Gerrymandering: Exploring the Data

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Definitely not the prettiest of graphics, but we can revisit the design.

We first look at CDFs of bids for each district in each map for Players A and B.

Next we depict the modal map selection by each subject during stage 2 in a simple bar graph.

Lastly we depict the final stage distribution of map selection for the entire sample and by Player (A or B).

For reference:
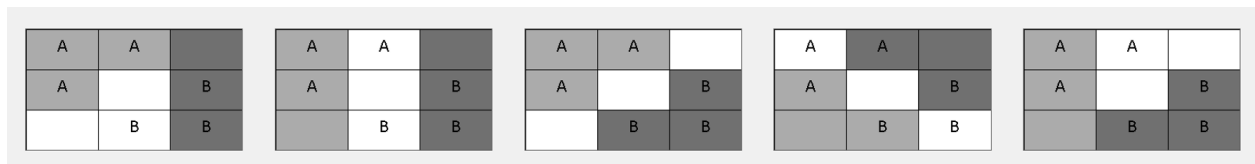
Note that in Maps 1, 2, 3, and 5 the white district is the only competitive district in the sense that only the competition within the white district determines whether a subject wins that Map. The exception is Map 4 in which it is logical to bid in any district as no district is guaranteed a victor.
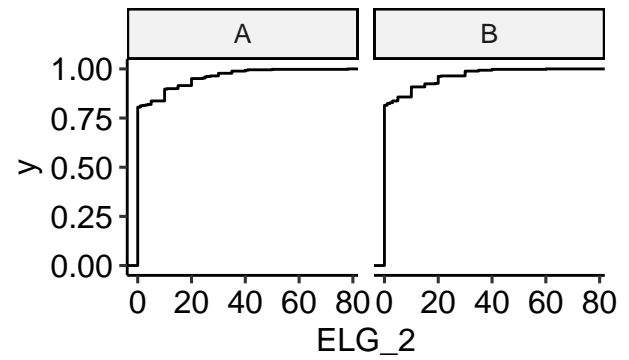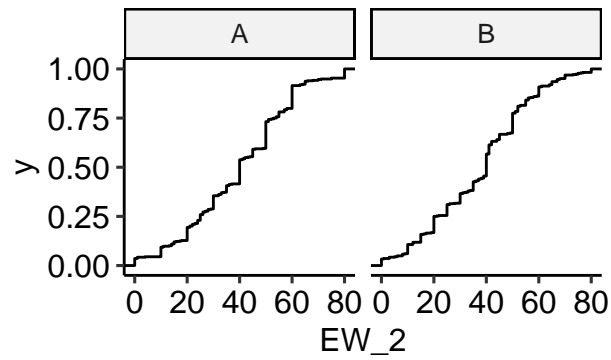
Map 1

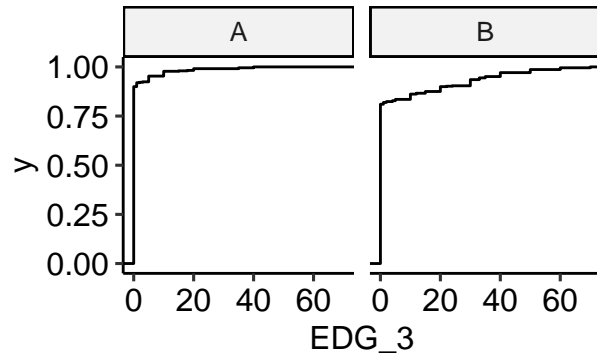**A** Bids in Dark Grey: Map 1

B Bids in Light Grey: Map 1
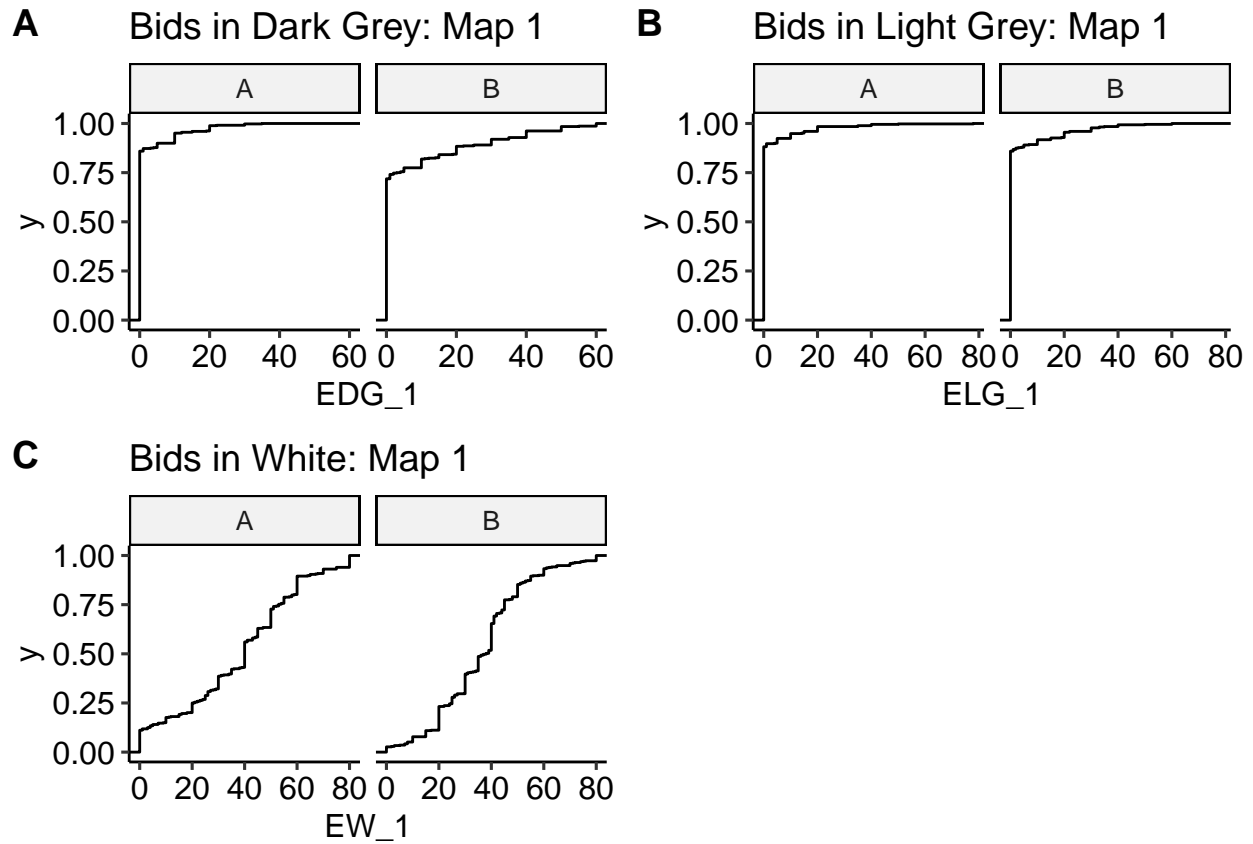
C Bids in White: Map 1

Map 2

A Bids in Dark Grey: Map 2
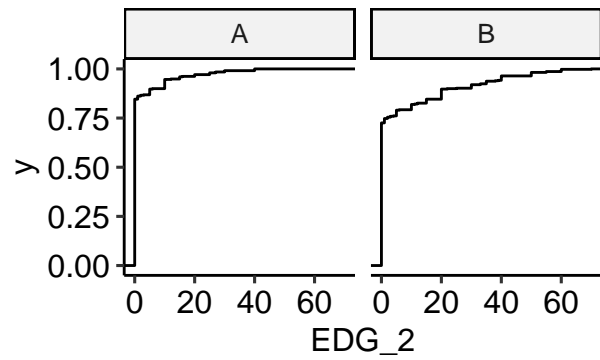
B Bids in Light Grey: Map 2
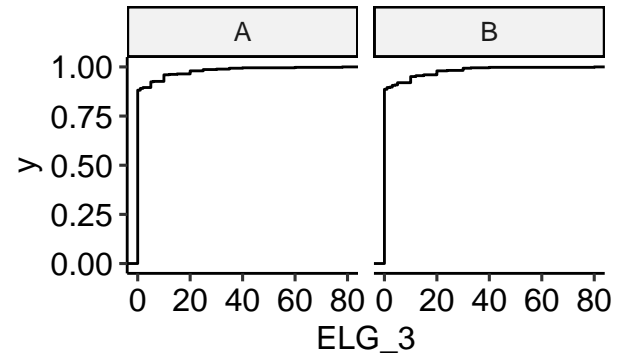

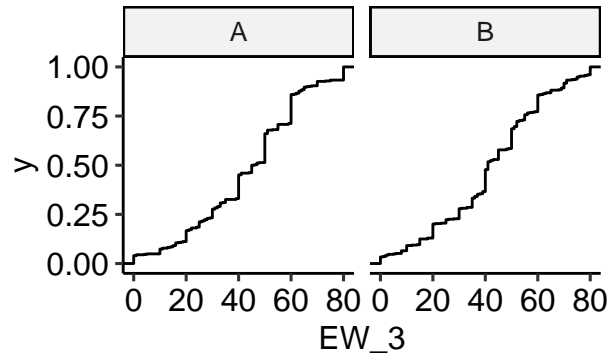**C** Bids in White: Map 2

Map 3

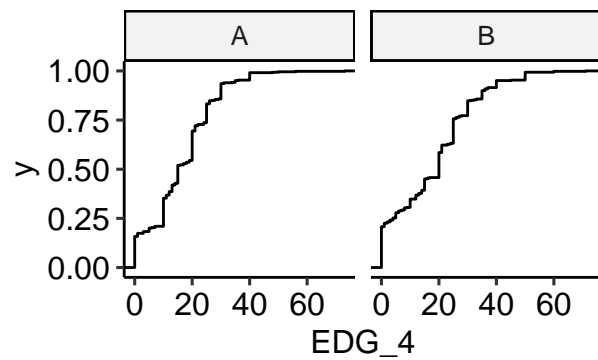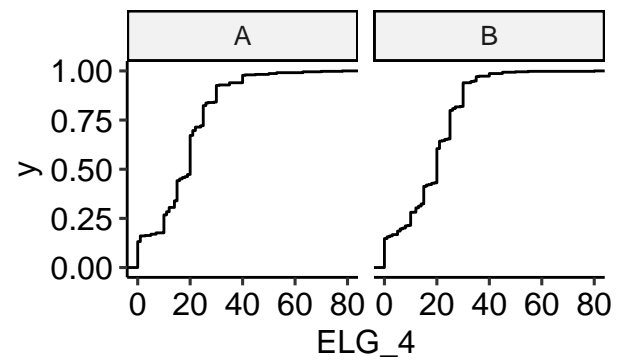**A** Bids in Dark Grey: Map 3

B Bids in Light Grey: Map 3

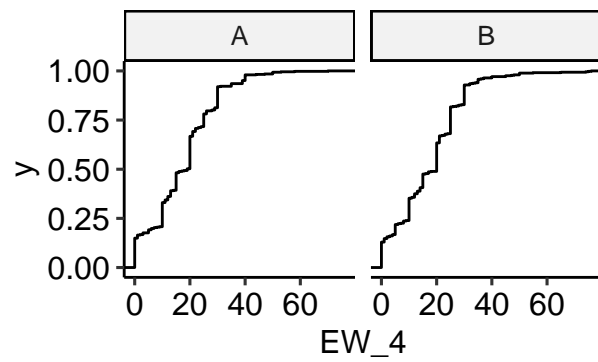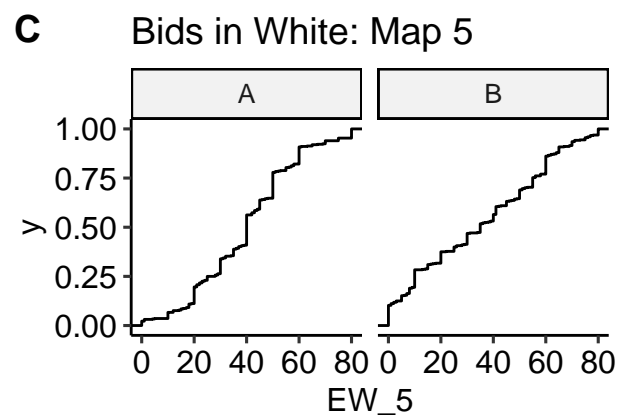**C** Bids in White: Map 3
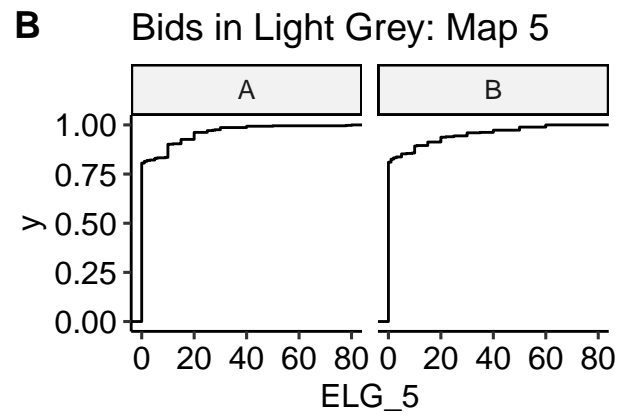
Map 4

A Bids in Dark Grey: Map 4

B Bids in Light Grey: Map 4

C Bids in White: Map 4
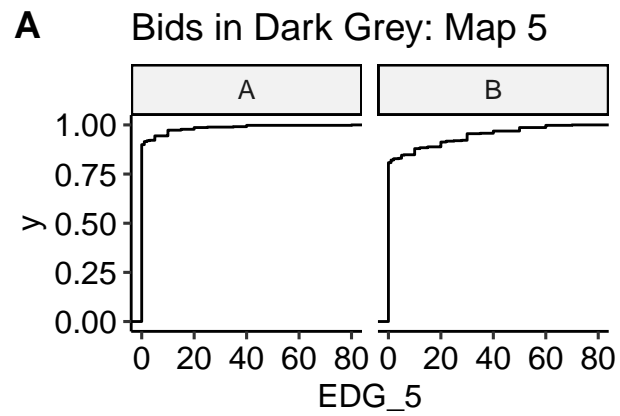
Map 5

A   Bids in Dark Grey: Map 5

B   Bids in Light Grey: Map 5
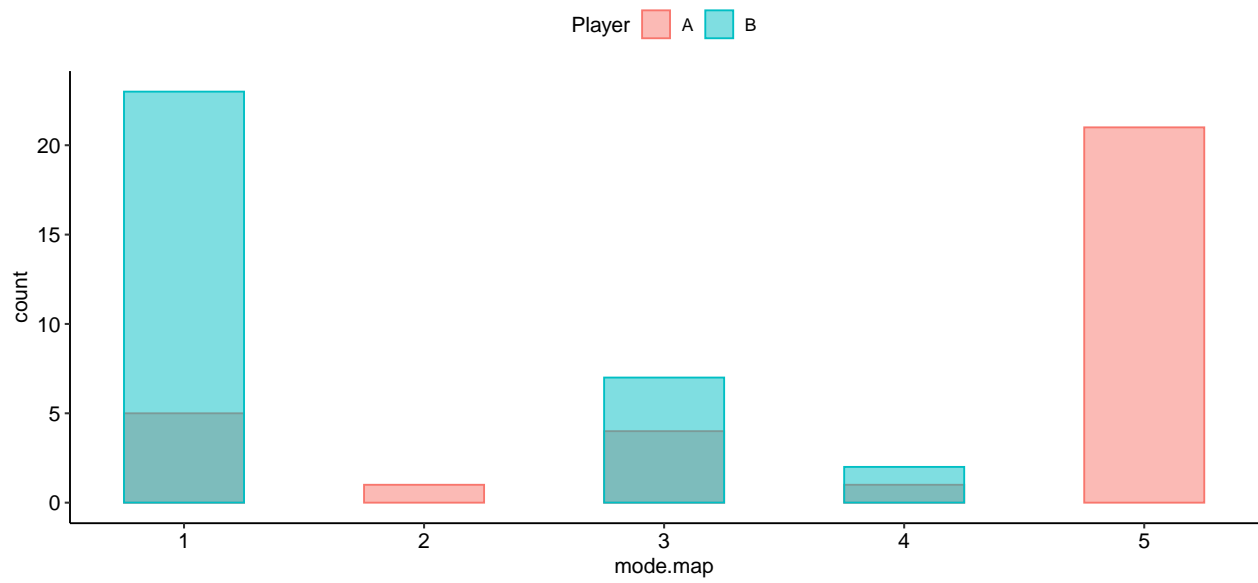

C   Bids in White: Map 5

Recall, Player A should pick Map 5 and Player B should pick Map 1 if they are choosing the map that gives them the best chance of winning.

Modal Map Selection in Stage 2

Notice, in the below figures the singular choice of -99 represents the individual (subject 4 from session 8) that excused themselves from the experiment during this part of their session. The first figure depicts the map choices during the final stage for all participants. The second figure is of interest because we might have spillover from the previous stage whereby participants choose the map they have been choosing without really paying attention to the implications...or they could just be flipping the coin that they are the "incumbent" after randomization occurs.
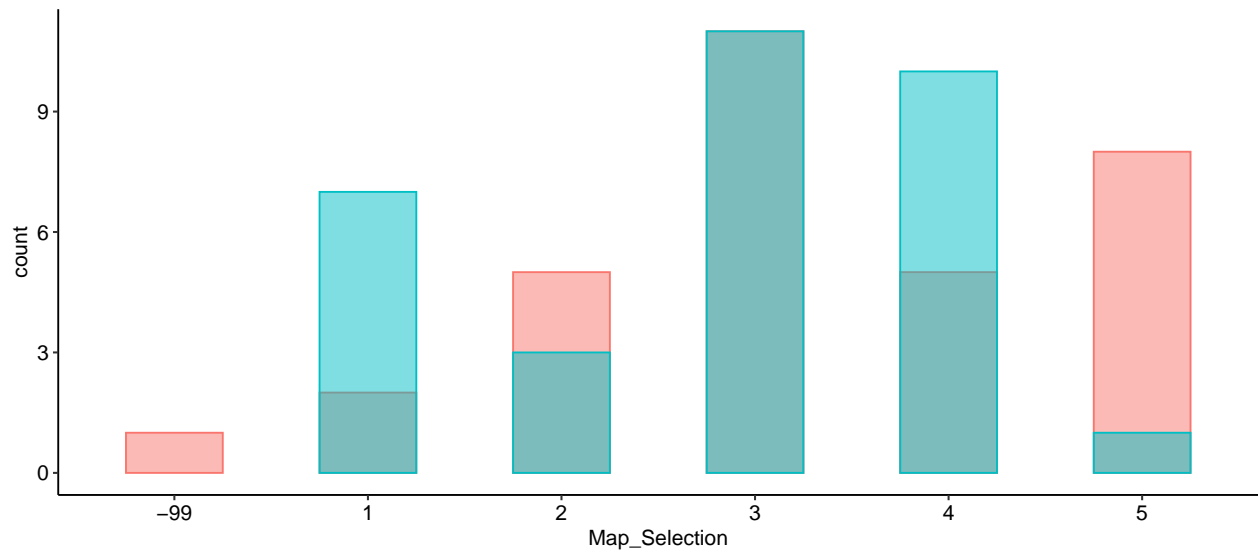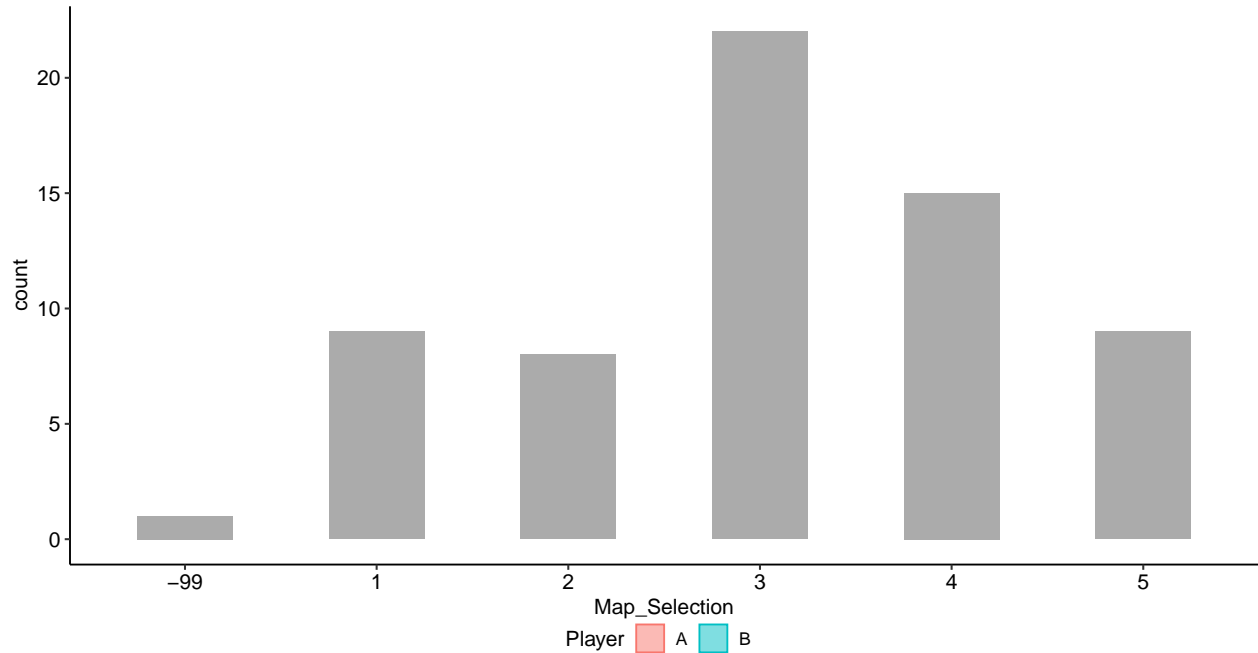
Now we are addressing:

1) For the map where they should be bidding on every region, I would like to see player A's 3 CDFs overlaid on top of each other because there's no reason for them to differ but it's hard to tell in the version you sent.

2) I would also like to see player B's CDFs overlaid
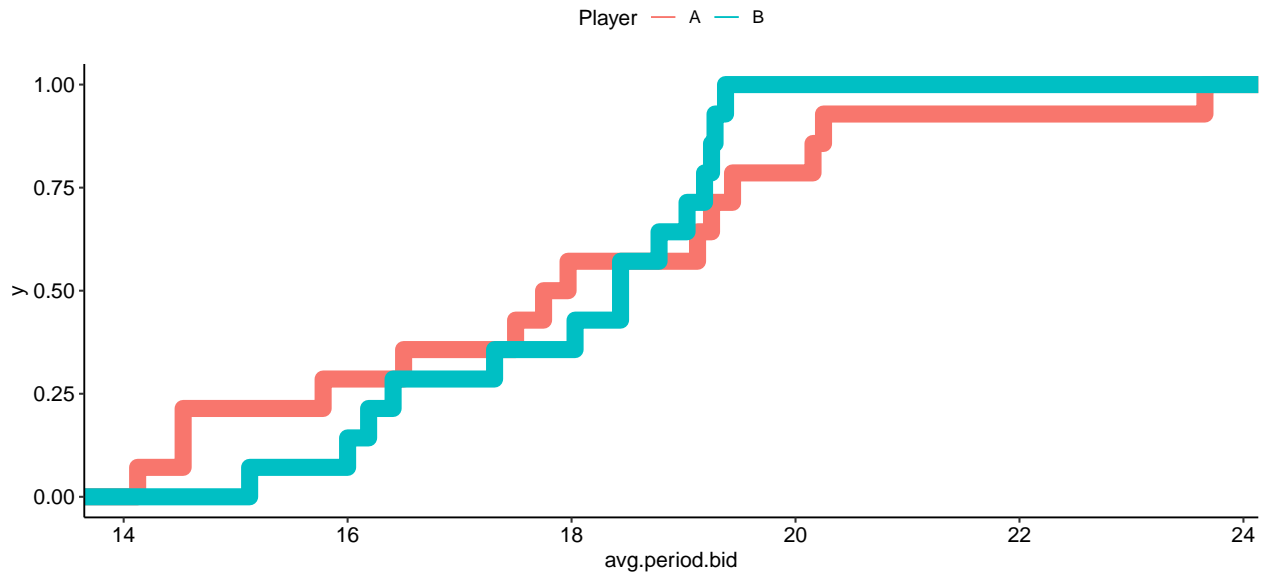
Map 4 CDF by Player and District
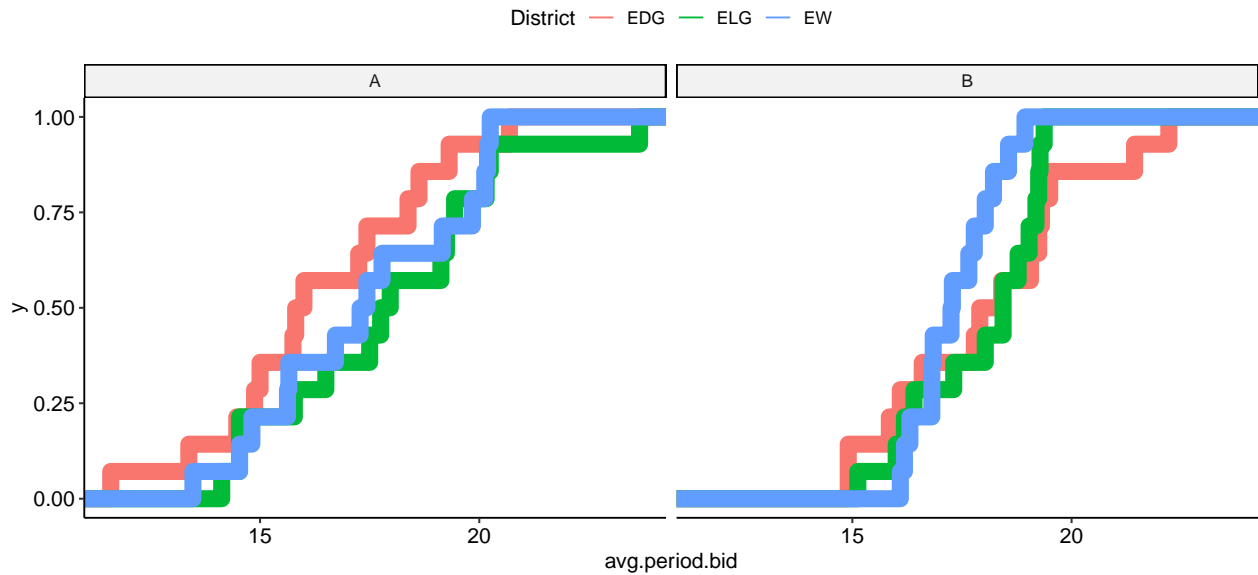
3) Separately I would like to overlay player A and B's CDFs for district 1 in the map where they bid on all districts since there's no reason for these to differ.
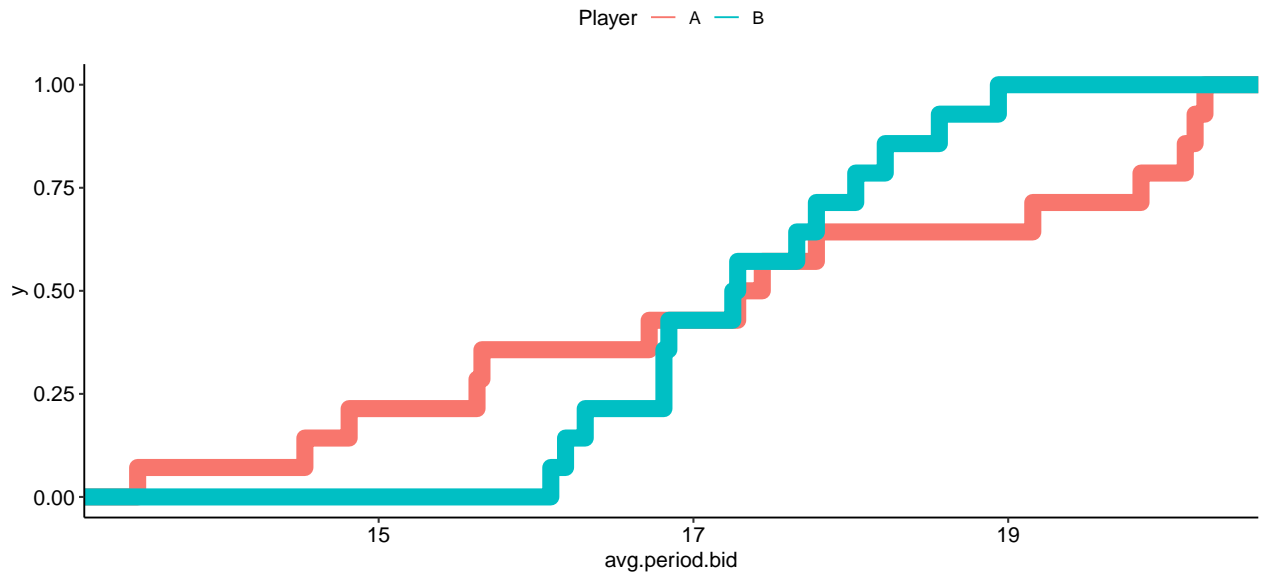
Map 4 CDF Dark Gray District
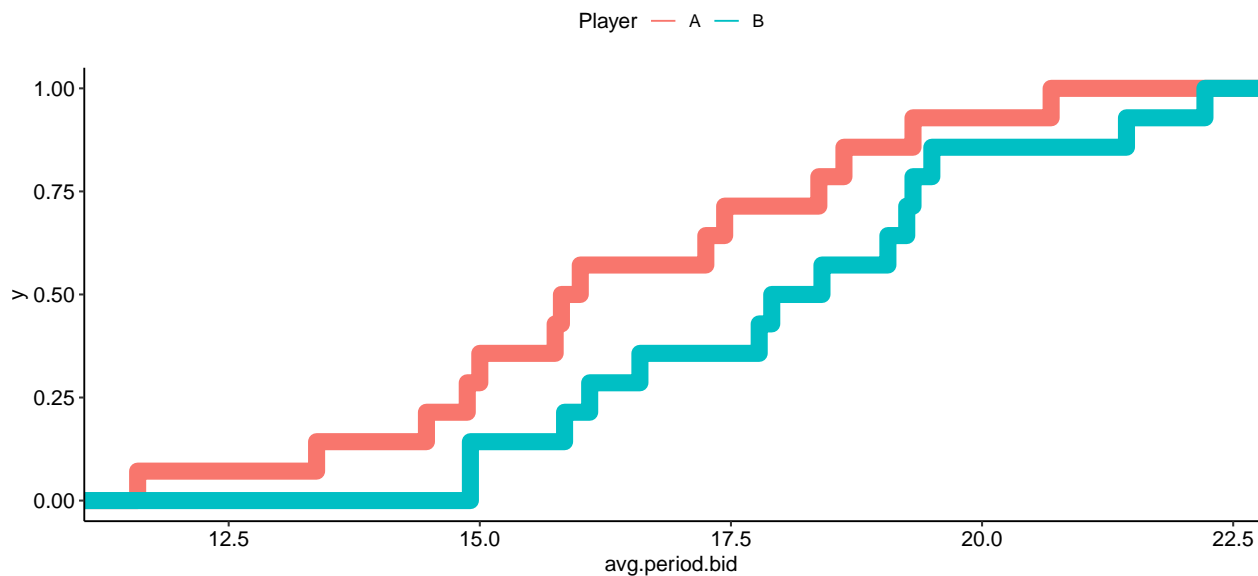
4) same as 3) for district 2.
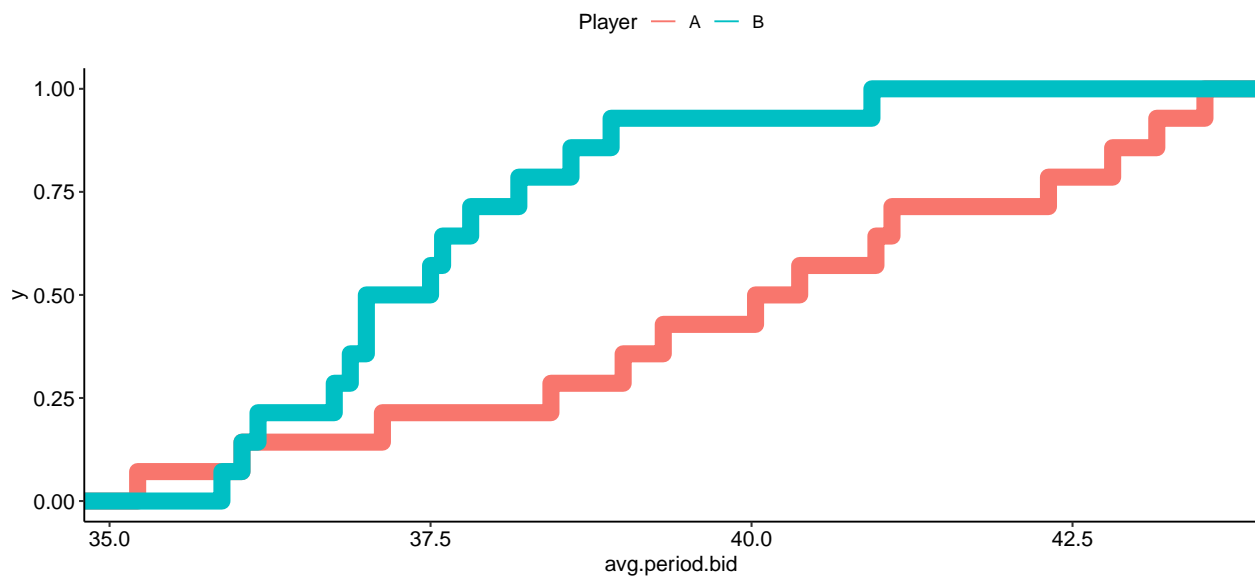
Map 4 CDF Light Gray District

5) same as 3) for district 3.
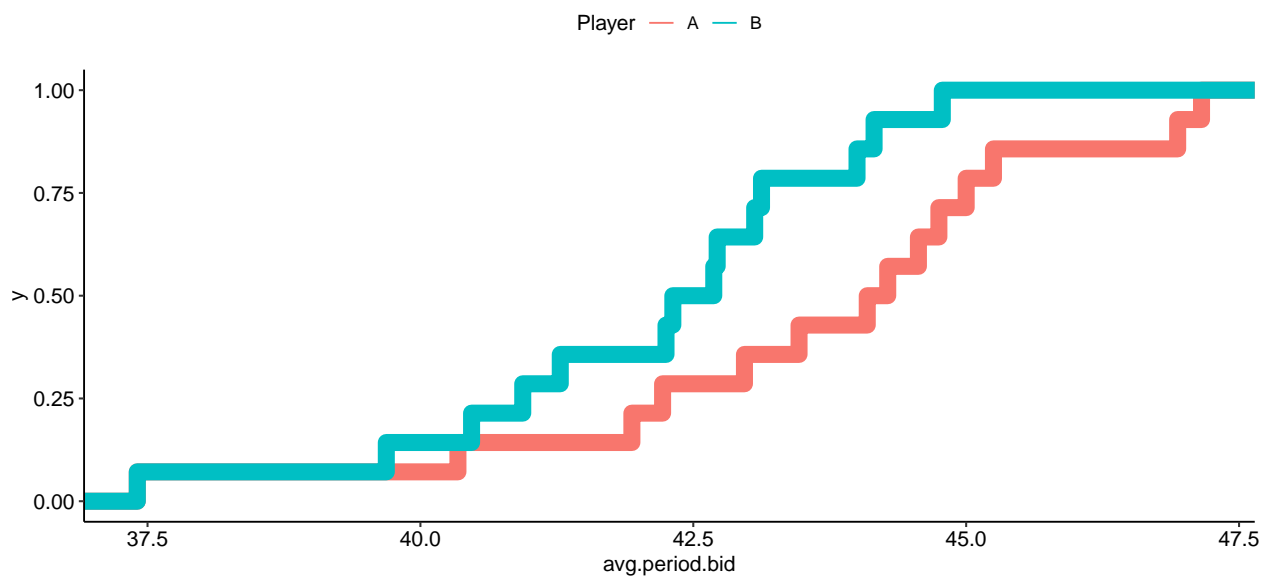
Map 4 CDF White District

6) & 7) On each of the two maps where the players are symmetric and only bidding on one district I would like to see their CDF's overlaid.
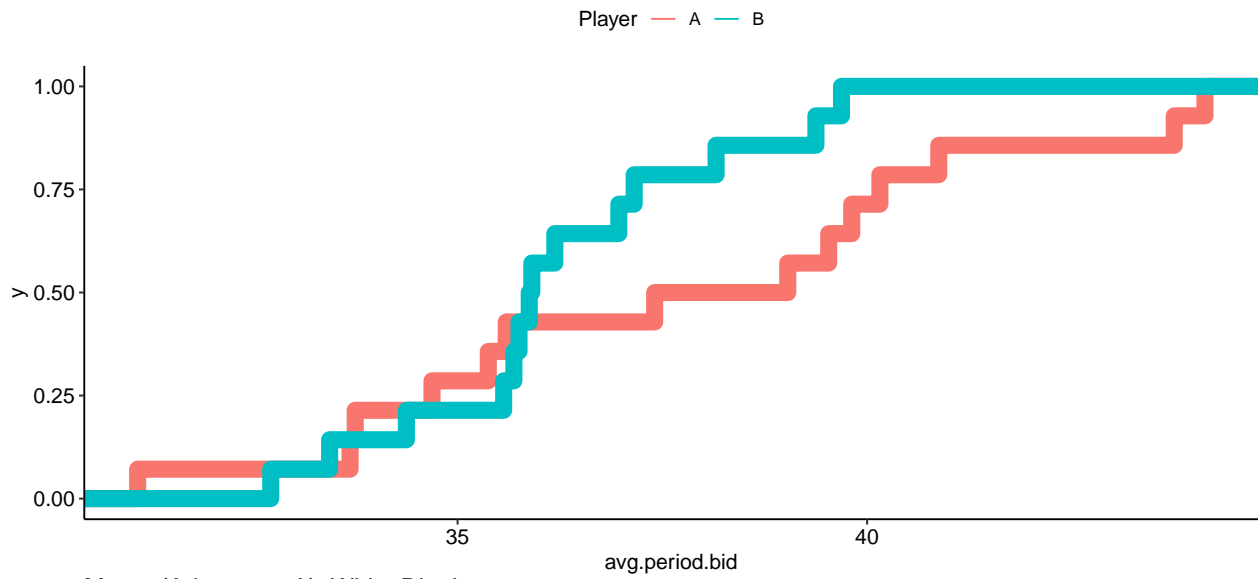
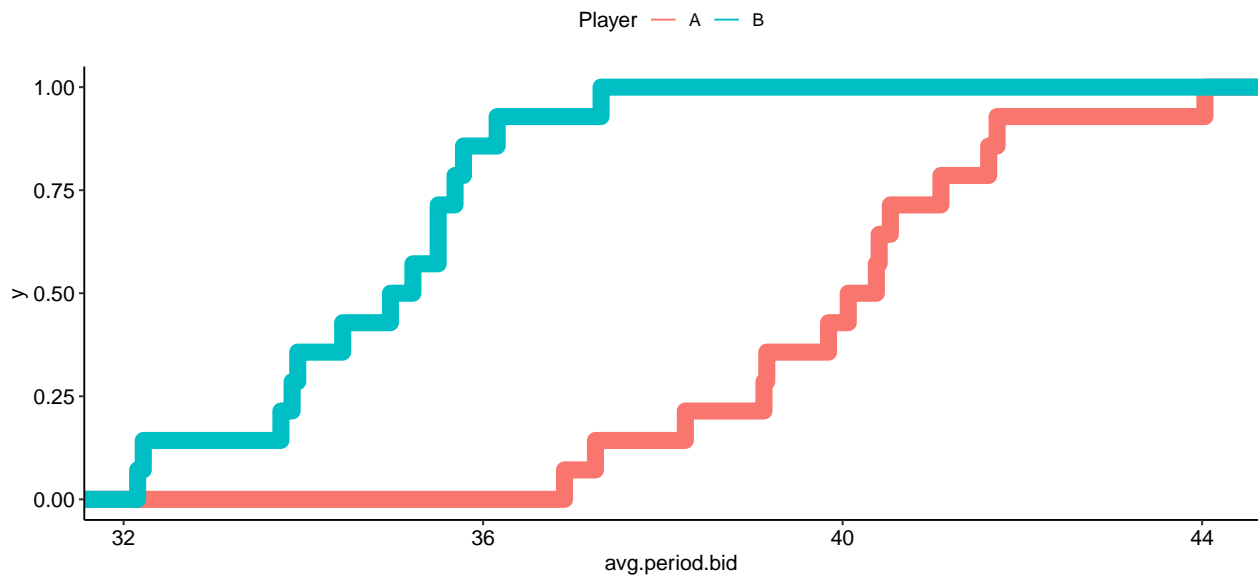Map 2: White District

Map 3: White District

8) Overlay the CDFs of the advantage player in map 1 and the advantage player in map 5.

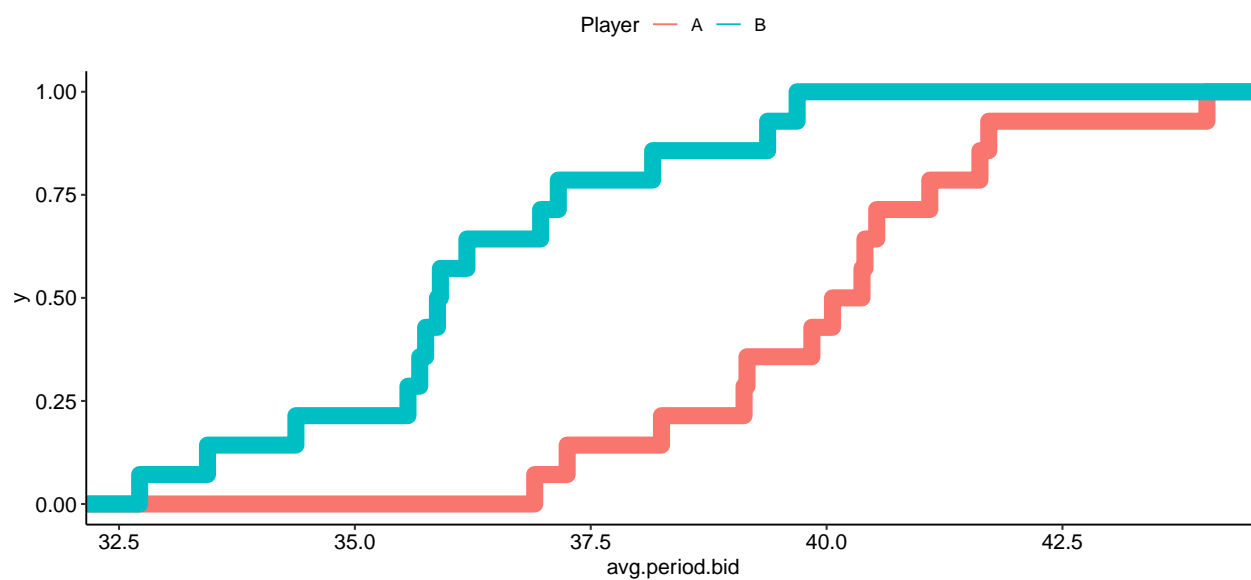9) Overlay the CDFs of the disadvantaged player in map 1 and the disadvantaged player in map 5.
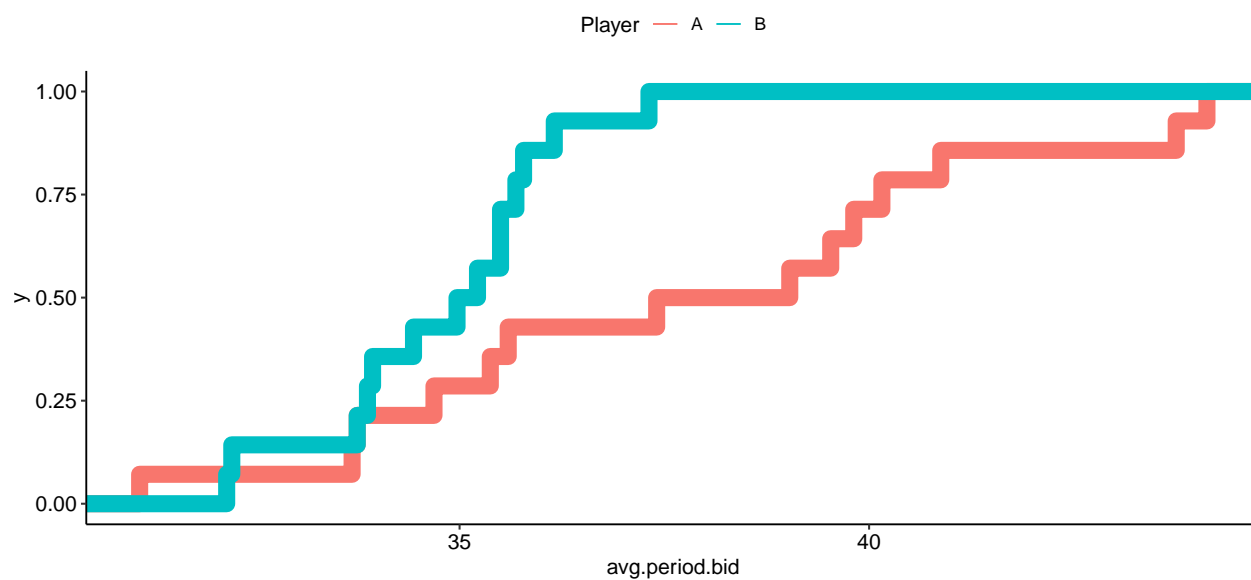
Map 1 (Advantage B): White District

Map 5 (Advantage A): White District

Both Players Advantaged: White District

Player —— A —— B

Both Players Disadvantaged: White District

Player —— A —— B

10) Assuming the two CDFs in 8) look the same and the two CDFs in 9) look the same, then make a combined advantaged CDF and a combined disadvantaged CDF and overlay those so we me can easily see how being advantaged matters.

Advnataged vs Disadvantaged