Draft Pre-Analysis Plan for "Affluence and Influence? Examining the Extent of Non-Policy Representation in American Cities"

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Recent research on representation has considered the extent to which policymakers are more responsive to the preferences of some income groups over others. Bartels (2008), for example, shows that legislator ideology in the Senate is more closely associated to the ideological position of high-income constituents, relative to middle and low-income earners. Gilens (2012) offers a similar take, demonstrating that aggregate-level policy change follows preferences for change among the affluent, especially when those preferences diverge from those of lower income groups. Still others suggest that the rich do not "win" more often than the middle or the poor (Bashir 2015; Branham, Soroka, and Wlezien 2017; Enns 2015; Tausanovitch 2016), often noting that previous work "looks for difference" even though detecting group-based representation is made difficult by the strong association in preferences across groups (Soroka and Wlezien 2008).

Policy representation, however, is not the only way in which policymakers, or government more broadly, may prioritize one income group over others. And indeed, given the challenge of separating and distinguishing the policy preferences of high-income earners from low-income earners, it may be the case that examining policy output is a theoretically unimportant way to consider representation. Constituent service—a form of distributive politics—is another

mode of representation. Here, we may expect to find that governments provide fewer services to poorer neighborhoods, for example, in part because poorer neighborhoods may be less likely—due to a lack of resources, for example—to officially request services (such as snow removal, or garbage pickup) from government. As indicated, examining representation from this angle may be more reasonable, as preferences—or more aptly, the propensity to lobby for government assistance— -may actually diverge across income groups. As a result, differences are likely to be much more discernible for government officials. To the extent that it exists, then, reliably detecting differential representation might be more likely.

My proposals asks: do city governments provide fewer services to the poor, relative to the rich? My hypotheses are that city governments will (1) be more likely to respond to and complete service requests as the median income of a neighborhood increases; and (2) conditional on response, respond to and complete service requests faster—as measured by the number of days between request and completion—as the median income of a neighborhood increases. I will test my expectations using 311 data from Boston (to begin). The below pre-analysis plan outlines the data and my empirical strategy for testing both of these hypotheses.

Data

Most major cities make data on constituent requests for government services readily available online. Boston, for example, updates the log of 311 service requests daily. 311 service requests can be made to report any number of non-emergencies: a broken street sign, a broken traffic signal, an out street lamp, a pothole, graffiti, etc. Requests can be made over the phone, online, or through the city's 311 smartphone app. These requests are then logged and made publicly available. Boston's dataset include an exhaustive amount of information on the nature of each request for service. This includes information on the date of the request, the address where the service was requested, the type of service requested, the neighborhood and

city council district where the request was made, whether the service request was completed, and if so, how long it took for the service request to be completed. These data are available beginning in 2015.

Critically, the 311 data also include the estimated latitude and longitude at which the service request was made, allowing me to geolocate each service request within a Census block. The geolocated service data will then be merged with economic data from the 2011-2016 American Community Survey (ACS). In particular, I will calculate the median income within each Census tract from the ACS. This variable will serve as my key explanatory variable in the analyses that follow.

Two outcome variables will be generated using the raw 311 data. First, I will create a binary variable equal to 1 if the service request was completed (as of the time that the data are downloaded). Second, among those requests marked as closed, I will calculate the difference—in days—between the time at which service was requested and the time at which the service request was completed. These two variables, respectively, will allow me to test the expectations outlined above: (1) that city governments are more likely to respond to and complete service requests as the median income of a neighborhood increases; and (2) conditional on response, respond to and complete service requests faster—as measured by the number of days between request and completion—as the median income of a neighborhood increases.

Empirical Strategy

Simply regressing whether a request was completed or not on the median income of the locale, however, is challenging. Imagine that we find a positive relationship, such that higher income areas are more likely to receive service (upon request), relative to lower income areas. We may wish to interpret this as reflecting differential representation on the basis of income, a la

Bartels (2008) and Gilens (2012). But it may also be an artifact of the need for services, and perhaps likelihood of requesting services. We may worry that simply making comparisons across various parts of the city may introduce confounding variables that impact income, the likelihood of making a service request, and the likelihood that the request is fullfilled. Given this, a stronger empirical strategy is to make comparisons only *within* neighborhoods. Boston, for example, is divided into roughly 23 neighborhoods. And so, while we can geolocate using a much smaller unit of aggregation—Census tracts—we can hold constant in our model numerous other (perhaps unobservable) factors (at the neighborhood level), and instead examine the effect of within-neighborhood variation in income on the probability of a given request being completed. We can do so by including neighborhood fixed effects in the model. We can estimate our two models using OLS as follows, where λ_i represents neighborhood fixed effects:[1]

$$Request\ completed_i = \alpha + \beta_1 Median\ income_i + \lambda_i + \epsilon_{it} \tag{1}$$

$$Days\ to\ completion_i = \alpha + \beta_1 Median\ income_i + \lambda_i + \epsilon_{it} \tag{2}$$

I will estimate these models in R, as follows, for each hypothesis:

```
hypoth1 <- lm(completed ~ median_income + as.factor(neighborhood),
              data = bos_311)


hypoth2 <- lm(days ~ median_income + as.factor(neighborhood),
```

[1] Alternatively, we can estimate (1) using logit, and (2) using Poission, or some other model, like negative binomial, more appropriate for count data.

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                data = bos_311)
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Discussion and Conclusion

This proposal seeks to examine whether policymakers in American cities exhibit bias—on the basis of income—in delivering services to constituents. It follows from an emerging literature which argues that legislators in the U.S. respond primarily to the preferences of high-income earners in crafting public policy (Bartels 2008; Gilens 2012). These studies, however, are plagued by significant correlations in public preferences across income groups: indeed, if, as some work has shown (Soroka and Wlezien 2008; Tausanovitch 2016), high-income and low-income preferences over public policy are both similar and move in parallel to one another, it seems unlikely that policymakers can actually differentially respond to one group over another. This proposal suggests that a more tractable way to detect bias in representation—to the extent that is exists—is by considering requests for constituent services. Doing so may allow us to reliably detect such bias, given that the propensity to lobby for government assistance is more likely to differ substantially across income groups.

The data and empirical strategy above outlines the "first cut" at examining this question. Of course, the project can and should expand beyond Boston. Numerous major cities—including New York City and San Francisco—make similar data publicly available. Second, the models outlined above do not take into account other factors—such as racial and ethnic diversity—that may also influence whether and how quickly government responds to requests for service. Another consideration may be voter turnout. Some work shows that politicians are particularly responsive to the preferences of voters (Anzia 2014). As a result, areas with higher voter turnout may be more likely to find that their city government is responsive to their concerns and requests. All of these Census-tract level factors should be accounted for in the model. Doing so would allow the estimate of income to better reflect—within

neighborhood—only the unique effect of income.

In sum, the study outlined above offers a unique take on how to study representation. Studies of representation overwhelming consider either representation with respect to either particular polices and broader ideological positions. But politicians and governments more generally interact with and influence the lives of citizens in more ways than simply through policy proposal and implementation. Moreover, citizens want more from government than just policy representation. Considering these other dimensions of representation will go a long way toward expanding our understanding of the relationship between the governed and the government in American politics.

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