

Study: Why the best soccer teams don't always win

October 1 2009, by Lin Edwards



(PhysOrg.com) -- A recent study, published in the October edition of the *Journal of Applied Statistics*, looked at soccer as being an experiment to determine which of two teams is superior, but their analysis found a high statistical probability that the best team might not win.

The study, carried out by Gerald Skinner and Guy Freeman from the University of Maryland, used a Bayesian approach to analyze the [soccer](#) games in various types of competitions, including the 2006 World Cup.

The authors proposed that if the games really did reveal which team was best, an intransitive triplet could not occur. (This is where team A plays

B and wins, then team B plays C and wins, and finally team C plays A and wins.)

The analysis of the scores of the 2006 World Cup games found that intransitive triplets occurred in 17% of the 355 triplets, which is not much better than the expected random result of 25%. The initial stages basically represent repeated experiments and should produce a more reliable result, according to the study's authors, but the knockout rounds played by the 16 winning teams are not like repeated experiments, and therefore the results are not reliable. The analysis found that in 2006 the best team had only a 28% chance of winning.

The study suggests that a level of confidence could not be obtained unless the game was changed radically, but the idea the authors propose, of having the game continue in extra time until the goal difference is large enough to yield an adequate level of confidence is not workable.

Fans of the 'beautiful game' may also actually like the idea of not knowing for certain which team was going to win anyway.

More information: *Journal of Applied Statistics* Vol. 36, No. 10, October 2009, 1087-1095, 10.1080/02664760802715922

Also available: [arXiv:0909.4555v1](https://arxiv.org/abs/0909.4555v1)

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