*PAR 1*

The availability of Louisville Metro Police Department’s traffic stop data presents an opportunity to examine trends in police stops. The data reviewed here is for the year of 2015.

This analysis started with the question “Are male police officers more likely than female police officers to give women drivers warnings as opposed to citations during traffic stops?” The impetus for the question was to test whether the trope of male officers forgiving female drivers more frequently than male drivers actually manifests itself in the data.

The answer to this question revealed another trend in the data that warranted further exploration.

[GRAPH]

[TABLES \*\* -> ADD TITLES ; PLACE TABLE AFTER RELATED GRAPH ; CLEAN SOURCE TABLES]

*PAR 2*

Regarding the initial question, it does not appear that, in 2015 at least, female drivers received any particular deference from male officers. In fact, there does not appear to be any meaningful discrepancy between how officers of either gender treat male or female traffic offenders.

Interestingly, there is a marked difference between the frequency with which male officers issue citations vs warnings *overall* compared to female officers.

The LMPD traffic stops data set records several variables that could point to corollary or even explanatory variables that exist in the data. That said examining differences between male and female behavior is dense question with confounding variables and causes that defy reliable measurement. It is important to keep these limitations in mind.

Diving into the other parts of the data set, the age range and race of drivers stopped does not seem to show a marked difference. Neither does the number of passengers in the vehicle at the time of the stop appear to show much disparity.

[GRAPHS]

*PAR 3*

Looking at the dates and time of the stops does seem to show some differences.

[GRAPHS]

*PAR 4*

Most interestingly is female officers execute more traffic stops between the hours of 8pm and 4am than male officers. This could be part of the answer to the question, since vehicles with missing headlights and taillights are stopped at night. Such low-level offenses are likely to produce more warnings.

The starkest difference between male and female officers that could help explain the difference in warning issuance comes from the geographic area where the traffic stops occur:

[GRAPH]

*PAR 5*

While it is difficult to say exactly why the divisions 8 and 2 result in more warnings than citations, it is possible that the areas where female officers execute traffic stops could have some explanatory value.

[CAN I DO A REGRESSION???]

A logistic regression analysis of the time and division values shows that

*PAR 6*

Further areas of exploration include

* Determine if female officers perform traffic stops at a significantly higher rate than male officers
* Examine the characteristics of the different divisions and see if there are any informative correlations that can be drawn
* Determine the character of traffic stops during the night vs those during the day
* Directly poll male and female officers to determine traffic stop habits

\*\* CITE DATA: LMPD Stops Data (https://data.louisvilleky.gov/dataset/lmpd-stops-data)