

Figures Say It's Steelers

Computer Rates The 'Big Plays'

By Bud Goode

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MIAMI, Jan. 20 — Today's Super Bowl may be decided by a big play. But a statistical analysis shows that some big plays are more likely to determine the outcome than others.

Turnovers (lost fumbles and interceptions), touchdowns scored on returns (of punts and kickoffs), runs with intercepted passes and recovered fumbles and other big defensive plays like quarterback sacks all have an impact on the winning margin.

When a computer sorts through NFL game data, it finds the following value in terms of points in the winning margin contributed by big plays:

Each TD scored on a return is worth nine to 14 points in the team's margin of victory. The most frequent return for a touchdown, the interception runback, is worth nine to 10; the rarest TD return, the kickoff runback, is worth 12 to 14.

A pass interception is worth five additional points, each sack is worth

Bud Goode does statistical analysis for 16 NFL teams.

three, a recovered fumble 2.8. In addition, the computer finds that each additional yard per pass attempt in excess of the opponent's total is worth three points in the victory margin, and each additional running play is worth a point.

These conclusions are arrived at through a complicated mathematical formula that takes into consideration the correlation between the various plays or statistics and the margin of victory. The formula also considers the big play's variation around the average, or how unusual the play is.

It seems odd to think that a six-point touchdown scored on a run or pass play is worth less than a TD scored on a big-play return. Occurring once in every five games (.17 per team per game), the return TD has an extra impact in the winning margin. Coaches look on the return TD as a gift and suggest the added value comes from the psychological lift or letdown that goes with the surprise score.

The Los Angeles Rams led the league this year with six return TDs more than they allowed and Kansas City was the cellar-dweller, allowing four more than they scored.

Pittsburgh scored one return TD more than it allowed; Dallas scored as many returns as it allowed. The difference is too small to give either team an edge. For both teams, odds are about 5 to 1 against a return TD in Super Bowl 13. If the big play develops, however, it should be tantamount to a victory.

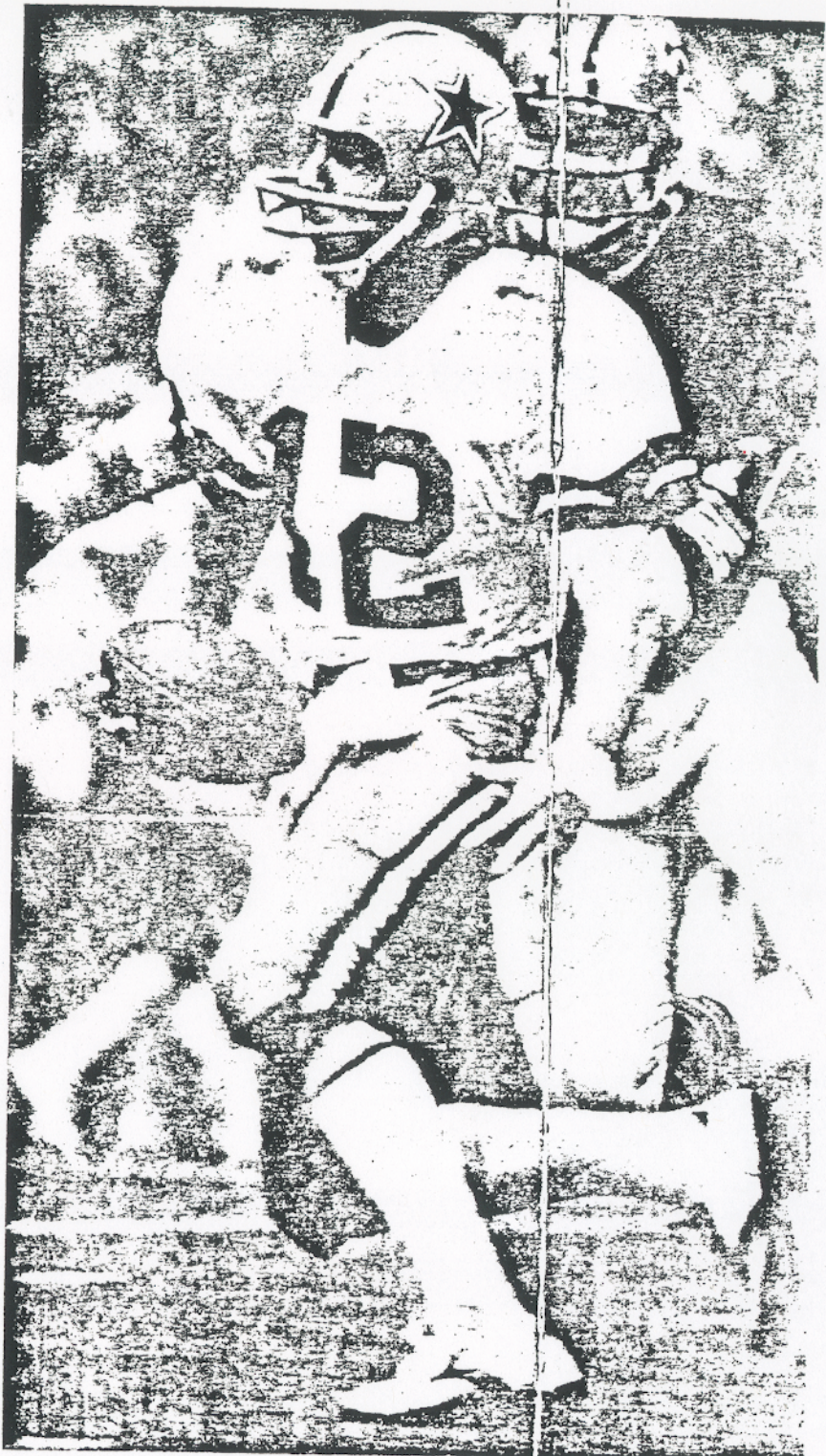
The extra pass interception is worth five points in the winning margin. Dallas stole six passes more than it lost this year. Pittsburgh was plus-five. Again the difference is too small to give either team an edge.

In both 1977 and 1978, the average team lost 1.43 interceptions per game. You can't throw 43/100ths of an interception. You throw one—or two. If either Dallas or Pittsburgh comes up with the one extra interception, the Univac computer shows it to be worth five points in the winning margin.

Pittsburgh gained 6.66 yards per pass, allowed 4.93, for a difference of 1.74, ranking third.

Dallas gained 6.59, allowed 4.67, for a difference of 1.92, ranking first in both 1977 and 1978. Edge to Cowboys.

One extra QB sack is worth three points in the winning margin. By contrast, any team that does not reach the opposing QB once in a game will lose 80 percent of its contests. As the



Roger Staubach, who threw 25 TD passes during the season, would like to add a few today.

game progresses, count the QB sacks—they are big defensive plays.

Dallas is plus-25 sacks over the year (1.56 per game) and ranks first in the NFL. Pittsburgh is plus-19 (1.19 per game), ranking fourth. Edge to Dallas.

The extra lost and/or recovered fumble is worth 2.8 points in the winning margin. The fumble is less important than the interception, in part because more return yards are earned on the interception.

Pittsburgh is plus-four fumbles for the year; Dallas lost five more than it

recovered. Significant edge to the Steelers.

One running play more than the opposition is worth one point in the winning margin. The typical championship team will run the ball 10 times per game more than its opponent. Dallas is plus-9.3, ranking second to New England (average 30 rushes more per game). Pittsburgh is plus-eight, ranking third. If the two teams play according to form, the Cowboys would have a 1.3-point edge in this one stat.

When NBC shows the halftime stats, compare them with the list above. One team will have earned one to two yards per pass more than it allowed; one will have run more than the other; one will have stolen one extra fumble or interception. Any halftime edge is a leg up on victory.

There is only one big-play category in which there is a significant difference between the teams. That is in fumbles, and the edge is to Pittsburgh. When this and all the other stats are taken into consideration, the computer favors Pittsburgh by 4.