DODGING BAR CHARTS

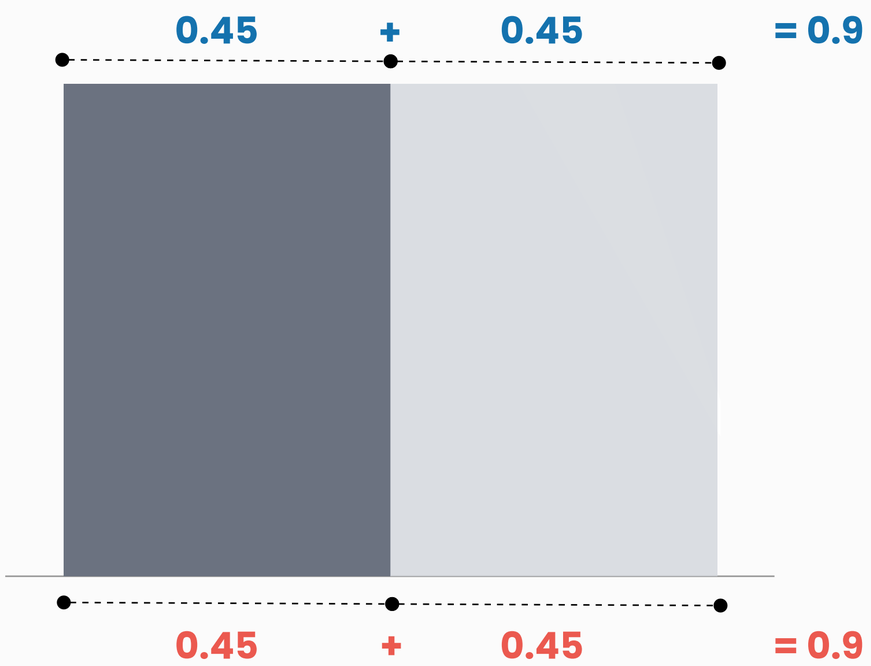
GGPLOT2 FUNDAMENTALS +

Use this cheat sheet to figure out how to manipulate the spacing between dodged bar charts with `position_dodge()` and `position_dodge2()`

position_dodge(): Adjacent bars

```
geom_col(position = position_dodge(width = 0.9),
         width = 0.9)
```

The width assigned to each bar is the width specified in position_dodge divided by the number of bars (0.9 / 2 = 0.45).

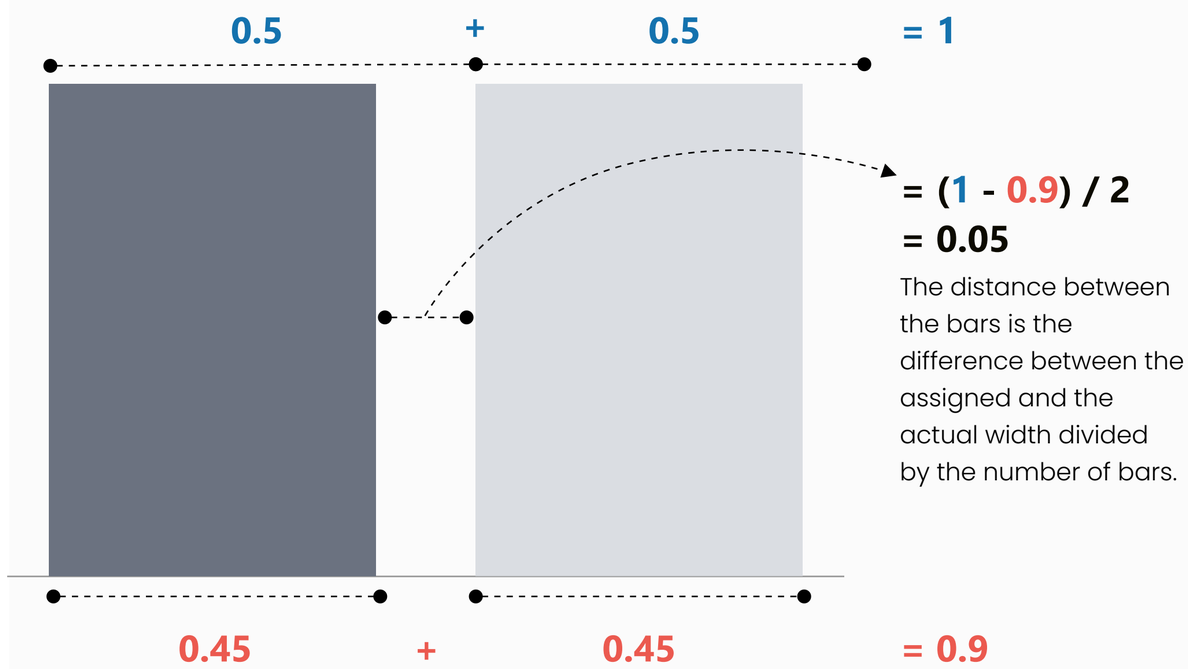


The width of each bar is the total width divided by the number of bars (0.9 / 2 = 0.45).

position_dodge(): Space between bars

```
geom_col(position = position_dodge(width = 1),
         width = 0.9)
```

There is a gap between the bars because the assigned width is larger than the actual width of the bars. Since there are two bars, each bar has an assigned width of 1 / 2 = 0.5.

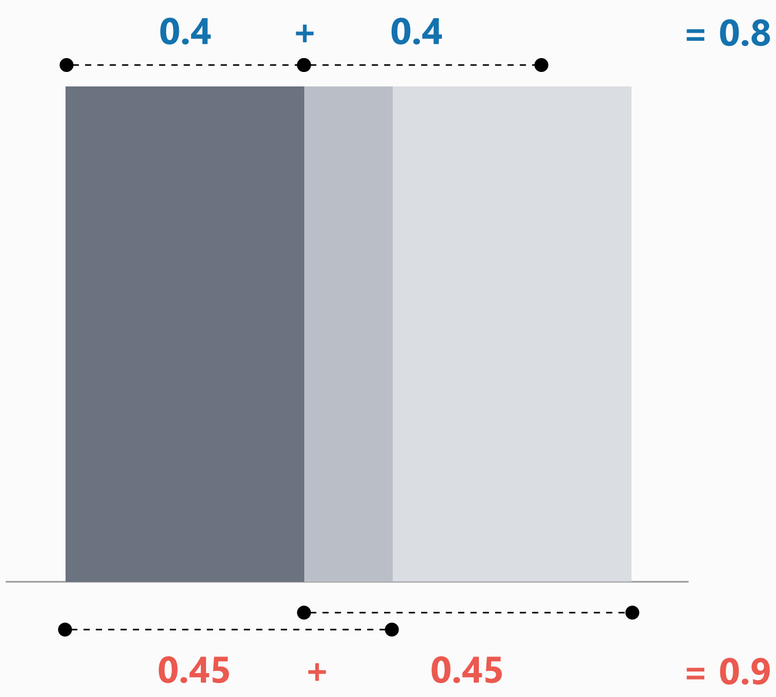


The width of each bar is the total width divided by the number of bars (0.9 / 2 = 0.45).

position_dodge(): Overlapping bars

```
geom_col(position = position_dodge(width = 0.8),
         width = 0.9)
```

In this case the bars overlap because the assigned width is smaller than the actual width of each bar.

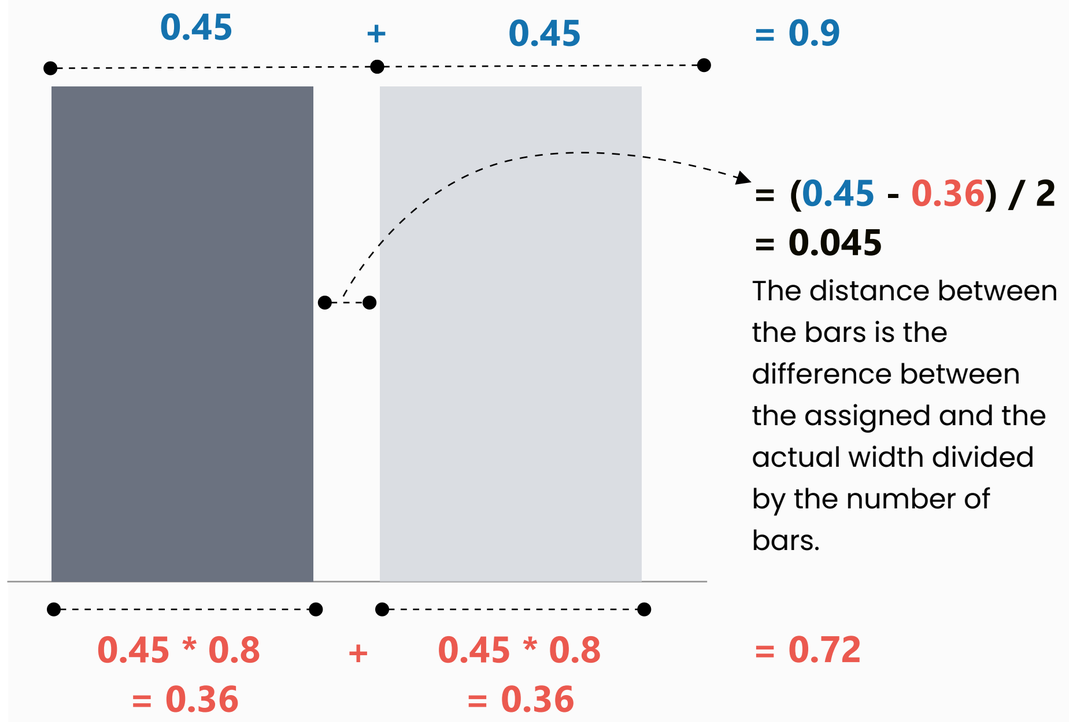


The width of the bars is independent of the assigned width. So the width for each bar is again 0.45.

position_dodge2(): Space between bars

```
geom_col(position = position_dodge2(padding = 0.2),
         width = 0.9))
```

With position_dodge2 the assigned width for each bar is calculated by the width specified in geom_col divided by the number of bars. In this case there are two bars, therefore the width of each bar is 0.9 / 2 = 0.45.



With position_dodge2 the actual width of each bar is variable. It is calculated from the assigned width of each bar times the remainder of the padding (1 - 0.2). In this case there are two bars, so the width of each bar is 0.45 * 0.8.