The list of good improvements and changes of the paper *Dominance Matrices: Your Secret Weapon in Footy Tipping, Roger Walter*

1. **Add two extra comments:**

   i The value of 0 is also assigned if two teams did not played with each other. If an entry is 0 and the value at the opposite site from the leading diagonal is 0 as well then the corresponding teams haven't played yet. If an entry is 0 and the value at the opposite site from the leading diagonal is 1 then the zero entry means a loss.

   ii The entries in each cell represent the number of points that the team that corresponds to a row receives in the game with the team that corresponds to a column.

2. **A mistake:** This value must be $\dfrac{1}{2}$.

3. **This sentence could be replaced with a paragraph that contains more detailed games description, for example:**
   A has beaten B and D and has not played with C or E. C has played drawn with B and E but has lost against D. E has defeated D and has not play against B. B and D have not played against each other.

4. *There was a lot of confusion with regards to the column vector* $\mathbf{1}$ *(which is defined as a column vector with all entries 1's) and with the product* $\mathbf{D1}$ *of the matrices* $\mathbf{D}$ *and* $\mathbf{1}$.
   To avoid confusion it would be better to use an other notation instead of $\mathbf{1}$, for example J or $J_{5\times 1}$.

5. **Replace this paragraph with the following comments to clarify the meaning of** $\mathbf{D^T}$ and $\mathbf{D^T1}$.

   It is clear that if one team wins a game and receives 1 point, the opponent team lose this point. Hence alongside with 'win' points the results of each game can be described with 'lost' points. This is why the ranking is usually determined with help of $\mathbf{D1}-\mathbf{D^T1}$. Thereby $\mathbf{D^T}$ is transpose of matrix $\mathbf{D}$ (the rows of matrix $\mathbf{D}$ are columns of matrix $\mathbf{D^T}$) and is given as follows:

$$\mathbf{D^T} = \begin{array}{c} \\ A \\ B \\ C \\ D \\ E \end{array} \begin{array}{c} \begin{array}{ccccc} A & B & C & D & E \end{array} \\ \begin{bmatrix} 0 & 0 & 0 & 0 & 0 \\ 1 & 0 & \frac{1}{2} & 0 & 0 \\ 0 & \frac{1}{2} & 0 & 1 & \frac{1}{2} \\ 1 & 0 & 0 & 0 & 1 \\ 0 & 0 & \frac{1}{2} & 0 & 0 \end{bmatrix} \end{array}$$

   $\mathbf{D^T}$ represents number of points that the team that corresponds to a row **lost** in the game with the team that corresponds to a column. Similarly to the column vector $\mathbf{D1}$, the vector $\mathbf{D^T1}$ gives the total number of 'lost' points for each team.

6. **Replace this sentence with the comment (i) and add an extra comment (ii) to interpret the results of r.**

   i Since for every 'win' point there is a 'lost' point sum of all entries in r_1 will be always 0.

   ii The first order ranking results show that the Team A with score of 2 can be ranked as number 1 followed by the team E with score of 1. However it is hard to rank the teams B, C an D so far as they have the same the first order ranking scores. To rank these team individually, a we will introduce a new vector which is called the second order ranking vector.

7. **A mistake:** Instead of E there must be D, since A defeated D and have not played with E so far.

8. **Replace** $(\frac{1}{2}+\frac{1}{2})$ with 1, since D has defeated C and has got 1 as the result of this game and has not received any other 'win' points.

9. **An extra comment can be added**: This takes into account the idea that if for example A has won against B, and B has beaten C, then one may think that it is likely that A would win against C.

10. **Remark:** The sentence: "It is useful for all teams to have played an equal number of games" makes sense however in the example considered the teams have not played the same number of games. In particular the teams A, B and E have played two games each while D and C have played three games each.

11. It would more accurate to write this formula as following

$$\begin{aligned} A = 3 \quad &+ \quad \text{(A/B) (B total excluding B/A)+ (A/C) (C total excluding C/A)} \\ &+ \quad \text{(A/D) (D total excluding D/A)} \end{aligned}$$

12. In between the first and the second sentence one more sentence can be added: In the last calculation the value of 3 represents the total number of games that team played .