lower jurisdictions (in this case Provincial B) are graded too highly; and all Maidens within a jurisdiction are rated too similarly to each other. The way we know for sure that Maidens are graded too highly is referred to elsewhere under the topic "RATING REVIEW", where I show that Maiden ratings have stayed the same over 8 year period 2008-2016, yet the remainder of races have descended 5 points.

So the problems are twofold:

1. The unraced rating is too high
2. The slope from highest jurisdiction to lowest is too shallow.

Rather than handicappers being urged by racing participants to "standardize" things, and to "not use discretion", handicappers should be allowed to do their job—make calculated decisions, especially when it comes to providing lower OHR.

MAIDEN HANDICAPS – pre-race

Why have maiden races run under handicap conditions?

Handicap maidens provide opportunity for a horse to prove whether it is able to win in its own jurisdiction before the owner is faced with the decision of either

1. Traveling long distances to race,
2. Transferring to a trainer in a weaker region, or
3. Selling into a weaker region.

Handicap maidens may be open by age and gender, restricted by age, by gender, or both. It is desirable to programme maiden handicap races restricted by gender in order to provide opportunity for the female maiden to receive appropriate weight relief from the unraced horse. In open-gender maiden handicap, the female maiden is already reasonably close to the minimum weight, and would reach the limit after a shorter series of losses compared to the male maiden horse, unless there was a 2kg difference (by gender) in the minimum, and I'm not advocating that.

In a maiden handicap, the weight to be carried by the unraced horse is dependent somewhat on the strength of the nominees. Generally speaking though, unraced mature male horse may be handicapped at 4kg or 5kg above the minimum. Depending the time of year, accounting for the age and sex allowances, a young filly on debut may be pretty close to the minimum. As such, the young filly would reach the limit after a small number

of handicap reliefs. In that case, the owner would be wise to stick to 3yo or 3yof, or Fillies and Mares maiden handicaps.

MAIDEN HANDICAPS – post-race

Because maiden handicap winners will regularly be handicapped below the unraced rating, the post-race OHR of the Maiden handicap winner will definitely be lower than it is currently. The result of that is that the maiden handicap winner will enter its next race much closer to the minimum, than it does currently, which I wrote above is at about 4kg above the minimum.

That helps the owner, and RWWA revenue, as the tote will hold more money on the horse at its following start, due to it being a shorter price / higher winning chance.

In NSW and QLD, about half of the maiden races are SW and half are under handicap conditions.

NSW MAIDEN RACES ON AVERAGE (2014 to date)				
Conditions	Field Size	Favourite	2 nd favourite	3rd favourite
SW	10	0.37	0.20	0.13
HCP	10	0.35	0.20	0.13

The normalized win probability (the market adds up to 1.00, after remove long shot bias) of first 3 favourites shows that the races are slightly more open in maiden handicaps than maiden SW. This encourages me to believe that introducing handicap maidens will not negatively impact field sizes or betting turnover.

Not content with this speculation, I dug into some tote data to discover that: In current season across about 2500 maiden races in NSW and QLD, the difference in hold SW versus HCP is negligibly small at about 0.5% (half of 1%). The tiny difference seemed to be accountable to the order of the race number on the day.

This study validates my speculation that HCP maiden should not hurt turnover. And HCP maidens will certainly help owners.

Recommendations:

Introduce Maiden Handicaps

Rate below average maiden winner closer to the merit of its performance

Alter the jurisdictional unraced rating as shown in red.

	Current unraced rating	Future unraced rating	Winner's "maximum" OHR (male)
Metro Prime	60	60	66
Metro Midweek+ ProVA	60	58	64
Provincial B	58	55*	60
Country	56	52*	58

* Over time, these need to be lowered further, but may not be able to be lowered fully in one step.

6. DUAL RATING SYSTEM (METRO AND COUNTRY)

What I wrote in 2009 on this topic is at the bottom of this section of my review—nothing has changed; the challenges are still the same; the solution is still dual (or actually multiple) ratings:

West Australia adopted a dual rating system many years ago. It's the only way to simultaneously address these two issues:

- 1) Creating competitive handicaps in all sectors.
- 2) Accurately re-assessing horses who travel across sectors.

WA handicappers took a further measure to differentiate between the strength of Metro racing, and the weakness of regional racing. They adopted a policy to raise winners by 4 points at Metro, 3 points at Provincial B and 2 points for a Country win.

Is the Dual rating system in WA working adequately?

Provincial B and Country WA horses racing at Metro Prime meeting

To measure whether the relationship between Metro and Country ratings is accurate I investigated: How do horses that raced recently in lower regions perform when coming to Perth and racing at Metro Prime?

For this study I separated by date ranges: 1 August 2012 – 1 August 2015; and 1 August 2015 – date.

The study is limited to Metro Prime runners that had their previous start in a Provincial B or Country race to the value of < \$30,000.

I listed these tracks as Provincial B: ALBAN, BROOM, ESPER, GLDTP, KALGL, MTBKR, NAGIN and YORK

Seasons	Provincial B	Winners	Strike Rate	Relative Frequency
2012/13-2015/16	400	23	1/17	0.6
2015/16-2017/18	351	13	1/27	0.4
TOTAL	751	36	1/21	0.5

I listed these tracks as Country: PT HE, CARNV, LEINS, MT NE and LEONO.

Seasons	Country	Winners	Strike Rate	Relative Frequency
2012/13-2015/16	11	0	0/11	0
2015/16-2017/18	16	0	0/16	0
* Past 24 months	7	0	0/7	0
TOTAL	34	0	0/34	0

* These 7 country horses raced last start at metro Prime, but had previous race start in Country.

“Relative Frequency” is a measure of the performance compared to the representation. So if the “fair share” were won, the R.F would be 1.0. Fair share can be quantified as 1/field size. For example, average field size might be 10, so a cohort wins its fair share if the cohort wins at 10% rate.

Understandably, a horse that has recently raced in Provincial B is likely to be on average inferior to a horse that raced recently against harder opposition. So it's unsurprising that the R.F is less than 1.0. However, the low and decreasing R.F confirm two things about the cohort's winningness:

1. The cohorts are underrepresented in the winner's stall
2. The cohorts are getting worse.

The degree to which the cohorts may be being over-handicapped is calculable approximately. I can derive this by the R.F and the public market. Public market in Australia is highly accurate, especially after accounting for the long-shot bias, where long-shot runners win at a much lower frequency than their literal odds. The 34 Country horses have started on average >50-1 at Metro Prime. The 752 Provincial B horses have started on average nearly 20-1.

RWWA totalisator and fixed odds require runners to be "in the betting", to maximise turnover.

I estimate that, as a cohort, the horses coming from Provincial B to Metro Prime could be running off a rating 3 points less than currently, and still win at a lower strike rate than 1/field size (their fair share).

Horses coming from Country to Metro Prime could be running off a rating 6 points less than currently, and still win at a lower strike rate than 1/field size (their fair share).

The current typical practice in WA is to give 4 points to the winner of a Metro Prime race; 3 points to the winner of a Provincial B; and 2 points* to the winner of a Country race. Provincial B winners may earn connections a quarter of the prize money of a Metro Prime win. Country winners earn even less. That fact is not lost on WA handicappers.

To offset, WA handicappers give relief by having dual ratings. Let's look at a recent example: TIRRENO = M74/C80. I recommend that the relief needs to be more than currently given. Provincial B winners, whilst already rising by fewer points* than a Metro winner, could be relieved a further point for each of the Provincial B wins. In other words, whilst handicapping appropriately in order that races remain competitive in regional areas, a Provincial B win might earn 2 Metro points; a Country win might earn 1 Metro point. By this reasoning, TIRRENO should be closer to: M68/C80. On my own figures, TIRRENO is racing in the best form of his career. The only thing stopping him from winning is his OHR.

It should be made more attractive to Country owners to take a chance on a trip to Metro Prime. The study shows that a Country horse travels to Perth barely once every few months.

Of course some horses that have come to Metro Prime from Provincial B or Country were already handicapped close to the limit weight, and extra relief would have been pointless—they still would have lost.

Applying a consistent process to determine the relief is important to encourage horses to Metro racing. It's also important for integrity, as perceived by connections of the opposition runners. With increased relief, a country horse (maybe TIRRENO) will eventually win—the above stats need to be remembered whenever such a time comes. Country owners go to greater effort to come to Perth, and need to be encouraged to continue to do so.

Many people site United Kingdom as being able to assign a single rating for all horses. U.K is far more like Victoria, geographically, and in its ability to attract major stables to race at the outlying regions. That's not true in WA or NSW.

Here is a copy of correspondence I received some years ago from Gregory Pearson, former Racing NSW handicapper, who has worked past 7 years for British Horseracing Authority as handicapper and Stipendiary Steward. I have highlighted and underlined 2 points of particular interest. The full correspondence is at the base of this section. **

[1. Great Britain is nothing like NSW whatsoever! It is very much in the mould of Victoria](#)

2. When a horse wins three or four races during the winter season, often against the same horses, it can prove to be over-Handicapped.

That's why it's easy to handicap with a single rating in Victoria, but it can't be done in WA or NSW.

NSW is the state which WA racing resembles most closely, due to its similarly vast geographic diversity, and multiple tiers.

In NSW, handicappers apply what would seem to be extraordinary relief to a well-credentialed Country horse when it comes to a Metro race. But the relief is appropriate. An extreme example is shown in this 3-run snapshot of ZARHRON's form:

HORSE	Date of race	Rating	Finish	SP
ZARHRON	5 Jan 2018	70 M	4 th	\$26
ZARHRON	21 Jan 2018	92 C	Won	\$3
ZARHRON	16 Feb 2018	70 M	Last	\$26

Despite the massive relief in rating points, ZARHRON has raced at Metropolitan tracks on 9 occasions, for one 2nd placing, the remaining eight unplaced. If ZARHRON happened to win eventually at METRO, no one should resent that.

All horses begin racing with an implied rating. In NSW the implied rating is 48 for a horse that starts its career at a Country racetrack. When ZARHRON had won 3 of his first 4 starts, he had a Country rating of 62, at which point his Metro rating was probably entitled to be similar, given that the Metro starting point is 60. From then on, ZARHRON raced mostly in Country, and 9 times at Metro, and each of his 8 Country wins saw him lifted 4 points. Notwithstanding the remainder of his form, it could be observed that an approximate calculation might be that he'd earned $8 \times 4 = 32$ country points: $62 + 32 = 94$. By being lifted 4 points per win, ZARHRON meets his Country rivals fairly and appropriately. But NSW handicappers are also saying that these 8 Country wins are worth nothing like 32 Metro points.

As I wrote above, WA handicappers have been providing relief the following two ways:

1. By awarding fewer points in lower jurisdictions, in the ratio 4:3:2 (Metro: Provincial B: C).
2. By giving additional relief when the horse races at Metro Prime.

What I'd like to see is less of dot-point 1, and more of dot-point 2: Handicap appropriately in the regions—give 4 points to a winner that earns it; and provide greater relief when racing in harder jurisdiction. But arguably, WA participants seem to have accepted the handicapping in their region. It's when their horse races in harder region that they are aggrieved.

Back to ZARHRON: if ZARHRON's OHR was being raised for each Country win by 2 points (as is done in WA), his Country rating would be low-80's; and he'd be unbeatable in Country races—thus unfair to his Country opponents.

Where to from here?

Provincial B winner that has been earning typically 3 points, really only advanced ~2 points measured against the Metro cohort. Notwithstanding the remainder of the horse's form, which must be taken into consideration, if handicappers relieved ~1 point for every Provincial B win when nominated for Metro, the resultant Metro rating would make the Provincial B horse more competitive.

Country winner that has been earning 2 points has really advanced <1 point against the Metro cohort. Notwithstanding the remainder of the horse's form, which must be taken into consideration, Country winners could be relieved at >1 point for every Country victory when nominated for Metro.

If handicappers began merit-rating Provincial B and Country winners, rather than applying fixed penalties, greater relief per win would be required when nominated in Metro Prime.

In a number of the submissions I received, the question was asked: "why can't we handicap to prize money earned"? The methodology described above brings about a similar result. The rating revisions after a win would coincide somewhat with prize money differentials, since a Metro win might earn 5 Metro points, Provincial B win 2 Metro points, and Country win 1 Metro point.

Dirt /sand surface ratings

Some horses are adept on one surface and not another. For example, a dirt surface expert that has repeatedly failed on turf may be given extra relief when nominated at a race meeting to be held on turf.

=====

What I wrote in 2009—nothing has changed; the solution is still dual (or actually multiple) ratings:

Numerous submissions from handicappers, both retired and current declared that a single-line rating across multiple jurisdictions of various strengths is not achievable. In closed horse communities such as Hong Kong, horses are not permitted to race out of their own assigned grade. Rating in such an environment is simple.

I will illustrate by way of example a number of problems faced by handicappers in their endeavour to apply a meaningful rating from which to handicap horses in NSW.

Country horse "A" wins a Country race – the present practice across Australia is to lift his rating, usually 4 points. The same day, Metro horse, B, wins a Metro race – the present practice across Australia is to lift his rating, usually by 4 points. Let's say the 2 horses each had a rating of 64 before they each started in the race described here -

HORSE	SECTOR	FINISH	RATING +/-	NEW RATING	PRIZE
A	C*	WIN	+4	68	\$4,500
B	M	WIN	+4	68	\$45,000

Does it make sense for A and B to be equally assessed (same rating lift) for wins which, correspondingly earn \$\$ at a ratio of 1:10?

Let's look at the RATING impact on A after multiple race starts in the Country -

A	C	WIN	+4	61	\$4,500
A	C	2 ND	+2	63	\$1,500
A	C	WIN	+4	67	\$4,500
A	C	3 RD	+1	68	\$1,000
A	P	4 TH	---	68	\$ 500
A	C*	WIN	+4	72	\$4,500

Let's say B races and wins again in a Metro race. His rating is now 72 (same as A's) and the prize-money differentials are:

A = \$16,500 Rating = 72

B = \$90,000 Rating = 72

Now let's say A nominates for a Metro race. Experientially, the handicappers know, as a certainty, that A has no possible chance if handicapped on a rating of 72. The handicappers have been using "discretion" for years in this circumstance and ignore the 72 rating, handicapping him as if he is rated about 67. Clearly, they are acknowledging that A's 72 rating is flawed – yet the rating methodology that drove A's rating to 72 is employed nationally.

The third problem they have is this:

Let's say A then races in 2 Metro races before returning to Country. If he fails in both M races, his rating is lowered to allow him a more competitive opportunity next start if he runs in M race.

A	C*	WIN	+4	72	\$4,500
A	M	7th	-2	70	
A	M	7th	-2	68	

Now let's say in that C race, horse D ran 2nd to A beaten 2 lengths. Let's say that while A went to Metro and ran 7th twice, D raced at Country and ran 2nd twice. Let's presume that before the C*** race, A and D were equally rated at 68.

D	C*	2 ND	+1	69	\$1,500
D	C	2 ND	+1	70	\$1,500
D	C	2 ND	+1	71	\$1,500

The outcome of this typical circumstance is that, over the short time wherein A & D had these 3 race starts, A beat D by 2 lengths, they won the same prize-money and yet if they meet in a race next start, A will meet D 1.5kg (3 points) better for beating him.

The handicappers in the past have suggested that the solution to these problems would be to either

- ~ Do away with ratings,
- ~ Have 2 different ratings – a Country + Metro rating,
- ~ Have a rating for the purpose of eligibility (fits into the race class RB0-70 for example), but handicappers could weight at their own discretion.

The challenge is to:

- 1) Create competitive handicaps in all sectors.
- 2) Accurately re-assess horses who travel across sectors.

Dominic Beirne, 2009

** Great Britain is nothing like NSW whatsoever! It is very much in the mould of Victoria and thus the Handicapping system works far more effectively and efficiently. You can drive from one end of the country to the other in about 8 hours and whilst certain tracks are traditionally stronger than others and will always

attract entries from the high profile yards, it is not uncommon for high profile yards; to travel their horses far and wide looking for the best opportunity to win races. Just like you have high profile yards venturing to country Victorian tracks that are regarded as being of inferior quality to the strong Provincial tracks.

We get their equivalents turning up right across the country, which leads to strengthening the level of racing at many of our tracks which are not considered to necessarily be in the upper echelon. So I do believe that there is a credible universal rating of horses across the UK - the obvious exception can be when more than half the horse population are not in training during winter and many of the powerful yards spell their horses during the all-weather season—when a horse wins three or four races during the winter season, often against the same horses, it can prove to be over-Handicapped when they come up against the more progressive and less exposed types that are returning from a spell having strengthened up and matured in the interim.

Races which are of a certain class are largely run for the same amount of prize money wherever they are conducted in Great Britain, but moreover it is the world class Handicapping panel that are entrusted with delivering competitive racing and whilst the initial allocation of Handicap ratings is paramount to its success, they also subjectively determine the level of races when updating these Handicap marks.

Gregory Pearson, 2013

7. MINIMUM & MAXIMUM WEIGHTS

In black is the current handicapping policy.

In red are my recommended proposed alterations.

MINIMUM WEIGHTS

	Currently	Future
Metropolitan PRIME	54	54 (53?)*
Group 1	53	52
Group 2	53	53
Metro Midweek & Provincial A	54	54
Provincial B	54	54
Country	55	55
Picnic	65	65

* Case for and against reducing from 54 to 53 is written below

MINIMUM TOP-WEIGHT AT DECLARATION OF WEIGHTS (AR. 103)

	Currently
Metropolitan, provincial & country	59
Group 1 races	58
Two-years-old races	58

Where it is necessary to raise the weight of all runners to achieve the minimum top-weight, the Handicapper will attempt to maintain a minimum spread of weights of 4kg in the metropolitan & provincial areas and 3kg at country venues.

MINIMUM TOP-WEIGHT AT ACCEPTANCES (AR103 & LR103)

A minimum top weight at acceptances of 58kg is applicable to all handicap races. Where a horse is weighted on the declared minimum weight but would otherwise be allotted a lesser weight in the absence of a required minimum weight, the increase in weight shall be applied to the lesser weight.

AGE ALLOWANCES

2yo & 3yo horses racing against older horses receive an age allowance according to the time of the year. It is intended to allow for their comparative immaturity.

In Great Britain, the WFA scale is applied literally to younger horses racing in open-aged handicaps. If in the first half of February an early season 3yo wanted to take on the older horses at 1000m, it would receive a 14lb allowance from all older horses.

My studies show that the WFA allowance that is applied in West Australia provides adequate opportunity for younger horses to win open-aged races. By that I mean, the relative frequency of winning matches the representation.

However, the relative frequency of winning is lower in races at and beyond 1600m. An uplift of WFA allowance in staying races can be tolerated. Such an uplift will provide encouragement and opportunity for a potential staying younger horse, especially when the racing programme may not provide opportunities throughout the year, due to a lack of available staying young horses.

2yo racing in any race open to all ages

DISTANCE	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
All	-	-	-	-	-	4	3.5	3.5	3	3	2.5	2.5
Non-PRIME	-	-	-	-	-	3.5	3.5	3.5	3	3	2.5	2.5
METRO PRIME												
To 1599m	-	-	-	-	-	3.5	3.5	3.5	3	3	2.5	2.5
1600+	-	-	-	-	-	4	4	4	4	4	4	4

AR.45A. Two-year-olds shall not be allowed to start:

1. (a) In a race over a distance exceeding 2,000 metres.
2. (b) In a handicap for which horses over the age of two years are eligible run before the first day of January, or such other date as the Principal Racing Authority concerned shall determine.

3yo racing in Provincial all-aged-maidens & all handicaps

DISTANCE	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
All	2.5	2.5	2	2	1.5	1.5	1	1	0.5	0.5	0	0

3yo racing in Metropolitan PRIME handicaps

DISTANCE	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
To 1599m	3	3	2.5	2.5	2	2	1.5	1.5	1	1	0.5	0.5
1600m+	3.5	3.5	3	3	2.5	2.5	2	2	1.5	1.5	1	1
To 1599m	2.5	2.5	2	2	1.5	1.5	1	1	1	0.5	0.5	0.5
1600-1799m	3.5	3.5	3	3	2.5	2.5	2	2	1.5	1.5	1	1
1800+m	4	4	4	4	3.5	3.5	3	3	2.5	2.5	2	2

Gr 1 & 2	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
To 1599m	6.5	6	5.5	5	4.5	4	3.5	3	2.5	2	1.5	1
1600m+	8.5	8	7.5	7	6.5	6	5.5	5	4	3.5	2.5	2

Gr3 & List	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
To 1599m	5	4.5	4	3.5	3	2.5	2	2	1.5	1.5	1	1
1600m+	7	6.5	6	5.5	5	4.5	4	3.5	3	2.5	2	2

MAXIMUM WEIGHT

“Weight stops trains” is a common mantra in horse racing. As a student of Don Scott, I have great respect for, and have relied for decades on my weight handicap database. It’s true that weight is an important variable for evening a field; and it does stop horses from winning—that’s the point of handicapping. However, the fear of carrying high weights is often exaggerated. Does weight stop trains, or is it rather that the “perception that weight stops trains is harming confidence in WA racing?”

It is a fact that highly weighted horses win at a higher rate than lowly weighted horses. In Australian handicap races, number 1 saddlecloth wins more often than #8 saddlecloth, #2 more often than #9. A horse carrying 60kg is about twice as likely to win as a horse carrying 54kg.

Due to the soft penalties assigned to winners in Australia, it is easier for horses to win as they climb the handicap than in HK for example, where the average penalty is > 6 points for a handicap winner.

I also heard often, and read a lot in the submissions that WA is quite unique. There are some unique properties in WA racing, as a result of the geographic isolation—most notably that WA doesn’t have regular migration from neighbouring States as the Eastern states do. But when it comes to studying large data of handicap weights, the WA uniqueness isn’t as perceived.

Here is a table of performance that looks at horses allocated to carry > 59kg in a handicap in WA, and elsewhere.

Weight allocated > 59kg. Winning strike rate				
2016-April 2018	METRO	P1	P2	ALL
WA	11.6	19.7	15.4	14.3
Other States	12.1	13.3	14.4	13.6

The following table granulates the data whether ridden by jockey or claiming apprentice.

WA Runners with > 59kg				
2016-April 2018	METRO	P1	P2	ALL
JOCKEY	10.8	23.8	18.1	16.5
APPRENTICE	12.0	16.7	11.3	12.4
ALL	11.6	19.7	15.4	14.3

The following table looks at non-WA. races

Remaining States with > 59kg				
2016-April 2018	METRO	P1	P2	ALL
JOCKEY	13.4	12.4	14.4	13.7
APPRENTICE	10.3	12.9	14.6	13.3
ALL	12.1	13.3	14.4	13.6

One standout statistic on the table is WA runners at METRO ridden by a jockey. At 10.8, this percentage is significantly lower than everywhere else in Australia. I suspect strongly that the 10.8 would be much higher but WA trainers aren't contesting at the same rate that trainers in other States are prepared to do.

It should be noted that due to the fear of loss, many highly weighted horses in WA opt to go up in grade, rather than go up in weight. Horses that go up in weight win far more often than horses that go down in weight.

MINIMUM WEIGHT

* Case for and against reducing from 54 to 53 in Metro Prime

The benefit in having weight spread is to distribute the winning chance more evenly across the runners. Effectively, it makes it more difficult to win with top weight than if the range of weights is narrower. It also means that the top weight carries a lower weight, since all weights are based on relative OHR. A horse rated 12 points higher than the minimum will carry 59kg on a 53kg minimum, but would carry 60kg on a 54kg minimum.

When weight spread was increased in NSW a few years ago, I conducted a study after 6 months. My study of the horses that should have benefited—the ones that would have been on the minimum, but then benefited by a reduction of 0.5kg or 1.0kg—showed that they won at a slightly higher rate, and finished a tiny bit closer to the winner, on average. It didn't seem to matter to the extent that I expected. What it did show, as expected, was that the higher weighted horses won a little less often. But the horses with 60+kg still won at a higher rate than the horses down near the minimum.

A consequence of lowering the minimum weight is that the income of jockeys is distributed from the heavier weighted jockeys to the lighter weighted jockeys.

Another consequence is that jockeys may need to be imported to ride the lighter weighted horses, if the jurisdiction doesn't have enough lightly weighted jockeys. North America has easy access to South American boys who are quite light. Australia has access to Asian boys, but the norm has been for them to return to Asia once they've ridden here for a period. Matthew Poon and Victor Wong were greatly successful, but by returning to Hong Kong, the training they achieved in Australia has left our shores.

A few years ago, Racing Australia raised the minimum weight from 53kg to 54kg. Apparently, the body that argued most strongly against the rise was the WA Jockeys Association, which recognised that once a man allows his bodyweight to rise, it's difficult to reduce healthily. Their argument was based on physiology: that if a male allows his weight to rise by 1kg, and his body and lifestyle becomes accustomed, it would be stressful to reduce.

I am indebted to head of the WA Jockeys' Association, Craig Staples for the various studies and opinions he provided me on the topic. Of particular interest was the seminal paper by Dr Vivienne Sullivan.

It is sobering reading when the decision is to be made to ask jockeys to waste more than they already do.

Craig Staples has written the following summaries of the papers and articles:

ATTACHMENT 1

Wasting Away: The Influences of Weight Management on Jockeys' Physical, Psychological and Social Wellbeing.

Vivienne M. Sullivan Faculty of Arts, Education and Human Development School of Psychology

Victoria University

Thesis submitted as a requirement for Doctor of Philosophy

The current study aimed to provide insight into a relatively overlooked area of research: the weight-loss experiences of jockeys and their families. This study has shown that wasting has detrimental effects on jockeys' physical, psychological and social wellbeing and impacts on the lives of their families. Most jockeys consistently use several unhealthy weight-loss techniques to lose a considerable proportion of their body weight, even though they experience negative effects as a consequence. Overall, the results from the current research provide a rare insight into the struggles jockeys have managing weight. Weight restrictions symbolise a range of other restrictions that characterise jockeys' lives. Reports that jockeys engage in track work; travel to race meetings; speak to trainers, owners, racing officials and other jockeys; ride in races; and interact with family and friends, while struggling with the negative effects of wasting are troubling. Adding to this is the concern that many jockeys could be engaging in weight-loss behaviour year-round purely because they find it difficult to take time away from racing for fear of damaging their prospects of future rides. Most jockeys, their family members and racing industry stakeholders recognise the need for change within the Victorian racing industry for the benefit of jockeys. The recommendations generated by the current findings aim to contribute to efforts to improve the physical, psychological and social wellbeing of jockeys and their families.

ATTACHMENT 2

Dr Adrian McGoldrick & Dr Giles Warrington Comments

We know that the male population is increasing in weight by on average of 0.4 kg every 3 years so if anything, weights should be increased. To force riders to make weight as detailed will, no doubt, have detrimental physical, physiological and psychological effects. As a result, the riders will not be riding at their peak so everyone is a loser.

In the last year we have had a situation here where the Trainers Association have approached the I.H.R.B. (Turf Club) and H.R.I. requesting an increase in the weights - a remarkable turnaround, but they see that their riders are getting taller and heavier year on year.

Adrian

"Just to add to Adrian's comments, there is absolutely no sound scientific basis for seeking to reduce the weights. On the contrary all the evidence, as you well know, points to the need to increase them further. Further reducing the minimum weights will only further compromise the health and well-being of the jockeys and put them at greater risk and goes against international practice. For example Ireland has seen noticeable increases in recent years based on the findings of our scientific research and as Adrian points out the Trainers Association has recently requested the minimum weights to rise further.

Giles

ATTACHMENT 3

Psychological effects of rapid weight loss and attitudes towards eating among professional jockeys

MICHAEL J. CAULFIELD & COSTAS I. KARAGEORGHIS

School of Sport and Education, Brunel University, Uxbridge, Middlesex, UK

(Accepted 2 December 2007)

Conclusion: In conclusion, the results of the current study indicate that jockeys who continually undergo periods of rapid weight loss to ride at a lighter weight may experience significant mood disturbance and develop maladaptive behaviours and attitudes towards eating.

Some jockeys may also be vulnerable to the development of eating disorders and should seek professional support in their endeavours to ride at a low weight. Governing bodies must continue to explore the possibility of increasing the minimum riding weight. Finally, jockeys should have access to forms of clinical support that provide practical assistance to help them manage the considerable demands of their sport.

ATTACHMENT 4

An Assessment and Analysis of Dietary Practices of Irish Jockeys

Thesis submitted for the degree of Research Masters.

Gillian O'Loughlin

School of Health and Human Performance

Dublin City University

Study Implications and Conclusion

Making weight and remaining at a stipulated weight throughout the prolonged racing season represents a major challenge to jockeys who compete in this extreme weight category sport.

The population is increasing in size however the weight structures, based mainly on tradition, have not increased accordingly. This puts ever-increasing pressure on jockeys to find ways to unnaturally attain these weights. This is especially the case with young apprentice jockeys who are still maturing, the reliance on unhealthy weight making strategies needs to be limited amongst jockeys.

ATTACHMENT 5

The Impact of Making Weight on Physiological and Cognitive Processes in Elite Jockeys

Eimear Dolan, SarahJane Cullen, Adrian McGoldrick, Giles D. Warrington

Results from this study demonstrate that simulation of race-day preparation through allocating a specific weight of 4% below baseline body mass, to be attained within 48 hr, caused a reduction in aerobic work capacity in a group of professional jockeys. In contrast, no such differences were observed for cognitive function.

The rapid weight loss practices adopted by the jockeys that focused predominantly on dehydration and restricted energy intake were the likely causes of much of this impairment to physiological function—although precise mechanisms remain to be identified. The limited research available to date suggests that horse racing is a physiologically demanding activity, causing jockeys to work close to their VO₂peak. The reduced peak and submaximal aerobic capacity observed in the jockey group following the reduction in body mass may impact on racing performance in this physically demanding sport.

In addition, racing is known to be an extremely high-risk sport (Hitchens et al., 2009), with a high incidence of falls and racing-related injury (Rueda et al., 2010).

Making weight caused jockeys to return to the experimental trial in a dehydrated and apparently energy deficient state, with attenuations to physiological processes, all of which may have both performance and safety related implications for the jockey.

Where feasible, jockeys should therefore be encouraged to adopt more gradual weight loss practices of a lesser magnitude before competition. Typical race riding allocations have been reported as being lower than that which jockeys are capable of comfortably achieving, however (Warrington et al., 2009), and the appropriateness of current racing weight ranges must be called into question.

ATTACHMENT 6

Chronic weight control impacts on physiological function and bone health in elite jockeys

GILES WARRINGTON¹, EIMEAR DOLAN¹, ADRIAN MCGOLDRICK², JOHNSON MCEVOY³, CAROLINE MACMANUS⁴, MICHAEL GRIFFIN⁴, & DECLAN LYONS⁵

Conclusion

In conclusion, low bone mineral density, high levels of dehydration, minimal body fat percentages, and a high number of racing-related injuries were prevalent in this athletic group.

These factors may have a considerable impact on the health and physiological function of the jockeys. Such factors are likely to be caused, at least in part, by certain weight-making practices, such as energy and nutritional restrictions and dehydrating techniques such as the sauna.

Based on the results of this study, the appropriateness of current weight restrictions must be called into question and reviewed as a matter of priority.

Further research is required to evaluate the short and long-term impact of chronic weight maintenance on physiological and cognitive function and long term health and performance in this group of athletes.

ATTACHMENT 7

'THEY JUST WANT TO RIDE': SMALL CHANGES IN SCALE OF WEIGHTS HAVE BIG IMPACT ON JOCKEYS' HEALTH

By Natalie Voss for the Paulick Report

Dr. Kelly Ryan, sports medicine physician at MedStar Sports Medicine, said there could be more serious impacts of dehydration, too.

Heart rates increase when the body is dehydrated because there is a lower volume of blood flowing through the body; kidneys can struggle, and may be followed by the liver and other organs in cases of dehydration combined with overheating.

Riders may have difficulty maintaining body temperature and may not be able to sweat as normal. All of this is amplified on hot, humid days as jockeys go to the post in long sleeves under a safety vest and helmet.

ATTACHMENT 8

The impact on health in jockeys due to demanding weight requirements in horse racing and nutritional strategies to help minimise the damage.

By Lee-Ann Wann

Key Points:

Jockeys are required to achieve very specific body weights to be able to obtain rides on race days.

Many jockeys are not naturally the required weight and struggle to make weight in a healthy and sustainable manner.

It is widely accepted for jockeys to severely restrict calories and employ rapid weight loss practices to achieve required race day weight.

Such practices can cause significant damage to the health and well-being of jockeys.

Implementing basic, fundamental nutritional strategies could minimise the damage caused by these weight-making practices.

ATTACHMENT 9

Bone density and body composition in newly licenced professional jockeys.

K. A. Jackson; M. T. Sanchez-Santos; A. L. MacKinnon; A. Turner; K. Kuznik; S. Ellis; C. Box; J. Hill; M. K. Javaid; C. Cooper; N. K. Arden & J. L. Newton

This study in a large, representative group of professional, entry-level jockeys has confirmed that 29% of newly licenced male, flat jockeys have a very low BMD (Z-score ≤ -2) in their spines.

This is occurring at an age when these young jockeys are reaching their peak bone mass, which strongly influences future bone health and fracture risk.

What is currently less clear is how less-than-optimal bone health influences immediate fracture risk in these young jockeys. The male, flat jockeys have a significantly lower BMD at the spine than female flat jockeys, which is the reverse of the normal population.

This study also identified that flat jockeys appear to have a proportional lower LM than would be expected in both the normal population and other low-weight sports.

The study cohort was young and so maturation may contribute to these findings.

This study provides robust evidence of poor male jockey bone health to support previous findings as well as body composition data on a large jockey cohort.

We would recommend further research establishing the relationship between poor bone health in newly licenced jockeys and subsequent injury in this population, as well as the relationship between body composition and rates of falls and injury.

ATTACHMENT 10

The Effects of Jockey Extreme Dieting to Injuries on the Track

Lessening the health risks on and off the track by increasing weight allowed

Authors: Brooke Domino and Julie M. Fagan, Ph.D.

Lower the Weight, the Higher the Injury

Due to extreme dieting of the jockeys, they often increase the risk of injury themselves. When jockeys partake in these unhealthy dieting behaviours they create “short and long-term health effects such as: dental erosion, nutritional deficiencies, menstrual irregularity, low bone density, dehydration, [and] heat stress” which many affect them on race day (“Bulleated summary”, p.4).

Due to malnutrition often from lack of eating or heaving, they create a lower bone density making the likelihood of breaking a bone more probable when compared to an average person of their size.

ATTACHMENT 11

Nutritional, lifestyle, and weight control practices of professional jockeys

EIMEAR DOLAN, HELEN O’CONNOR, ADRIAN MCGOLDRICK,

GILLIAN O’LOUGHLIN, DEIRDRE LYONS, & GILES WARRINGTON

The need to relentlessly align body mass with racing limits appears to encourage the use of short-term and potentially dangerous acute weight loss strategies in an attempt by jockeys to optimize riding opportunities.

The detrimental effect of “making weight” or attainment of the required body mass may be further exacerbated for professional jockeys because they must maintain the designated weight during each ride, often over an entire day of rides, with limited opportunity to replenish energy or rehydrate.

Many professional jockeys do this almost daily for the duration of their career with no defined “off season” when diet and body mass can be normalized. Acutely cutting body mass for competition may have severe health implications.

MINIMUM & MAXIMUM WEIGHTS – this copy of the current policy is clean of my suggested alterations.

MINIMUM WEIGHTS

	Weight in kg
Metropolitan PRIME	54
Group 1 and 2	53
Metro Midweek & Provincial A	54
Provincial B	54
Country	55
Picnic	65

MINIMUM TOP-WEIGHT AT DECLARATION OF WEIGHTS (AR. 103)

	Weight in kg
Metropolitan, provincial & county	59
Group 1 races	58
Two-years-old races	58

Where it is necessary to raise the weight of all runners to achieve the minimum top-weight, the Handicapper will attempt to maintain a minimum spread of weights of 4kg in the metropolitan & provincial areas and 3kg at country venues.

MINIMUM TOP-WEIGHT AT ACCEPTANCES (AR103 & LR103)

A minimum top weight at acceptances of 58kg is applicable to all handicap races. Where a horse is weighted on the declared minimum weight but would otherwise be allotted a lesser weight in the absence of a required minimum weight, the increase in weight shall be applied to the lesser weight.

AGE ALLOWANCES

2yo all races

DISTANCE	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
All						4	3.5	3.5	3	3	2.5	2.5

3yo Metropolitan handicaps

My own note: WFA allowance for 2yo in July is 2.5kg, yet increases to 3.0kg for August 3yo. I presume this policy is in place to maximize 2yo field sizes.

DISTANCE	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
To 1849m	3	3	2.5	2.5	2	2	1.5	1.5	1	1	0.5	0.5
1850m+	3.5	3.5	3	3	2.5	2.5	2	2	1.5	1.5	1	1

3yo Provincial all-aged-maidens & all handicaps

DISTANCE	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL
All	2.5	2.5	2	2	1.5	1.5	1	1	0.5	0.5	0	0

8. GROUP RACES IN WA

Tables copied or derived from 2015/16 Australian Racing Fact Book

Group	WA black type races as a % of all AUS black type races	WA starters as % of all starters in AUS	WA Group prize money as a % of all prize money in AUS *
1	4 %		
2	6 %		
3	10 %		
4	19 %		
TOTAL	13 %	12%	8%

* WA pays less than average prize money due to the fact that WA Group races are predominantly lower-end Black Type, LISTED.

About 11% of all races in Australia are held in Western Australia. This percentage hasn't fluctuated materially since 2003/04.

Conclusion: By this measure, WA is equitably represented in so far as Black Type races are concerned.

GROUP RACES by number

Group	NSW	VIC	QLD	SA	WA	TAS	TOTAL
1	27	30	8	4	3		72
2	40	37	9	3	6		95
3	53	58	17	12	16	4	160
4	52	76	45	28	51	12	264
TOTAL	172	201	79	47	76	16	591

GROUP RACES average prize money, by rank order of State

Group	NSW	VIC	QLD	SA	WA	TAS
1	1	2	4	5	3	
2	3	5	4	2	1	
3	5	1	6	3	4	2
4	2	1	3	5	4	6

RWWA ambition:

1. Find out which are the most highly rated Listed and Group 3 races
2. Consider whether a lift in Prize money might encourage stronger fields, resulting in these races being promoted.

Availability of lead up races to feature Group races

I received scant submissions complaining of gaps in programming en-route to feature races.

I've reviewed many of the feature races and I conclude that there are reasonable lead-up races available.

With regard to the 3yo Classic races, the Derby and Oaks, a larger WFA allowance for 3yo at 1800m+ Metro Prime provides more choice to W.A Derby and Oaks candidates, since some horses may be suited by longer or shorter lead-up time and alternative distance of the current lead up races. Nominees aged 3yo might be prioritised in the ballot in Metro Prime 1800m+ 3yo+ BM+ and Restricted races in March and April.

9. APPLICATION OF HANDICAP POLICY

Templates – are they helpful or not?

Templates were introduced to provide trainers with advanced knowledge of the likely handicap weight to be allocated. This knowledge would be used when booking jockey, and for trainer to discern whether happy or not to have horse carry the weight.

The arithmetic is so basic, that all trainers know now as 2nd-nature that their horse will be allocated $(0.5 * (\text{OHR} - \text{BM}\#) + \text{Minimum weight})$.

I've heard mixed reviews over the years from various handicappers. I'm sure that some would prefer there be no template.

In my section on programming, I refer a number of times that certain races should be handicapped depending the OHR of the nominees. Templates tend to cement in stone the race base, and hence the trainer's expectation of weight to be allocated, making it difficult for handicapper to be flexible.

Long handicap at declaration of weights

In 2009 WA was the front running State to introduce Long handicap in order to ensure appropriate weight spreads. It is an excellent policy.

Reclassifying BM# at acceptance time

The following examples are published for the sake of public information and education.

The first 5 examples are different scenarios of the same race, with 8 nominees.

Race is programmed as BM66+ metropolitan Prime, minimum weight 54kg, all runners are 4yo+, so no age allowances need to be accounted for.

Eight nominees: A, B, C, D, E, F, G and H

Official Ratings displayed in Column 2

Weights declared as displayed in Column 3.

Horses that accept displayed in Column 4.

Field declared with handicaps displayed in Column 5.

Finalised BM# classification displayed in red in the first Cell of Column 5.

Example 1 –All 8 accept: classification remains BM66+. Weight range 10.5kg

Nominee	Rating	Declare	Accept	BM66+
A	87	64.5kg	A	64.5kg
B	84	63	B	63
C	82	62	C	62
D	80	61	D	61
E	78	60	E	60
F	72	57	F	57
G	68	55	G	55
H	66	54	H	54

Example 2 – Bottom 5 accept: classification remains BM66+. Weight range 7kg

Nominee	Rating	Declare	Accept	BM66+
A	87	64.5kg		
B	84	63		
C	82	62		
D	80	61	D	61kg
E	78	60	E	60
F	72	57	F	57
G	68	55	G	55
H	66	54	H	54

Example 3 – Top 6 accept: weights lowered 2kg at acceptance time to give weight relief; therefore new classification BM70+. Field declared as shown in column 5. Weight range 7.5kg

Nominee	Rating	Declare	Accept	BM70+
A	87	64.5kg	A	62.5kg
B	84	63	B	61
C	82	62	C	60
D	80	61	D	59
E	78	60	E	58
F	72	57	F	55
G	68	55		
H	66	54		

Example 4 – BCDEF accept; weights lowered 2kg at acceptance time; therefore new classification BM70+. Field declared as shown in column 5. Weight range 6kg

Nominee	Rating	Declare	Accept	BM70+
A	87	64.5kg		
B	84	63	B	61kg
C	82	62	C	60
D	80	61	D	59
E	78	60	E	58
F	72	57	F	55
G	68	55		
H	66	54		

Example 5 – Bottom 3 accept – weights raised 2kg at acceptance time; therefore new classification BM62+. Field declared as shown in column 5. Weight range 3kg

Nominee	Rating	Declare	Accept	BM62+
A	87	64.5kg		
B	84	63		
C	82	62		
D	80	61		
E	78	60		
F	72	57	F	59kg
G	68	55	G	57
H	66	54	H	56

Example 6 – The nominees for this BM66+ include EFGH from above, plus 4 horses that are out of the handicap (OOTH)—defined as having official rating less than the base, which was 66+ in this case.

The column “Long Hcp” displays the real weight difference if these horses were able to compete with no minimum weight.

Nominee	Rating	Declare	Long Hcp	Accept	BM66+
E	78	60	60	E	60
F	72	57	57	F	57
G	68	55	55	G	55
H	66	54	54	H	54
I	64	54	53	I	54
J	62	54	52	J	54
K	60	54	51	K	54
L	59	54	50	L	54

Example 7 – Nominees are same as Example 6 above. Horse E doesn't accept. Weights raised 2kg, at acceptance time. Base of race is lowered 2kg (4 points), and is now handicapped and published as BM62+

Nominee	Rating	Declare	Long Hcp	Accept	BM62+
E	78	60	60		
F	72	57	57	F	59
G	68	55	55	G	57
H	66	54	54	H	56
I	64	54	53	I	54
J	62	54	52	J	54
K	60	54	51	K	54
L	58	54	50	L	54

AR 103(2) and 103(3):

- (2) The top weight allocated for handicap flat races must not be less than 59 kilograms, except for Group 1 handicap races and races in which 2yos only can run, for which the allocated top weight must not be less than 58 kilograms.
- (3) Notwithstanding the provisions of sub-rule (1), if at the declaration of acceptances for a handicap flat race the weight allocated to the highest-weighted acceptor (including any extra weight by way of re-handicap or penalty) is less than 58 kilograms, or less than a higher weight determined by a Principal

Racing Authority, then allocated weights for the race must be increased until the highest-weighted acceptor is weighted at not less than 58 kilograms

At acceptances, this race could have had top weight 58kg, but the words “not less than 58kilograms” provide opportunity for RWWA to allocate the top weighted horse 59kg. I believe this is what RWWA does.

Example 8 –Horses D, E, F are the only acceptors. The 3 acceptors are handicapped to carry 61, 60 and 57kg. There is room to relieve each of them by 2kg without impacting the relative handicaps, resulting in an average weight carried this race being closer to the season average carried weight in WA of 56.5kg. Weights are lowered 2kg at acceptance time.

Nominee	Rating	Declare	Long Hcp	Accept	BM68+
D	80	61	61	D	59
E	78	60	60	E	58
F	72	57	57	F	55
G	68	55	55		
H	64	53	53		
I	62	53	52		
J	60	53	51		
K	58	53	50		
L	56	53	49		

The following rules would apply to handicap races (not under Quality handicap conditions) with Minimum weight 54kg.

1. At acceptances, if weight-spread is greater than 5.5kg, and the bottom weight has less than 55.5kg, the weights will stand. If the bottom weight has more than 55kg, the bottom weight will be reduced to 55kg, with a maximum reduction of 2kg.
2. At acceptances, if weight-spread is between 3kg and 5kg, and the bottom weight has less than 55.5kg, the weights will stand, provided that the top weight must be no less than 58kg. If the bottom weight has more than 55kg, the weights will be reduced so that the bottom weight has 55kg, with a maximum reduction of 2kg.
3. At acceptances, if the weight-spread is less than 3kg, and the bottom weight has less than 56.5kg, the weights will stand, provided that the top weight must have no less than 58kg. If the bottom weight has more than 56kg, the weights will be reduced so that the bottom weight is 56kg, provided that the top weight must be no less than 58kg.

In all cases, the maximum allowable reduction will be 2kg, inclusive any reduction that occurred at declaration of weights. Hence the lowest reduction from the calendar advertised BM# would be 4 points.

Example 9 – Quality handicap conditions

Presented fully in the Section titled: Merit Based versus Fixed Penalties

Background: The maximum top weight under Quality handicap conditions varies from state to state between 60kg and 62kg. In WA the maximum is usually 62kg.

The WA template shows that a horse rated 107 may be allocated 61kg in a Listed handicap. Ergo, the “standard” base of a Listed handicap is considered to be 93+, since there would be 7kg from top weight to minimum weight, 54kg.

In the imaginary example below, K is rated 117 when nominated for a Listed handicap race, under Quality conditions. He exceeds the standard Listed handicap horse carrying 61kg by 10 points. If K accepted to race, the weights would stand as declared in Column 3, headed "Declared". If K did not accept, the weights should be spread as in Column 6, headed Final Field.

The alternative final field—as would be declared in some States would be as italicised in the final column 7. If handicapped as in the final column, this field is not competitive in the way that it ought to be. The lack of competitiveness would have come about because an over-rated horse nominated, but then didn't accept. The example also gives rise to the question as to the motive of the over-rated nominee, if it accepts, but is subsequently scratched, particularly if the stable has other runner(s) nominated.

Nominee	Rating	Declared Implied Race strength: BM101+	Long Hcp (true hcp spread)	Accept	Final Field: Listed BM93+	<i>Final field if no long hcp.</i>
K	117	62	62			
L	103	55	55	L	59	<i>58</i>
M	101	54	54	M	58	<i>58</i>
N	99	54	53	N	57	<i>58</i>
P	97	54	52	P	56	<i>58</i>
Q	95	54	51	Q	55	<i>58</i>
R	93	54	50	R	54	<i>58</i>
S	91	54	49	S	54	<i>58</i>

Long handicaps guard against potential manipulation of the weight spread under Quality conditions.

In the event that the top weight accepts, and is scratched, there may be an investigation to see if AR68 has been breached.

AR.68A. (1) No person shall enter or cause to be entered a horse in a race with the primary purpose of affecting the weight to be allocated to any other horse entered in such race.

(2) No person shall declare or cause to be declared any horse as an acceptor for a race with the primary purpose of affecting either the weight allocated to any other horse that is accepted for such race or the total number of horses accepted for such a race. *[Replaced 1.9.09]*

(3) Any person who, in the opinion of the Stewards, is guilty of a breach of this rule may be penalised and the nomination or acceptance for the horse may be rejected or cancelled.

(Amended and reframed 1.10.06) [Amended 1.9.09]

(4) If in the opinion of the Stewards there has been a breach of sub rule (1) of this Rule, the Stewards may, if practicable, direct the Handicapper to reissue a set of revised weights. *[Added 1.9.09]*

Miscellaneous comments:

Jockey's Overweight

The amount by which a jockey is overweight due to being too heavy to ride at the allocated weight is accounted for when handicappers revise post-race OHR. That's fair enough if the connections elected to engage that jockey. However if the overweight is due to circumstances that were out of the connections' hands, I recommend that the overweight not be accounted. For example, when the rider is disallowed to ride by the club doctor or stewards, and there is no lighter jockey available.

2yo SWT and 3yo SWT

Reconsider the penalties for multiple wins. Currently the policy is 2kg for first win, 1.5kg for 2nd win, 1.0kg for subsequent wins. I'd suggest each win earns 2kg.

Once a horse has won and been assigned its rating, I recommend that its OHR be updated after each following run.

Handicapper – access and communications

The WA handicapper might take a higher profile by being interviewed on radio, or posting blogs to discuss the past week's highlight performances, and to explain reasoning behind various OHR he's assigned.

Access to handicappers might be limited to certain times of the day, rather than ad-hoc interruption to his productivity. Approaches to handicapper might be in writing via email, handicapper to follow-up having considered the complaint or enquiry.

Not accepting due to drawing a wide barrier.

One topic listed as part of my review was to determine if current policies and methodology are maximising attractiveness of racing product to the punter. I believe increasing average field sizes above the current average would be more attractive to the punter.

The W.A barrier draw being done at declaration of weights, not at acceptance time is unique to W.A and has been the practice for decades. Many connections choose to not accept with advanced knowledge that their horse is highly likely to have a double-digit barrier. It is obvious to all racegoers that a horse is more likely to win from a low or middle draw than from a high draw. But is the practice of not accepting, and hoping to be drawn more favourably in a future week the clever thing to do commercially?

In order to answer the question, I will make some generalisations and approximations:

I looked at data back to season commencing August 2000. In an 11-runner race, a horse has about 2/3rds as much chance from barrier 11, as from middle barrier 6. Similarly, in a 13-runner race, barrier 13 has about 2/3rds the chance of barrier 7.

Let's say there are 10 other runners each week in the race of your class. Let's say you draw outside, and decide to not accept, preferring to race in 2 weeks, hopeful to get better barrier. Let's say that you have to wait 2 weeks for a race wherein your horse would be similar odds (setting aside this factor of barrier#). There is an even chance of getting any of the 11 barriers, so I'll work on drawing barrier 6/ 11 in 2 weeks' time.

In 70k race, \$4k to jockey, each runner could be considered on average to have 66k/11 worth of value. Middle barrier 6 could be considered "average" and is therefore worth \$6,000.

In the race foregone this week (the race you didn't accept), the value of your runner would have been \$4,000. To put it another way: the opportunity cost of not running this week is \$4,000.

Cost of training a horse in full work with nominations, vet etc., might be \$1,000 per week.

The impact of the decision whether to race first week only, scratch from the first week and run second week only, or run both weeks could be summarised as:

1. Race this first week value is \$4,000
2. Race in 2 weeks time, value = \$6,000 minus cost of training \$2,000 = \$4,000
3. Race both weeks, value = \$8,000

The quantum of the impact varies depending the odds of the horse. A horse that is likely to start \$4.00 chance might be calculated as:

1. \$8,800
2. \$13,200 minus \$2,000 = \$11,200
3. \$20,000 (discountable of course if wins week 1)

My conclusion: not accepting due to fear of failure from barrier >10 is hard to justify commercially.

Penalty to handicap winner that is significantly out of the handicap (SOOTH) where significantly may be ≥ 10 points.

For SOOTH winner, cap the penalty as the higher of the amount by which:

1. OOTH + 1 point, or
2. OOTH + highest penalty given to a runner that was in the handicap.

Re 1: This penalty will be large enough. [OOTH + Standard penalty] is too penal.

Re 2: The penalty to runner-up or 3rd placing, if in the handicap, would rarely exceed 2 points.

Penalty to handicap winner that was eligible for age allowance, but can't take full age allowance due to the allocated weight being the minimum weight

The situation of VITAL DANCER was raised at the submission stage of my review. VITAL DANCER was rated 62 and was eligible for 2.5kg age allowance when it won Metro Prime BM62+ in October. Essentially this circumstance is identical to racing 5 points OOTH. To put it another way, VITAL DANCER actually ran off a rating of 67.

VITAL DANCER performance rating = [Base + race strength + OOTH] = 62 + 3 + 5 = 70.

The consequent 8-point penalty seems onerous compared to winning a race restricted to 3yo where the average penalty is 4 points (side note: I rate the race strength as 3, not 4).

The problem with a 4-point penalty (OHR=66) would be if VITAL DANCER raced again in open age BM62+, the age allowance would reduce its allocated weight back to the minimum, thus the penalty for winning previous start would have been zero. The decision was made to rate the horse 66, but if nominated for open-age race it is ineligible for age allowance.

The facts are that it did performance-rate 70, and the trainer ought to have been aware that winning would incur a penalty inclusive the age allowance. As it has turned out, subsequent performances have shown that the horse's ability was 66, not 70. Does that make the practice correct?

Handicappers across the country will have different views this topic. Mine is this:

VITAL DANCER rating next start = [62 + 3 + 5 + (age allowance this month - 5)]

= [62 + 3 + age allowance this month]

If VITAL DANCER didn't race until 4yo, I think it is reasonable that he returns to racing with OHR=65.

Is the available data being maximised?

Regressing data from previous years is a valuable way to programme for the pool of horses that may be available. Monthly and seasonal data are highly likely to be instructive as to the horses that may be available this year by jurisdiction, class, distance and OHR.

10. LIFETIME MINIMUM RATING FOR HORSES THAT HAVE REACHED CERTAIN PRIZE MONEY

I'm unaware anywhere that applies such an inhibitor to entry.

The horse that this limitation would apply to is bound to be one with a history that's linked to some former relative glory. If the current, lower OHR has been determined fairly and is a true reflection of the horses' current ability, "the ratings should be allowed to do their work", as was quoted to me by a leading West Australian trainer when I interviewed him.

An alternative restriction might be to place a condition on BM+ races that makes ineligible any horse that has won > "x"\$. Whatever "x" is in the equation, it's going to meet opposition. I think the restriction would not be worth the battle, and future criticism, as it will apply to very few horses.

Let's investigate whether the fear of such horses is founded:

Does an accomplished horse with diminishing OHR have an advantage?

One of the reasons to introduce Ratings Based handicaps was to provide opportunity for horses that may have been falling in form. Many horses produce their best performance at a young age, win a bunch of races, and struggle to return to that level.

Such a horse that is past its prime, but still physically well to race, may have a current rating well below its Personal Best. For example, a horse with OHR of 70, down from 90 is able to win a BM64+, but under the old systems would be forced to race in open company, where it is now outclassed—it's simply too slow—unless it migrates to much weaker jurisdiction. The owner, one of two demographics along with punters, putting on the show may not want that.

I heard regularly and read in submissions that it's unfair for "my horse with one win to race against a horse with multiple wins". The solution was suggested: "my inexperienced young horse has to meet a horse with many wins if they meet in BM+ race, so all races should be classified by the number of wins: Class 1, class 2 etc."

WA participants are not alone in this view. On Sydney radio this week I heard one of our best trainers talking about his horse that would have put up a picket fence of wins, but for the wins being interrupted by a failure in a BM# handicap race. "The Benchmark system isn't working for this horse", he said.

The fact is that if that horse went back into that BM race with that same weight, it would start \$1.30 and would be likely to walk in. There are many variables that can be attributed to underperforming. Zeroing in on one as the categorical reason is often misleading. I doubt it was the BM system that got it beaten.

Perception is everything to many, but is it true when you study larger sample size? In other words, should participants form a conclusion from a narrow number of experiences, or look at the big picture?

I thought it important to test the theory: "Does the horse with many wins have an advantage in RB or BM races?"

The study was divided into two 3-year groups, 2012-2015 and 2015-2018.

The study looked at lower level RB and BM races that would reasonably be presumed to have horses that had won a various number of races. I had the study divided into "Metro Midweek & Provincial A" and "Provincial B".

The study isolated races where there was at least one horse that had previously won 6 or more races.

The study compared such horses to the remainder of the runners in the race (horses that had won less than 6 races).

By this study, I should be able to measure whether "horses that have won a bunch of races are unfairly advantaged in BM+ handicaps".

The answer was that in both timeframes, the horse that had an advantage by number of previous wins underperformed the remainder of the horses: they were beaten further. Hence, on average, they finished beyond midfield.

The cohort of horses that had won <6 races included those that were badly handicapped, due to being over-rated Maiden winners. One would reasonably have expected the 6+ winners to have an advantage over them.

Lower Class Benchmark and Ratings Based Races

Race Prize money < \$30,000

Metro & Provincial A

Season	Group	Count	Median LBW
Aug 2012 - July 2015	6+ Previous wins	105	3.5
Aug 2012 - July 2015	All in these races	843	3
Aug 2015 - Apr 2018	6+ Previous wins	55	4.5
Aug 2015 - Apr 2018	All in these races	1077	3.8

Provincial B

Season	Group	Count	Median LBW
Aug 2012 - July 2015	6+ Previous wins	854	4
Aug 2012 - July 2015	All in these races	8800	3.7
Aug 2015 - Apr 2018	6+ Previous wins	658	3.8
Aug 2015 - Apr 2018	All in these races	3764	3.5

I outsourced this study to Daniel O'Sullivan from The Rating Bureau.

In U.K or H.K a horse may be relieved 20+ points in a single season. I'd like to see out of form well-tried horses in Australia relieved more quickly than current practice. Inevitably, as such a horse finds itself in lower BM+ races, it would most likely be the highest prize money winner in the race. If such a horse happened to win comfortably off the greatly reduced OHR, it may be entitled to a higher than normal rating lift.

It is obvious that in such a large sample as tabled above, there have been winners that have upset people. It's important to acknowledge that the large data shows, on average, that such horses are handicapped appropriately, not with an advantage.

The "lifetime minimum" rule would be a deterrent to a WA owner purchasing an accomplished Eastern States horse that was out of form, and slipped down the ratings scale.

My recommendation: I recommend that RWWA doesn't create policy that limits how far a horse's OHR may descend.

11. WHAT SYSTEMS OF PROGRAMMING AND HANDICAPPING ASSISTS IN MAXIMISING FIELD SIZES?

Summary answer:

To assist in optimising field sizes, merit-based handicapping is optimum.

To assist field sizes, a variety of programming is optimum.

How healthy are WA field sizes?

The following tables display the average field size and normalized win probability of the favourite, by class at Metropolitan and Major Provincial tracks.

The tables show that at this stage there is no measureable difference in field size whichever class system is used.

	CLASS	FIELD SIZE	PROB_FAV
METRO PRIME	MAIDEN	12.9	0.28
	BM+	9.8	0.32
	RESTRICTED	10.8	0.31
	HCP	10.1	0.31
	WFA	10.2	0.37
	SWP	10.2	0.36

	CLASS	FIELD SIZE	PROB_FAV
METRO MIDWEEK	MAIDEN	12.1	0.33
	CLASS 1	11.1	0.32
	CLASS 3	10.8	0.30
	CLASS 5	10.7	0.27
	CLASS 1-6	10.9	0.30
	3 YO	10.2	0.34
	RESTRICTED	9.8	0.34

PROVINCIAL A	CLASS	FIELD SIZE	PROB_FAV
	MAIDEN	11.0	0.35
	BM+	10.7	0.32
	CLASS 1	10.2	0.32
	CLASS 3	10.4	0.29
	CLASS 5	9.2	0.30
	CLASS 1-6	10.1	0.30
	3YO	10.3	0.36
	RESTRICTED	10.3	0.30
	HCP	10.6	0.32

How are WA Field sizes in similar classes faring across the jurisdictions?

CLASS	METRO PRIME	METRO MIDWEEK	PROVINCIAL A
MAIDEN	13	12	11
CLASS 1-6		11	10
BM+	10		10.5
RESTRICTED	11	10	10.5
HCP	10		10.5
WFA	10		
SWP	10		
3 YO		10	10

There is room for improvement increasing field sizes at Metro Prime.

Associated to the question of field size should be an investigation of the horse population, since that's where the fields come from. Are there any trends in horse population of which the industry needs be aware?

Compared to other States, the number of horses racing in WA is shrinking.

I derived the following data from the Australian Racing Board's Fact Books.

Comparison total number of runners in a season			
STATE	2016/17 compared to average of previous 8 seasons	Peak 2-year period	2016/17 numbers compared to average of the peak 2-season period
WA	- 8.7%	2010/12	- 16.6%
NSW	SAME	2012/14	- 2.3%
VIC	- 2.3%	2008/10	- 4.5%
SA	- 3.2%	2010/12	- 8.3%
QLD	- 4.8%	2008/10	- 12.4%
TAS+ACT+NT	- 8.8%	2009/11	- 13.5%

Column 2, the 2016/17 season compared to the average of previous 8 seasons.

Column 3, the peak 2-year period each State

Column 4, the 2016/17 season compared to the "peak" period—the highest average for any 2-year period during this 8 years.

% Of Australian breeding stock that are in WA			
Year	% Of all Stallions	% Of all Broodmares	% Of all Foals
2015	11	10	8
2014	11	10	9
2013	11	11	9
2012	11	12	10
2011	12	12	10
2010	11	12	11
2009	12	12	11
2008	11	12	11
2007	11	12	12

The number of foals being born is shrinking. There are fewer Mares being served, where are they?

Answer: They're at the racetrack:

FEMALE RUNNERS as a % of all runners this age			
Age	2008-09	2012-13	2016-17
2yo	43	48	52
3yo	45	45	41
2yo + 3yo	44	46	44
4yo	36	38	42
5yo	30	35	34
6yo	22	24	26
7yo	10	18	19
8+yo	5	9	12

Also to note:

By comparing 2008 to 2016, owners are holding back male horses from starting at age 2, but by age 3, the ratios have normalized and 5/9 horses that have started in a race at age 2 or 3 are male.

By holding back males, one would expect them to last longer at the racetrack. So the only explanation for the increasing % of runners being female in later years is that owners aren't sending their mares to breed.

WA ownership base is growing older, and not being replaced by young participants.

% Of Owners > 50 years old		
SEASON	WA	AUST
2016	51.7	50.9
2015	50.3	50.3
2014	49.4	49.6
2013	47.9	48.4
2012	46.8	47.9
2011	46.6	47.4
2010	45.2	46.5
2009	44.4	45.5
2008	43.7	44.7
2007	43.5	43.9
2006	43.4	42.7
2005	42.6	41.6

Programming

Review of current programming:

My study of the programming that has been available to participants over the years is that the department is doing a pretty good job. It is apparent that classes have been changing with demand, the lowering over time of OHR, and the expectations of trainers. Naturally there are some holes in the system—periods of time wherein a race class doesn't have a race distance.

I was surprised how few submissions I received concerning programming. As an outsider to WA racing, I recognise that local participants have extensive knowledge and experience. Not many shared that knowledge, or their opinions at the submission stage, April 2018.

I have been provided by RWWA the race programmes for seasons 2016/17 and 2017/18. I have rearranged these data by jurisdiction, racecourse, class and distance. These will be made available to all racing participants on RWWA CRIS website in order that participants may take a closer look, and provide feedback.

Provincial A:

There has been a significant sway in recent times at the Provincial A, from BM+ and RB races to the old Class 1-6 system.

Some would be happy to revert entirely to the Class1-6 system; others referred favourably to the system from decades ago, which list I found on Page 114, Don Scott's *The Winning Way*, 1982: Maiden, Improvers, Progressive, Intermediate, Advanced, Approved, Novice, Transition, Encourage and Welter. Once a horse went up, it stayed up in the higher class. There were circuits for Country, Provincial and Metropolitan.

12. FUTURE PROGRAMMING:

After consultation with the racing department, reading and hearing submissions, and studying the programmes, my recommendations for consideration are tabled below.

Next year's programme will provide 3 additional open races (non-Group and Listed). There will be at least 12 more BM78+ races programmed, mostly in the 2nd-half of the season. The number of Group and Listed races is maintained at 78.

Some changes I suggest to future programming might be made immediately, whilst some may be introduced over time.

Metro PRIME	Future	Frequency	Notes
MAIDEN 4YO+		Alternate weeks**	Handicaps dependant on nominees' OHR
0MW 4YO+			
0MWLYR 4YO+*			
1MWLYR	BM64+		Handicaps dependant on nominees' OHR
R2MW	BM70+?		Handicaps dependant on nominees' OHR
R3MW	BM75+?		Handicaps dependant on nominees' OHR
BM+	65+	10 per 4 weeks	Throughout most of the year
BM+	70+	4 per 4 weeks	Throughout most of year, fewer in 2019/20
BM+	75+	6 per 4 weeks	Throughout most of the year
BM+	80+	4 per 4 weeks	Throughout most of year, increased frequency in 2019/20
OPEN HCP	85+-90+		Phased up, so not less than 88+ by 2019/20
Other			

* 0MWLYR might be reclassified better to allow inclusion of a horse with zero wins past 7 starts.

** These 3 classifications would share Metro Prime, alternate weeks in winter. In other seasons, consider 2/3 these classes to build Metro Prime meetings to 9 races.

MIDDLE DISTANCE / STAYING 3yos in open age handicaps:

Elsewhere in this review I recommend an increase in the Metro Prime 3yo allowance at 1800m+ in order to encourage more young horses to staying races—that might keep some horses in the Metropolitan area longer.

Provincial A + Midweek Metro

Some of the suggestions I make below may be more likely to evolve over time, as the OHR become more elongated than the current cluster that exists around OHR low- to mid-60's.

I recommend a blend of systems for Provincial A: predominantly the Class 1-6 system; add RB races where can be entered the horse that has won more than 6 races, but has an OHR that's greatly descended from its PB.

Provincial A + Midweek Metro	Future	
OMWLYR	Maybe RB75	Handicaps dependant on nominees' OHR
OMW	Maybe RB70	Handicaps dependant on nominees' OHR
Class 5	62+	
Class 4	59+	
Class 3	56+	
Class 2	53+	
Class 1 *	50+	
Rating Limited	RB60 (0-60)	
Other		

* Lower than at present. Maiden handicaps and Merit-based SW maiden OHR will result in lower ratings, on average, for Maiden winners, thus entering Class 1 at a lower level.

Instead of BM+ races at Provincial A, ratings-restricted races RB0-65 for example would encourage more highly rated horses to contest Metro Prime, where a runner is worth more revenue to the industry.

Provincial B	Future
Open **	>/= 65+
BM+	65+
Class 6	60+
BM+	60+
Class 4	55+
BM+	55+
Class 2 *	50+
BM+	50+
BM+	45+
Rating Limited	RB55 (0-55)
Other	

* Lower than at present. Maiden handicaps and Merit-based SW maiden OHR will result in lower ratings, on average, for Maiden winners, thus entering Class 1 at a lower level.

** Instead of classifying such races in advance, perhaps it would be preferable to publish them in the calendar as Open handicaps. Handicapper would be able to classify depending the ratings of the nominees.

Country	Future
Open **	>/= 58+
Class 5	55+
BM+	55+
Class 3	50+
BM+	50+
Class 1	45+
BM+	45+
BM+	40+
Class B	50+ or lower
Rating Limited	RB 50 (0-50)
Other	

** Country open handicap races

Instead of classifying such races in advance, perhaps it would be preferable to publish them in the calendar as Open handicaps. Races like Mingenew Cup, Leinster Memorial would be better handicapped if handicapper had licence to classify depending the ratings of the nominees.

Handicapper would seek 5kg spread whenever possible.

Lowest classification = 58+

Highest classification = 68+

Classification to be the higher of:

1. 58 or
2. The BM+ classification that accounts for three horses in the handicap at declaration of weights or
3. The highest rated nominee – 10 points
4. Not higher than 68+

Long handicap process applies. AR68A applicable.