MAFL Heuristic Tipsters For 2011

Loathing the Bye Already

Back in 2009 I introduced MAFL's Heuristic Tipsters and these have predicted home and away results with accuracy levels ranging from passable to exceedingly good over the past two seasons.

In 2011, the addition of a seventeenth team, the Gold Coast, has forced the AFL to introduce byes to the competition. Some of the heuristics on which the Heuristic Tipsters are built need to be updated to account for this change, so I took the opportunity to review and rebuild the Heuristic Tipsters entirely.

Now, some 740 lines of code later, I've built Heuristic Tipsters: 2011 Edition.

The Building Blocks

The 2011 versions of the Heuristic Tipsters are very similar to the 2009/2010 versions. The underlying building-block heuristics are generally the same, save for some amendments to cater for byes, and the order in which these building-blocks are applied for a particular Heuristic Tipster (aka strategy) is the same as it was previously.

Here are the heuristic building-blocks from which we'll construct strategies:

Heuristic Name	Heuristic Description	Move to the Next Heuristic If			
Favouritism	Tip the team that is the TAB Sportsbet favourite as at 12 noon on the Wednesday before the match	The two teams are equal favourites			
Designated Home Team	Tip the team that is the AFL Designated Home Team for the match				
Most Recent Tipping Success	Tip the team that has most recently in the current season as measured by round number, been tipped and won. Work backwards through the rounds, reverting to the immediately preceding round if neither team was tipped and won in the round currently under review, even if one or both teams were tipped and lost. Teams with byes are considered not to have been tipped in the round for which they have the bye	Both teams' most recently tipped win was in the same round or neither team has a tipped win in the current season			
Season-Long Tipping Success	Tip the team that has the best record in the current season, as measured by percentage of wins when tipped (treating wins as 1 correct tip and draws as ½ a correct tip)	Both teams have the same tipping record, as measured by percentage of wins, for the current season OR if either team has not been tipped in the current season			
Team's Most Recent Success	Tip the team that has most recently, in the current season, won. For the purposes of this rule, byes are treated as non-wins	Both teams' most recent win was in the same round or neither team has a win in the current season			
Team's Season- Long Performance	Tip the team that currently has the better winning percentage. If both teams have the same winning percentage for the season, use For and Against percentage to break the tie. If they are also tied on this measure, check that Hell hasn't frozen over and then revert to the previous week's winning percentage and For and Against percentage. In Round 1 use the ladder from the previous season as at the end of the home-and-away games (ie Round 22 in 2010).	(In the so-unlikely-that-it's-barely-worth-mentioning event that the two teams were also tied as at the end of the previous season, continue working back through the weekly ladders in the previous season until the tie is broken)			
Team's Most Recent Result	Tip the team that, in the current season, won by the larger margin (or lost by the smaller margin) in its previous game. For the purposes of this rule, byes are ignored, so it's possible that the result in question for the two teams pertains to different rounds	Both team's margin of victory (or of defeat) in the previous round were identical			

Longest Successful Tipping Streak	Tip whichever team was tipped in the previous round of the current season provided that it won. If both teams were tipped in the previous round and won, tip the team with the longest streak (in the current season) of being tipped and winning. The streak is broken if a team is not tipped, is tipped and loses or draws, or has a bye	Both teams have the same length streak (note that a streak cannot extend into the previous season)		
Team's Longest Streak of Success	Tip the team that won in the previous round of the current season. If both teams won, tip the team with the longest streak (in the current season) of winning. The streak is broken if a team loses, draws or has a bye.	Both teams have the same length streak (note that a streak cannot extend into the previous season)		

The most significant changes in the descriptions compared to those used previously are that:

- byes are treated as non-wins and/or non-tips, as necessary
- season-long tipping success is based on a team's winning percentage when tipped and not on the number of times it has won when tipped. This change has the biggest effect on Silhouette which, as we'll see in a moment, uses this heuristic as the primary basis for its selections
- draws are no longer counted as wins in determining success and streak lengths
- the home team is now the team that the AFL says is the home team, not the team I deem to be the home team (well except that I'm this year deeming the home team to be the AFL-designated home team, so I guess in that sense nothing's changed, except that ... never mind)

In all, had these changes been in place in 2010, the effect on strategy performance would have generally been small. Three strategies would have tipped 1 or 2 more winners, one would have tipped 1 fewer, and 1 strategy (Silhouette) would have tipped 4 fewer. That perhaps suggests that the previous definition of Season-Long Tipping Success was superior, but tipping a team that's won on 5 of the 18 occasions you've tipped it over a team that's won 4 out of 4 doesn't seem consistent with the notion of "loyalty" on which Silhouette (and Shadow) were conceived.

The Strategies

As previously, the next step is to combine these heuristics into strategies.

BKB is still the only strategy to use the Favouritism heuristic; every other strategy is still based on, at most, information about team successes and the accuracy of the strategy's previous tips.

The columns in the following table describe the strategies that will be tipping in season 2011 and the numbers in each column denote the priority of the relevant heuristic for that particular strategy.

Heuristic Name	ВКВ	CTL	Home Sweet Home	Shad- ow	Silho- uette	EI I	EI II	STM I	STM II	Ride Your Luck	Follow The Streak
Favouritism	1										
True Home Team			1								
Most Recent Tipping Success				1	2	2	1	2	1		
Season Long Tipping Success				2	1						
Team's Most Recent Success								1	2		
Team's Season Long Performance	2	1	2	3	3	3	3	3	3	2	2
Team's Most Recent Margin						1	2				
Longest Successful Tipping Streak										1	
Team's Longest Streak of Success											1

As you can see, no strategy uses more than three heuristics and many use only two. All of them have the Team's Season Long Performance as their final rule though, in practice, some of them rarely have need to use this rule.

Here's a quick summary of each strategy:

BKB (short for Bookie Knows Best) is one of the simpler strategies. Each week it tips the TAB Sportsbet favourite unless the teams are equal favourites in which case it uses ladder position to break the tie.

CTL (short for Consult The Ladder) is also a simple strategy. Each week it tips whichever team has the superior season-long performance, referring back to earlier rounds if a tiebreak is needed, and using the final regular-season ladder from the previous season to make its selections for Round 1.

Home Sweet Home tips the Designated Home Team.

Shadow is the first of the more complex strategies, combining heuristics pertaining to its own performance with, if required, those pertaining to team performance.

Silhouette, named because of its similarity with Shadow, is another more complex strategy. It differs from Shadow only in the priority with which it applies its base heuristics.

EI I (short for Easily Impressed I) is a strategy that selects the team that won by the most (or lost by the least) in its previous game. In the event of a tie on this heuristic, the strategy tips the team with which it has had the most recent tipping success. In Round 1, since neither of these rules produces a tip, the strategy must use another rule; it mimics CTL.

EI II varies from EI I in that it puts the Most Recent Tipping Success ahead of a Team's Most Recent Margin.

STM I (short for Short Term Memory I) is a strategy that looks firstly at the length of time (measured in competition rounds) since each team's most recent success, then at the length of time since it has successfully tipped each team, and then at season-long performance.

STM II varies from STM I in that it puts Most Recent Tipping Success ahead of a Team's Most Recent Success.

Ride Your Luck is the first streak-based strategy. It tips the team that has provided it with the longest streak of successful tipping, reverting to season-long performance in the event of streaks of equal length.

Follow The Streak is the second streak-based strategy. It tips that team that has had the longest streak of success, reverting to season-long performance in the event of streaks of equal length.

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