

Figure 1 provides a convenient graphical representation for the reversal paradox in our “death penalty” illustration. This representation generalizes to any $2 \times 2 \times 2$ contingency table. The x -axis is labeled as percentage of victims who are white; the y -axis has a label indicating the probability of death penalty imposition. This probability generally increases along with the percentage of victims that are white. Two separate lines are given in the graph reflecting this increase, one for black defendants and one for white defendants. Note that the line for the black defendant lies wholly above that for the white defendant, implying that irrespective of the percentage of victims that may be white, the imposition of the death penalty has a greater probability for a black defendant compared to a white defendant.

The reversal paradox of having a higher death penalty imposition for whites (of 12%) compared to blacks (of 10%) in the 2×2 contingency table aggregated over the race of the victim, is represented by two vertical lines in the graphs. Because black defendants have 38% of their victims being white, the vertical line from the x -axis value of 38% intersects the black defendant line at 10%; similarly, because white defendants have 94% of their victims being white, the vertical line from the x -

axis value of 94% intersects the white defendant line at (a higher value of) 12%. The reversal occurs because there is a much greater percentage of white victims for white defendants than for black defendants. (The two lines in the graph can be constructed readily by noting how the endpoints were obtained of 0% and 6%, and of 13% and 17%. When the percentage of white victims along the x -axis is 0%, that is the same as having a black victim [which immediately generates the graph values of 0% and 6%]; if the percentage of white victims is 100%, this is equivalent to the victim being white [and again, immediately provides the other two endpoints of 13% and 17%]).

Figure 1: Graphical representation for the Florida death penalty data.

