Commuter plot

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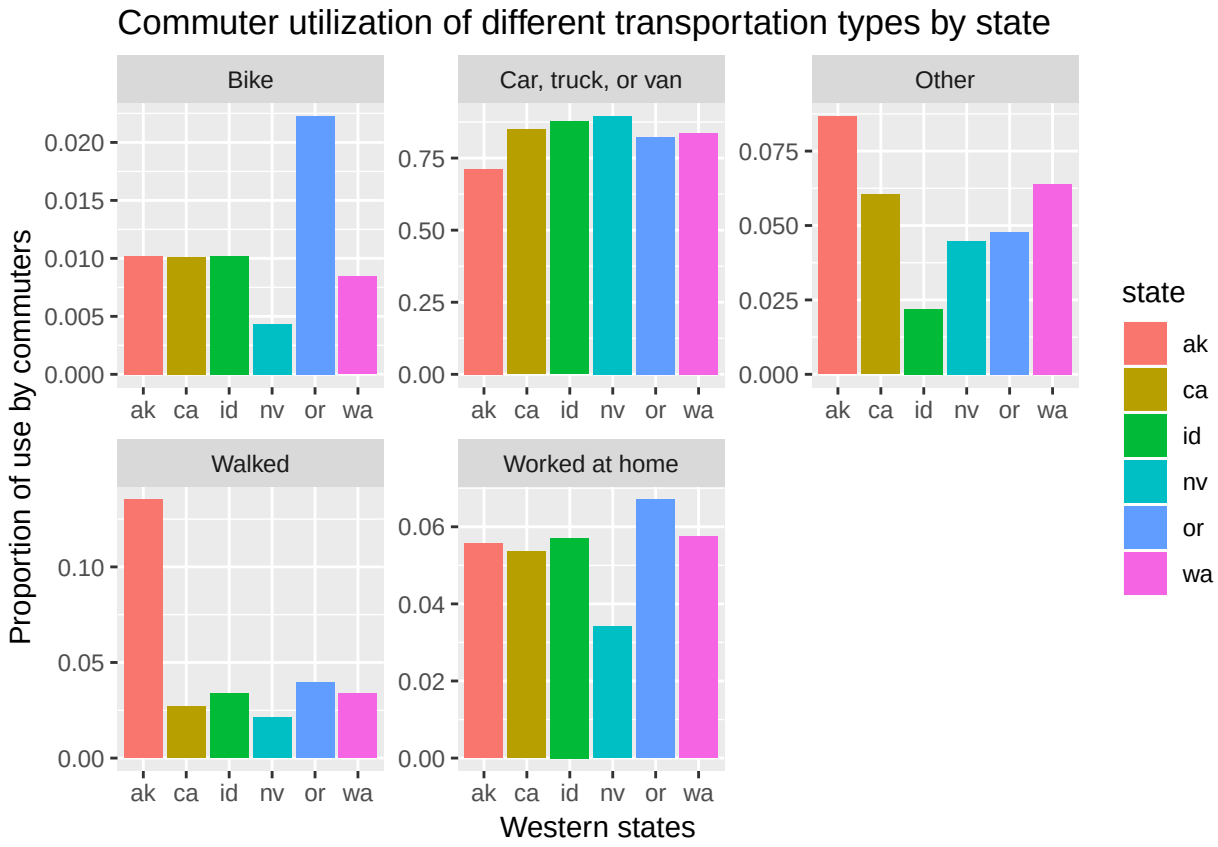

The pie chart example fails in requiring the reader to exercise their judgement of the magnitude of area in preference to more accurate elementary tasks. Following Martin's example but with separate scales for each category, we utilize `position` in our telling of the data. While bars can be said to nominally have `length`, we contend that bars placed on a common scale indicate `position` to the reader instead of `length`. It is their point of termination that the reader judges, much as the dotplots of Cleveland and McGill do, despite implicitly showing `length` with the ellipses preceding the dots (1984). The number of levels of transport type in the dataset would overwhelm the readers' working memories. We reduce the cognitive load by lumping the categories of lesser interest into "Other". The sheer range of the values across the dataset for transportation usage would allow the "Cars, trucks, and van" category to render the categories with lesser values indistinguishable from state to state. Since the primary objective is to compare bicycle usage, we give each category its own common scale using ggplot2's `facet_wrap`. While not an appropriate choice for a continuous variable, we effectively employ the `color` aesthetic in ascribing values to the categorical variable of `state`.

References

Cleveland, W.S. and McGill, R., 1984. Graphical perception: Theory, experimentation, and application to the development of graphical methods. *Journal of the American statistical association*, 79(387), pp.531-554.