

A NOTE ON THE EFFECT OF DIFFERENT POINT VALUES FOR GOALS IN AUSTRALIAN FOOTBALL LEAGUE GAMES

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Dedicated to the late Mr Ray Young who pioneered the publication of detailed VFL/AFL statistics for the general public.

Introduction

There has been much discussion on the introduction of a rule giving nine points for a goal scored outside fifty metres instead of the current rule of six points given for all goals. This new rule was trialed in the recent pre-season competition and at least one AFL coach has called for its introduction during the regular season. We have decided to investigate what difference the new rule would make. As most teams average only a small number of goals scored outside fifty metres, at first glance it would seem that there would not be much effect. We have decided to pursue this a little deeper than just looking at averages. By applying the rule to the results from previous seasons we find how many games would have had a different outcome and then what effect this would have had on the final premiership ladder at the end of the home and away season.

In section 2 we outline the scope of the study and some simple summary statistics and then, in section 3, we give some premiership ladders computed under the two rules. Section 4 gives a brief discussion of the results.

Scope of Study

One of us has assembled a database of publicly available football statistics in the process of research for his Master's thesis (see Isgro, 2000). The sources of these are newspapers, magazines and non-subscription websites. It covers the years 1994–2002 but suffers from a drawback in that not all statistics have been publicly available in all of those years. For studying the effect on scoring we need all final scores and also the number of goals scored outside fifty metres. This means we must restrict attention to the four years 1998–2001. For these years the data are essentially complete although one game has a missing value for goals scored outside fifty metres. (This was the round 15 game in 2001 between Adelaide and St Kilda and we have decided to ignore the effect of this missing value).

We give the following summary statistics for these data:

TABLE 1: Summary

YEAR	Average Goals	No. Games with Changed Outcomes
1998	1.37	11
1999	1.25	6
2000	1.60	6
2001	1.60	8

At first glance it would not seem likely that much change to the final premiership ladder would result from these figures.

Comparison of premiership ladders for the four years at the end of the home and away season under the two scoring systems.

For each year we list the original premiership ladder and a recomputed premiership ladder based on the assumption that goals scored outside fifty metres are given nine points. This is followed by a brief summary of the changes in that particular year.

Table 2(a) 1998 Original Premiership Ladder

Points	For	Against	Percentage	Team
64	2486	2117	117.4	Kangaroos
60	2353	2019	116.5	Western Bulldogs
56	2283	2143	106.5	Sydney
56	2009	1956	102.7	Melbourne
52	2172	1763	123.2	Adelaide
52	2148	2104	102.1	St Kilda
47	1940	1773	109.4	West Coast
47	2250	2071	108.6	Essendon
47	2018	1926	104.8	Richmond
38	1928	2017	95.6	Port Adelaide
36	2018	2109	95.7	Carlton
36	1777	1963	90.35	Geelong
32	1992	2083	95.6	Hawthorn
28	1968	2167	90.38	Collingwood
28	1739	2277	76.4	Fremantle
22	1860	2453	75.8	Brisbane

Table 2(a) 1998 Original Premiership Ladder

Points	For	Against	Percentage	Team
68	2639	2210	119.4	Kangaroos
60	2337	2185	107.0	Sydney
60	2247	2185	102.8	St Kilda
56	2461	2139	115.1	Western Bulldogs
54	2117	2025	104.5	Melbourne
48	2102	2028	103.6	Richmond
46	2235	1844	121.2	Adelaide
44	2370	2158	109.8	Essendon
44	1991	1836	108.4	West Coast
44	2117	2193	96.5	Carlton
44	2015	2122	95.0	Port Adelaide
36	1849	2047	90.3	Geelong
32	2085	2266	92.0	Collingwood
28	2088	2206	94.7	Hawthorn
24	1817	2349	77.4	Fremantle
16	1914	2591	73.9	Brisbane

Summary of changes that would have occurred in 1998.

Teams that would have finished higher:

Sydney (third to second)
 Saint Kilda (sixth to third)
 Richmond (ninth to sixth)
 Carlton (eleventh to tenth)
 Collingwood (fourteenth to thirteenth)

Teams that would have finished lower:

Western Bulldogs (second to fourth)
 Melbourne (fourth to fifth)
 Adelaide (fifth to seventh)
 West Coast (seventh to ninth)
 Port Adelaide (tenth to eleventh)
 Hawthorn (thirteenth to fourteenth)

Table 3(a) 1999 Original Premiership Ladder

Points	For	Against	Percentage	Team
72	2400	1905	126.0	Essendon
68	2463	2129	115.7	Kangaroos
64	2422	1671	144.9	Brisbane
62	2363	1993	118.6	Western Bulldogs
48	2068	1937	106.8	West Coast
48	2088	2028	103.0	Carlton
48	1851	2054	90.1	Port Adelaide
44	2184	2128	102.6	Sydney
42	1858	1943	95.6	Hawthorn
40	1978	2021	97.9	St Kilda
40	2328	2454	94.9	Geelong
36	1977	2170	91.1	Richmond
32	1903	2232	85.3	Adelaide
24	1850	2293	80.7	Melbourne
20	1981	2403	82.4	Fremantle
16	1973	2326	84.8	Collingwood

Table 3(b) 1999 Recomputed Premiership Ladder

Points	For	Against	Percentage	Team
72	2490	1977	125.9	Essendon
68	2574	2222	115.8	Kangaroos
64	2485	1770	140.4	Brisbane
60	2468	2074	119.0	Western Bulldogs
48	2134	2027	105.3	West Coast
48	2175	2115	102.8	Carlton
44	2223	2218	100.2	Sydney
44	2071	2093	98.9	St Kilda
44	1935	2147	90.1	Port Adelaide
40	2433	2562	95.0	Geelong
40	2082	2221	93.7	Richmond
36	1930	2024	95.4	Hawthorn
32	1969	2304	85.5	Adelaide
24	1919	2359	81.3	Melbourne
20	2057	2422	84.9	Collingwood
20	2062	2472	83.4	Fremantle

Summary of changes that would have occurred in 1999.

Teams that would have finished higher:

Sydney (eighth to seventh)
 Saint Kilda (tenth to eighth)
 Richmond (twelfth to eleventh)
 Geelong (eleventh to tenth)
 Collingwood (sixteenth to fifteenth)

Teams that would have finished lower:

Port Adelaide (seventh to ninth)
 Hawthorn (ninth to twelfth)
 Fremantle (fifteenth to sixteenth)

Table 4(a) 2000 Original Premiership Ladder

Points	For	Against	Percentage	Team
84	2816	1770	159.1	Essendon
64	2667	1979	134.8	Carlton
56	2557	2159	118.4	Melbourne
56	2447	2304	106.2	Kangaroos
50	2234	2306	96.9	Geelong
48	2602	2222	117.1	Brisbane
48	2321	2241	103.6	Western Bulldogs
48	2198	2251	97.6	Hawthorn
44	2068	2221	93.1	Richmond
40	2254	2219	101.6	Sydney
36	2255	2347	96.1	Adelaide
32	1886	2618	72.0	Fremantle
30	2216	2399	92.4	West Coast
30	1928	2295	84.0	Port Adelaide
28	2089	2431	85.9	Collingwood
10	1855	2631	70.5	St Kilda

Table 4(b) 2000 Recomputed Premiership Ladder

Points	For	Against	Percentage	Team
84	2933	1878	156.2	Essendon
64	2787	2054	135.7	Carlton
64	2695	2267	118.9	Melbourne
52	2692	2312	116.4	Brisbane
20	2309	2362	97.8	Hawthorn
20	2306	2426	95.1	Geelong
48	2591	2391	108.4	Kangaroos
48	2447	2382	102.7	Western Bulldogs
40	2365	2300	102.8	Sydney
38	2170	2320	93.5	Richmond
36	2375	2461	96.5	Adelaide
32	1961	2729	71.9	Fremantle
30	2321	2519	92.1	West Coast
30	1994	2367	84.2	Port Adelaide
28	2227	2536	87.8	Collingwood
10	1912	2781	68.8	St Kilda

Summary of changes that would have occurred in 2000.

Teams that would have finished higher:

Brisbane (sixth to fourth)

Hawthorn (eighth to fifth)

Sydney (tenth to ninth)

Teams that would have finished lower:

Kangaroos (fourth to seventh)

Geelong (fifth to sixth)

Western Bulldogs (seventh to eighth)

Richmond (ninth to tenth)

Table 5(a) 2001 Original Premiership Ladder

Points	For	Against	Percentage	Team
68	2548	1895	134.5	Essendon
68	2538	1989	127.6	Brisbane
64	2473	1918	128.9	Port Adelaide
60	2126	1973	107.8	Richmond
56	2311	1797	128.6	Carlton
52	2149	2041	105.3	Hawthorn
48	2121	1833	115.7	Sydney
48	2085	2026	102.9	Adelaide
44	2232	2088	106.9	Collingwood
40	2305	2458	93.8	Western Bulldogs
40	2136	2364	90.4	Melbourne
36	1926	2054	93.8	Geelong
36	2161	2371	91.1	Kangaroos
20	1708	2590	65.9	West Coast
16	1917	2642	72.6	St Kilda
8	1794	2491	72.0	Fremantle

Table 5(a) 2001 Recomputed Premiership Ladder

Points	For	Against	Percentage	Team
68	2655	2082	127.5	Brisbane
66	2662	2033	130.9	Essendon
60	2596	1987	130.6	Port Adelaide
56	2398	1887	127.1	Carlton
52	2226	1932	115.2	Sydney
52	2207	2105	104.8	Richmond
48	2190	2098	104.4	Adelaide
48	2227	2170	102.6	Hawthorn
46	2323	2479	93.7	Kangaroos
44	2379	2181	109.1	Collingwood
44	2055	5147	95.7	Geelong
40	2383	2623	90.9	Western Bulldogs
36	2214	2493	88.8	Melbourne
20	1804	2668	67.6	West Coast
16	2019	2726	74.1	St Kilda
8	1875	2602	72.1	Fremantle

Summary of changes that would have occurred in 2001.

Teams that would have finished higher:

Brisbane (second to first)
Carlton (fifth to fourth)
Sydney (seventh to fifth)
Adelaide (eighth to seventh)
Geelong (twelfth to eleventh)
Kangaroos (thirteenth to ninth)

Teams that would have finished lower:

Essendon (first to second)
Richmond (fourth to sixth)
Western Bulldogs (tenth to twelfth)
Hawthorn (sixth to eighth)
Collingwood (ninth to tenth)
Melbourne (eleventh to thirteenth)

Discussion

We have shown that awarding nine points for goals scored outside fifty metres would have had a major impact on the premiership ladder at the end of the home and away season for the years 1998 to 2001. There would have been eleven changes (higher or lower ladder positions) in 1998, eight changes in 1999, seven changes in 2000 and twelve changes in 2001. In addition, in each of the four years the draw for the finals would have been affected and in the first two years we considered, the make-up of the final eight would have been affected.

Given that coaches would most likely change tactics if the rule change were introduced there would most likely be some interesting changes to the predictability of the final eight towards the end of the season.

Reference

Guy Isgro (2000). *Statistical Performance Measures in Sport*. Unpublished M. AppSC, RMIT.