## Weekly wrap up

Friday, 23 July 2010							Home	Away
7.40pm	+	St. Kilda	VS.	Ш	Hawthorn	Etihad Stadium	\$1.68 \$0.84	\$2.15 \$1.07½
Saturday, 24 July 2010								
2.10pm		Collingwood	VS.		Richmond	M.C.G.	\$1.10	\$6.25
2.10pm		Geelong	VS.		Brisbane	Skilled Stadium	\$1.05	\$8.50
7:10pm		North Melbourne	VS.		Essendon	Etihad Stadium	\$1.40	\$2.80
7:40pm	77	West Coast	VS.		Carlton	Subiaco Oval	\$1.90	\$1.85
Sunday, 25 July 2010								
1.10pm		Western Bulldogs	VS.	T	Fremantle	Etihad Stadium	\$1.28	\$3.50
2.10pm		Melbourne	VS.		Sydney	M.C.G.	\$2.25	\$1.60
4.40pm	П	Port Adelaide	VS.		Adelaide	AAMI Stadium	\$3.75	\$1.25
9.40pm	3	Adam Liaw	VS.	3	Callum Hann	Masterchef Kitchen	\$1.60	\$2.25

Friday night delivered a thriller at the Etihad ice rink with a tiny interchange infringement effecting a 2 goal turnaround to St. Kilda and ultimately resulting in the second draw of the season. For those who tipped Hawthorn, I'm tracking that half cent of the payout odds too. Just in case it means I can be a bastard and wrest the first place prize from someone's clutches in the same way that the weekly Second Chance entry has been wrested from me two weeks running...

Meanwhile, Western Bulldogs have demonstrated that sacking Akermanis can do wonders for a team



Speaking of being a bastard, it isn't often I get to combine two of my favourite pastimes. The first is mathematical pursuits and the second is poking fun of people. So this week I ask: "What is that chance that a person, entering our tipping competition now and picking teams at random, can still manage to beat Paul?"

To answer this question, we note the following:

- If someone were to enter the competition today, they would receive 80c per missed tip over the last 17 rounds giving them a starting amount of \$108.80; just 83c behind Paul.
- Assuming random tipping means that half of the time the tip would be incorrect and assuming random odds, the other half of the time the payout would follow a (truncated) Exponential distribution with minimum \$1.01 and mean \$1.87. By my reckoning, this leads to a round payout that has an average of \$7.48 and a standard deviation of \$3.54<sup>1</sup>
- Random tips would have zero correlation to Paul's tips, therefore assuming the Central Limiting Theorem, I calculate a **68%** chance that Random tips would make up the 83c shortfall over the remaining 5 rounds.

Things get even more patronising if we assume a particular individual's record to calibrate distributional parameters. After accounting for correlation in historical tips, someone like Andrew would have a **95%** chance of beating Paul from a similar standing start. In fact, all tippers would have a better than 50% chance of overtaking Paul if they decided to enter the competition in Round 18!

Confusingly, the person who would have the second best chance of overtaking Paul in such circumstances is not Emily (the second placed tipper with an **86.5%** chance of managing such a feat) but George's much lower placed second entry with an **86.7%** chance. Even though he is placed 6th on the scoreboard he has a relatively low payout standard deviation and is positively correlated to Paul's tips, meaning he has a better chance of overtaking Paul, and staying ahead, in the space of 5 rounds.

...ahh, I love the smell of statistics in the morning.

<sup>&</sup>lt;sup>1</sup> Pixie points awarded to anyone who either verifies, or disproves, my derivation of the standard deviation of a random tipper's payout. The average is comparatively easy as each match has, on average, a \$1.87 payout (the harmonic mean of any pair of Sportsbet payout odds) and a random tipper has a 50% chance of tipping the correct match. Therefore the average per round is \$1.87 x 50% x 8 = \$7.48

Unlike the Soccer World Cup, Masterchef is quite popular and interesting to watch, therefore deserving of a few lookalikes





Claire and Cynthia Nixon who plays Miranda in Sex and the City





Adam and a terracotta warrior





Callum and Alfredo Linguini from Ratatouille. Not only do they look alike, but each started as hired kitchen hands before gaining their fame as talented cooks