## PP plot illustration of ordinal effect measures comparing $p(y \mid x = 0)$ to $p(y \mid x = 1)$ based on the "independent draws" device

 $cdf(y_1)$ v₁ wins  $y_1 > y_0$ /draw/ tie v₀ wins  $y_1 < y_0$ 0  $cdf(y_0)$  $C_2$   $C_3$  $C_1$ 0  $r_1$  $r_2$ 

mean ridit(y\_1 w.r.t. cdf(y\_0))
= area under diagonal

win ratio = orange : blue
win odds = above diagonal : below diagonal
win difference = orange - blue

orange ?= common language effect size
?= probability of superiority
?= win probability
?= AUROC
check handling of ties/grey

Mann-Whitney U statistic = (orange + grey/2) \*  $N_0$  \*  $N_1$  Somers' D = area above - area below (vs. win difference: ties?)

 $r_3$   $r_4$  1 ridit( $y_0$ ) = midrank( $y_0$ )/N

N rank( $y_0$ )

Note: both axes have the same number of levels

1

What about average difference between the CDFs (since CDF plots are natural)?