

Eviction and the dissolution of neighborhoods

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Abstract

Research has documented the negative impacts of eviction on individuals, particularly the resulting financial insecurity, health challenges, and increased likelihood of homelessness. In this paper we study a potential unintended impact on the neighborhoods that experience evictions: a decrease in community engagement with neighborhood problems. Using data from the Eviction Lab and calls to 311 collected from seven cities' online depositories, we study the level of participation in neighborhoods, as well as how changes in eviction impact changes in public engagement. We find evidence that eviction is a predictor of the number of service calls within a census block group and a clearer indication that increases in eviction reduce calls to 311. These results demonstrate that the

costs of eviction may extend beyond the individuals that are forced from their residences and can be reflected throughout a neighborhood.

Introduction

Eviction has long been a substantial problem for vulnerable communities in the United States with costs that accrue to individuals and communities. The impoverished, black women, the elderly, widows and widowers, and those with substance abuse problems are at a higher risk of eviction and the associated harms that come with it (Crane & Warnes, 2000; Desmond, 2012b). To whatever extent social problems unjustly cause vulnerability, those problems can be compounded by eviction, which in turn causes or worsens these initial problems. Eviction can thus be understood as a problem of mental and physical wellbeing as well as equality, both on the individual and community level.

Some costs of eviction, such as decreased mental, physical, and economic wellbeing, are born by individuals. For instance, research finds long-term health impacts from eviction, particularly on mothers and their children. Mothers who are evicted report worse wellbeing for themselves and their children, with higher rates of depression, physical health, and parental stress (Desmond & Kimbro, 2015). Other research finds that the mere threat of eviction is associated with lower physical and mental health (Vásquez-Vera et al., 2017).

Eviction is often caused by financial insecurity, but it also contributes to poverty by locking people into a negative housing cycle by making it more difficult to find affordable housing in the future. Similarly to a criminal record, landlords are often hesitant to rent to an individual with a history of eviction (Desmond, 2012b). Eviction is thus also linked with homelessness. If one is unable to pay one's rent, it is highly unlikely they will be able to put together a deposit on a new unit. In competitive rental markets where landlords want a reference for potential tenants, those who are evicted, or threatened with eviction, are less likely to secure such letters. Eviction followed by homelessness is typically not a sudden occurrence, but rather the culmination of long-term financial challenges and difficulty of maintaining the

property one is renting (Crane & Warnes, 2000). Being homeless creates additional barriers to employment, thus exacerbating their financial problems, and making it yet more difficult to find secure housing. Homelessness is, of course, a substantial burden, as it contributes to psychological and physical pathologies and is itself a barrier to receiving medical care (Hwang, 2001).

However, not all costs of eviction are felt just by the individual, as there are also impacts on neighborhoods and communities. Research finds that the evicted and housing insecure often rely on disposable ties as much as deep ones, and are often forced to “burn” those ties to meet basic needs (Desmond, 2012a). In addition, eviction increases housing mobility, which has the effect of disrupting engagement with schools, support services, and the community in general (Desmond & Shollenberger, 2015). These effects reduce collective efficacy, thereby exacerbating other problems in the community (like crime and disorder). As such, it is unsurprising that neighborhood crime and eviction are interlinked, with higher rates of police reports increasing the odds of a family being evicted, holding other factors constant (Desmond & Gershenson, 2017).

More generally, vulnerable communities experience higher rates of eviction and, therefore, weaker community bonds (du Plessis, 2005; Hartman & Robinson, 2003). Community bonds contribute to “collective efficacy” which allows communities to engage in informal social control and organization. Collective efficacy has been identified by social scientists as important in sustaining healthy and prosperous communities which enable people to flourish (Morenoff et al., 2001; Sampson, 2003). Similarly, other researchers have demonstrated that public service and goods, like public safety and sanitation, must be “co-produced” with collective efficacy an important input or condition (Eijk et al., 2017; Thijssen & Van Dooren, 2016).

Eviction is highly geographically concentrated within a city or region, acting to further concentrate poverty and interrelated social disorder (Shelton, 2018). So-called “slum clearance” policies enacted by city governments (Bennett, 1981) to clear certain areas for redevelopment cause eviction, though this does not

explain the majority of displacements (Desmond, 2012b). Another, more fundamental reason why eviction is highly concentrated is because the various vulnerabilities that contribute to eviction are themselves not geographically dispersed. Redlining and the middle-twentieth century “urban renewal” activities resulted in concentrated poverty that is still observable (Hillier, 2003; Immergluck, 2002).

However, neighborhoods with high rates of eviction may escape poverty. The increasing role of state-led gentrification uses eviction as a tool to promote neighborhood change (Paton & Cooper, 2016). Eviction appears to be most common prior to gentrification or during the early stages (Chum, 2015; Sims, 2016), which should indicate a significant transition in the populations within a neighborhood, breaking up communal bonds and fraying social connection.

Thus, there is a need for community stability to encourage neighborhoods to engage with or solve shared problems as they arise. Given evictions role in forced departures and community change, it is critical then to determine whether eviction further depresses community engagement, co-production of public services, and collective efficacy.

Question and Hypotheses

In this paper we study the impact of eviction on community engagement and co-production of public services. Across a spectrum of measures for community engagement, such as participation in voluntary organizations, voting, or co-production of public services and goods, neighborhoods with lower socioeconomic status are found to participate less through formal structures (e.g., Casciano, 2007; Houston & Ong, 2012; Marschall, 2004; Stoll, 2001). These lower levels of involvement are driven by both a lack of opportunity and lack of access, created by the barriers to participation and the necessities of meeting basic needs. As described above, eviction is generally concentrated in impoverished neighborhoods with lower levels of human capital (Desmond, 2012b), and thus it is reasonable to expect that areas with higher numbers of evictions will engage less.

Furthermore, third party policing may play a role in creating a negative relationship between eviction and public participation. Third-party policing refers to the practice of police agencies leveraging power over third-parties to induce them to reduce or eliminate criminogenic features of the environment they control (Desmond & Valdez, 2013; Garland, 2001; Mazerolle & Ransley, 2006; Meares & Owens, 2019). Research on third-party policing indicates that the presence of police leverage induces landlords to raise the threat of eviction on tenants who would otherwise be likely to seek out public services. In other words, the threat of eviction makes it risky for vulnerable populations, such as women who are regular victims of domestic abuse, to call on government services (Desmond & Valdez, 2013). As such, we predict that eviction will be negatively correlated with engagement rates for neighborhoods.

H1: There will be lower levels of community engagement in neighborhoods with more evictions.

Beyond the relationship at a given point in time, when looking at the issue longitudinally it is possible that eviction can either be associated with an increase or a decrease in engagement at the neighborhood level. Research on gentrification shows that community change can alter the frequency and type of contact residents have with police and government services (Beck, 2020). Insofar as eviction may be associated with the ascending of neighborhoods and gentrification (Chum, 2015), it may introduce an increase in human capital and residents that are more likely to participate. As such, there is reason to think that evictions rates will be positively correlated with engagement of public services.

In contrast, there are two paths through which eviction may reduce community engagement. Eviction has the potential to reduce social and physical disorder in a neighborhood, particularly by uprooting problematic tenants, assuming they move to different communities. For instance, such tenants may have a history of not properly caring for a property, or can be removed because of frequent calls to police (Desmond, 2016; Desmond & Gershenson, 2017). Alternatively, eviction may create distrust and cause individuals nearby to be less likely to engage with government by reducing a sense of community; that effect can potentially be observed for those that are evicted, as well as neighbors who may be vulnerable to

similar processes in the future. Thus, we propose two (mutually exclusive) hypotheses to be tested related to how eviction changes a neighborhood in its aftermath:

H2: Increases in eviction will be associated with increases in community engagement.

H3: Increases in eviction will be associated with decreases in community engagement.

Materials and Methods

In order to study the impact of eviction on community engagement and co-production of public services at the neighborhood level, we utilize data from three sources. To assess the prevalence of eviction, we collected data from the Eviction Lab at Princeton University. Second, we use data from calls to 311 published by seven cities to study engagement. Finally, we include data from the American Community Survey to assess additional (non-eviction) characteristics of neighborhoods. Each source is reviewed below in turn, before discussing the methodology of the study.

Data. Data on eviction comes from the Eviction Lab, a research organization led by Matthew Desmond. The Eviction Lab collects data primarily from U.S. Court Records to create the first nationwide database assessing the prevalence of eviction filings and rates. In addition, records from LexisNexis were acquired to further expand the number of locations included in the data. Currently data is available for 48 states and the District of Columbia from 2000 to 2016. Addresses listed in the records were converted to geocoordinates, allowing for an assessment of evictions at various geographic levels, from Census block groups up to the state. The collected data was further verified by comparing it against official statistics published at the county level for 27 states. However, given the scope of the data collected and the lack of transparency in court records, the data is not without questions about its validity particularly related to whether it is underreporting the number of evictions (Aiello et al., 2018; Immergluck et al., 2019). While it should be cautiously interpreted for the magnitude of evictions, it can still be a useful tool for comparing the number or predictors of evictions across the data. Data from the Eviction Lab has been used primarily to

study the public health effects of eviction (Allen et al., 2019; Niccolai et al., 2019; Zewde et al., 2019), but here we use it to study the impacts on community engagement.

In this analysis, we use calls to 311 as a proxy for community engagement. 311 phone lines were developed in the late 1990s, in order to take pressure of 911 for calls for routine and non-urgent concerns. Scholars have used 311 data to proxy for several features of cities and neighborhoods. Higher levels of 311 calls are often viewed as a sign of civic engagement, (Gao, 2018; Minkoff, 2016; O'Brien et al., 2015), but they also necessitate the presence of problems to report. As such, Corinth and Finley (2020) show that 311 can be used as a proxy for the location of the homeless, while Lacoé and Ellen (2014) demonstrate that forecloses are associated with an increase in calls for service. Calls to 311 have also been used to model neighborhood conditions, and used to measure disorder (Wheeler, 2018) or neighborhood conflict (Legewie & Schaeffer, 2016). Here, we follow Levine and Gershenson (2014) and Lerman and Weaver (2014) in using 311 calls as an indicator of willingness or ability to engage in fixing neighborhood problems.

Data on 311 was collected directly from city repositories that make the information publicly available. The seven cities were selected based on a review of the open data depositories of the 25 most populous cities in the United States; the seven used were those with complete data for 311 calls available from 2016 to the present that was geo-coded into latitude and longitude. While availability was the driving factor behind selection, as displayed in Figure 1 below the data demonstrates geographic balance for the nation and captures different demographic characteristics. We use the total number of 311 calls in our analysis, rather than distinguishing between certain categories of calls in order to approximate the total engagement of neighborhoods.

Insert Figure 1 Here

The final source of data collected was from the 5-year American Community Survey, which reports information about the demographics and urban character of neighborhoods in order to supplement the

information on eviction. The specific variables used are listed below when describing the models used in the analysis.

Methods. In order to understand the impact of eviction on calls for service, we look at the effect across three distinct analyses using census block groups as the unit of analysis to approximate neighborhoods. We first analyze the cross-sectional relationship between evictions and calls for service, using data from 2016 for both variables. In addition, we control for the characteristics of the neighborhood, both because of how eviction non-randomly occurs across neighborhoods and because of how the type and quality of housing impact whether 311 calls occur. Specifically, we control for the race, educational attainment, median age, poverty status, marital status, and gender of individuals for each census block group. In addition, we account for the vacancy rate, age of buildings, total population, housing density, and neighborhood turnover to capture the urban character of a neighborhood. Finally, the city each census block is within is included to control for potential differences in how the data is reported and the popularity of the service. As outlined in H1, we predict that eviction will be associated with lower levels of service, and thus negatively predict calls to 311. Because calls for service is a count variable that was heavily skewed, we use a log transformed version in the first set of models.

$$311\ Call_{2016} = Eviction_{2016} + Demographics_{2016} + Urban\ Character_{2016} + city + \varepsilon$$

It is necessary to look at how changes in eviction impact changes in calls to 311 in order to test H2 and H3. Because eviction data is reported by Eviction Lab annually, the narrowest change we can analyze is the change between years. Our second set of analyses tests how changes in eviction in the year prior (t_1-t_2) impact changes in calls to service in the following year ($t-t_1$). However, community demographics are not available annually for census block groups, so we are only able to measure their levels for 2016. Thus, the control variables are the same within the first two models. Summary statistics for the variables used in the first two analyses are reported below in Table 1.

$$\Delta 311 Call_{2017-2016}$$

$$= \Delta Eviction_{2016-2015} + Demographics_{2016} + Urban Character_{2016} + city + \varepsilon$$

Insert Table 1 Here

While community characteristics are not measurable over a single year, five-year changes can be calculated using the American Community Survey. Thus, our final set of analyses tests how change in all the independent and control variables impact the change in calls for service within a neighborhood. More specifically, we also look at how changes in eviction over five years, paired with five-year changes in community demographics and urban character, predict changes in calls for service over the following year. Summary statistics for the variables used in the final analysis are reported below in Table 2.

$$\Delta 311 Call_{2017-2016}$$

$$= \Delta Eviction_{2016-2011} + Demographics_{2016-2011} + Urban Character_{2016-2011} + city + \varepsilon$$

Insert Table 2 HereAs shown in table 2, the number of calls for service to neighborhoods had extreme values. While looking at the number of calls, the mean is 370 while the largest value is 281,924. We manually analyzed the generation of those extreme values individually and could find no error that caused the counts to occasionally significantly exceed the typical values. Extreme values in themselves do not generate outliers, but the residuals from OLS models were shown to violate basic assumptions due to of the presence of high leverage observations and outliers that were spread across all seven cities. As such, we report the results of robust regressions which reduce the weight of outliers and omits extreme values (Huber, 1964; Massart et al., 1986; Verardi & Croux, 2009). Specifically, we us an mm-estimator to address different types of outliers and leverage with robust standard errors to prevent heteroskedasticity (Verardi & Croux, 2009).

Results

Insert Table 3

We first analyze the effect of evictions on calls to 311 in the same year (2016). As shown in Table 3, when looking at the bivariate relationship between eviction and calls in column 1, we observe a significant difference, with eviction being negatively related to calls for service. That relationship remains consistent when including other demographic and neighborhood characteristics, which also greatly improves the accuracy of the model overall. However, when including the city for each observation as a covariate the relationship reverses, and the number of evictions is associated with a significant increase in the number of calls for service. Taken together, these results indicate a somewhat mixed relationship, with the strongest evidence indicating that neighborhoods that see more evictions have higher numbers of 311 calls.

Other covariates are useful in predicting the level of calls to 311 within a census block group and generally align with existing literature on community engagement. Communities with a higher socioeconomic status, as measured by the percentage of college graduates, made more calls to 311. Similarly, areas with higher rates of poverty observed fewer calls for service. Neighborhoods with higher median ages saw more calls to 311, as did areas with more individuals who had never been married. In addition, a lower rate of neighborhood turnover, as measured by the share of individuals that had lived in the same house the year earlier, increased the number of calls that were made. Controlling for the population and all else, greater housing density lowered the number of calls for services, as did greater vacancy rates. Different cities showed differing levels of 311 calls as well, with only Philadelphia having fewer calls than Austin (the omitted value). Overall, with the exception of the change in direction for the eviction, the models perform similarly with respect to significance and direction when controlling for the city, despite changes in magnitude throughout the models.

Insert Table 4

Table 4 shows the impact of changes in evictions for a census block group in the year prior on the changes in calls for service in the following year. Across the models, the effect of an increase in evictions is a decrease in the number of calls for service. While the magnitude of the effect does change based upon the specification, the direction and significance are consistent. For each additional eviction that occurred in a neighborhood, there is an associated decrease between .73 and .44 in calls for service across the models, holding the demographics and urban character of the area constant.

The control variables allow us to assess what demographics and urban characteristics predict an increase in the number of calls for service between 2016 and 2017. Neighborhoods with a larger population or a larger share of unmarried residents saw increases in their calls for service. In contrast, areas where there with newer housing or with higher rates of poverty saw decreases in the number of 311 calls between 2016 and 2017, holding all else constant. Finally, the displayed cities generally saw increases in the number of 311 calls over the study period that exceeded Austin, Texas.

Insert Table 5

Table 5 shows how changes over a longer period (5 years) impact changes in calls to 311. Larger increases in eviction over 5 years are still associated with a decrease in calls for service, but the magnitude is reduced and the final model only reaches low levels of significance. Here, an additional eviction over five-years is associated with just under half a call fewer. In addition, fewer of the other covariates measuring five-year changes in the demographics or urban character reach significance either. However, an increase in the percentage of which residents or an increase in the total population are both associated with increases in calls for service.

Robustness check

One potential weakness of using the total number of 311 calls in the above analyses is the potential conflation of civic engagement and community distress. In particular, higher levels of 311 calls could signal

a greater ability to solve community problems or higher levels of disorder. In addition, a decline in calls for 311, as we have shown to occur when evictions increase, may relate to a decrease in self efficacy for neighborhoods or the reduction of such problems. As a robustness check on our earlier results we look at a single type of 311 call, potholes. While it is possible that evicting problematic tenants may reduce some community problems, potholes are a cumulative problem and are unlikely to be fixed systematically after evictions. Thus, if they decrease with an increase in evictions, it would be greater evidence that such changes are a result of decreased engagement with community problems. In addition, if there are higher numbers of such calls in areas with more evictions, it likely relates to such problems being larger in those neighborhoods rather than there being greater community engagement.

In order to ensure consistent coding of call categories, we study calls related to potholes in one city, Austin, Texas. In addition, we utilize the same set of three models analyzed earlier, though we only report results for the full model including demographics and urban conditions.

Insert Table 6

In the interest of space, table 6 shows results only for the three eviction variables. Full results are available in Appendix A and B. The relationship of calls to 311 for potholes in Austin and evictions generally align with earlier results. Column 1 shows that neighborhoods with more evictions have more calls related to potholes, though the result is only weakly significant. In addition, as evictions increase between 2015 and 2016, there is a decrease in those calls, and that result is highly significant. However, column 3 shows there is no relationship between five-year changes in evictions and calls related to potholes in Austin. Taken together, these additional results provide further evidence that neighborhoods with more evictions have higher levels of distress, and declining ability to address such issues.

Discussion

Existing literature finds a variety of problems, both individual and social, that arise because of eviction. Our findings add to this literature, though we also extend some of these earlier results into a more diffused cost of eviction for neighborhoods. Using calls to 311 as a measure of civic engagement and willingness to fix community problems, we studied how eviction predicts the current levels and changes in calls for service. We found evidence that levels of eviction predict more rather than fewer calls within a neighborhood, meaning we dismiss H1. However, we also found clearer evidence that as eviction increases, calls to 311 decrease, supporting H3 and rejecting H2. These results were more precise when looking at one-year changes in eviction rather than the change over a longer period, indicating that the effects may be lessened over time, though the evidence was consistent in direction over either period.

Studying the association between eviction and 311 calls at the neighborhood level precludes us from assessing who is driving the decrease in engagement. Specifically, we cannot assert whether the displaced individuals drive the decrease in 311 calls, or whether it is an effect on their nearby neighbors, or any other members within the census block group. While avoiding the ecological fallacy, we can speculate at a variety of sources that may help to explain our findings.

Living in a long-term state of financial and housing insecurity can preclude individuals from taking on various costs to improve the community in which one lives. Unable to bear these costs, individuals who are evicted or who are at elevated risk of eviction may withdraw from the public sphere. This interpretation is supported by prior research showing that the co-production of public goods and services requires, at a minimum, the opportunity to take such action (Thijssen & Van Dooren, 2016). Alternatively, these individuals may experience a lack of support from their community (including their landlord) and their local government officials, and for this reason experience alienation and internalize the view that it is not worth engaging public problems. Whatever the cause in individual cases, the drop in community engagement due to eviction and its threat may cost individuals a sense of belonging and support that comes from engagement.

and reciprocation. Such an effect can generate or contribute to negative feedback loops. Lower levels of public (and perhaps political) engagement can contribute to less financial and housing stability, thereby reducing both, making upward mobility increasingly difficult.

It is possible that 311 calls are a measure of both community engagement *and* community distress. The complicated nature of 311 calls as a proxy for other variables requires some discussion. We find that high eviction neighborhoods make more 311 calls, undermining H1. These might be explained by taking 311 calls to measure community distress. High socioeconomic status neighborhoods are likely to have higher tax bases and, therefore, more regular (and perhaps preventative) forms of public service, thereby decreasing the need for calls for service in the first place. 311 calls can be caused by highly sensitive and highly engaged residents; they can also be caused by more serious problems that prompt even less engaged residents to make a call.

This interpretation helps to contextualize our findings. We found both that neighborhoods with high levels of eviction have high levels of calls for service and that as eviction increases calls to 311 decrease. If we understand calls to 311 to be both a measure of community engagement and a measure of distress, these results suggest both that neighborhoods with a lot of eviction are distressed and that increasing the level of eviction reduces engagement to address such distress. That is, increased eviction potentially resigns residents to tolerate such distress, possibly because they are pessimistic that anything within their power can be done about it.

Community distress can increase while engagement decreases, and it is unlikely that increasing eviction rates decreases community distress. Potholes and our findings from the robustness check can serve as an example. It is likely that distressed neighborhoods have more potholes, so there will be more 311 calls because of them. But increasing eviction will not decrease potholes or other kinds of community distress but we found that 311 calls for potholes decrease as eviction increases. So, while high levels of 311 calls in high-eviction neighborhoods plausibly measures community distress (undermining H1), increased eviction

followed by decreased 311 calls plausibly measures community engagement (supporting H3). More generally, another reason it is unlikely that eviction decreases community distress is that it is unlikely that “distressed people” move out and “non-distressed people” move in. This may occur when neighborhoods gentrify, but only some neighborhoods with increasing levels of evictions are simultaneously undergoing gentrification.

This contributes to existing research on neighborhood attributes, co-production of public services, and collective efficacy. Earlier findings suggest neighborhood morphology affects co-production of public services (Thijssen & Van Dooren, 2016). Denser, more walkable neighborhoods are thought to have higher levels of collective efficacy, in part because those attributes facilitate interaction among neighbors. Yet, we find that denser neighborhoods have fewer 311 calls. Again, this could be because higher collective efficacy reduces the kinds of problems that require a 311 call in the first place. If 311 calls are also a proxy for (decreased) community engagement, then our results suggest that eviction undermines the collective efficacy of neighborhoods. Collective efficacy requires, among other things, a stable neighborhood where people know one another and interact, which is one reason why neighborhood morphology is related to co-production of public services. High levels of eviction will have the effect, not only of increasing the vulnerability of individuals, it will also reduce the typical duration of residence in a neighborhood. If collective efficacy and co-production require a sense of belonging to a collective, then eviction will reduce the sense of belonging to the extent that fewer people in an area feel connected. It is presumably easier to draw new individuals into an established sense of collectivity in a neighborhood than it is to create this sense anew, so eviction can eliminate or prevent these feelings and attitudes from developing. In fact, we do find that there are more calls for service in neighborhoods where there are more long-term residents. As eviction levels increase, neighborhoods may approach dissolution to the point where community distress can no longer be addressed by the community.

Often, the problems that arise in vulnerable neighborhoods are costlier for those residents than those who are not vulnerable. For instance, potholes can damage a vehicle, but the individuals who live in areas with more potholes are less likely to afford the repairs needed than those who live in areas with better maintained roads. Yet, even if local governments are willing and able to dedicate resources to improving the quality of infrastructure and life in vulnerable areas, they typically rely on citizens to draw their attention to the problems. Cities need 311 reports to know when a street has a pothole, and decreased community engagement can, therefore, make it even more difficult for vulnerable neighborhoods to have their needs attended to, even assuming local governments are willing and able to address them. Low engagement thus exacerbates not only the costs of living in a vulnerable neighborhood, but their inequitable distribution as well.

In light of these individual and social problems and their role in dangerous negative feedback loops, policy makers could consider a variety of potential partial solutions. Most of them are attempts to rectify power imbalances between landlords and tenants. These include public awareness campaigns on eviction proceedings in vulnerable neighborhoods, policies that increase the cost of evicting a tenant, and various kinds of housing assistance. Legal assistance for tenants in eviction proceedings to reduce the power of the threat of eviction are also an attractive option. The need for a fair trial in this context is readily apparent, yet those who are at risk of eviction are highly unlikely to afford representation (Kleinman, 2003; Scherer, 2004). In New York City's Housing Court, those with legal representation tend to secure much better outcomes than those without (Seron et al., 2001). Most closely related to our results is the possibility of modifying third-party policing strategies.

While third-party policing might be a cost-effective way of eliminating some crime or criminogenic environments (as in so-called "slum clearance"), it is easy to overlook the costs that do not show up in the budget. Earlier results indicate that third-party policing strategies make it less likely that victims of domestic abuse will call 911 because it increases their risk of eviction. While 311 calls lack the visibility of

911 calls (no police officer arrives because of a 311 call), our results are consistent with a similar mechanism reducing calls for service by vulnerable tenants. Because increased eviction rates decrease community engagement (via 311 calls), it is plausible that the threat of eviction increases the likelihood that tenants will withdraw from co-production of public services in order to protect themselves from the immediate costs of eviction. In other words, our results provide limited, but further, support for the concern that third-party policing operates in part by effectively denying citizens their right to request government assistance. Though there may be fewer complaints made through 911 or 311, it does not follow that the problems that typically generate calls for service go away. Balancing the interests in forcing property owners to internalize problems associated with their properties against the interests in not depressing consumption of public safety services is a difficult problem. Our results broaden the scope of the problem.

These possible policy changes of course require further investigation. Given the magnitude of eviction costs, this investigation is sorely needed. In the meantime, recognizing the costs of eviction and the power imbalances that characterize the landlord-tenant relationship, increasing existing taxpayer-funded housing support for the vulnerable is an attractive option.

Future research can look more closely at how changes in a neighborhood across the breadth of the Eviction Lab data to alter the relationship to 311 calls or other measures of community engagement. We hypothesized that eviction could affect changes in 311 calls either positively or negatively; while we found the balance of evidence to support H3, exceptions certainly exist to that generalized trend. Future research could look to distinguish those neighborhoods that observed increases in their engagement, particularly through renewal or gentrification, and those that saw their engagement diminish. Such research would help to understand the type of neighborhood where eviction is potentially being used to churn residents and trap poverty and those where it is being used to clear out residents in order to serve a different community.

The present analysis is not without limitations. Because of a lack of consistently available 311 data, we were only able to look at changes across one year for the seven cities studied. A more longitudinal structure may be able to be created for a single city that has greater availability of 311 data. In addition, analyzing annual changes may mask some of the impact of evictions. Evictions might create a spur of 311 calls immediately in their aftermath and a reduction from the neighborhood over longer periods. Daily data on evictions, paired with the minutely reported time of 311 calls, would allow for a greater study of how evictions impact the use of public services. Finally, data from eviction could be paired with other data used to measure community engagement, such as calls to police, volunteering rates, or nonprofit locations, in order to more comprehensively study the relationship between forced housing removals and public engagement. As such, the community level impact of growing evictions is a fertile area for future research.

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Table 1. Summary Statistics for Cross Sectional Models

Variable	Mean	SD	Min	Max	Description
# 311 Calls	370.49	3429.19	0	281924	Number of calls to 311 in 2016
Change in # of 311 Calls	29.54	2410.7	-174954	100363	Change in number of calls to 311 between 2016 and 2017
# of Evictions	3.97	6.99	0	128	Number of evictions in 2016
Change in # of Evictions	-0.12	4.45	-44	66	Change in number of evictions between 2015 and 2016
% White	0.51	0.29	0	1	Percentage of residents that are White
% College Graduates	0.35	0.24	0	0.98	Percentage of residents that graduated from college or above
Median Age (logged)	35.97	7.6	8.6	80.2	Median age
% in Poverty	0.21	0.15	0	1	Percentage of residents with income below poverty line
% Never Married	0.46	0.14	0.06	0.99	Percentage of residents that have never been married
% Female	0.51	0.07	0.13	0.78	Percentage of residents that are female
% Homes Vacant	0.61	0.25	0.03	1	Percentage of housing units that are vacant
Median Year Home Built	1953.2	16.27	1939	2010	Median year homes were built
Total Population	1446.59	763.26	89	12563	Total population (logged in model)
Housing Density	12449.14	11941.5	15.45	131500	Housing units per square mile (logged in model)
% Living in Same House	0.86	0.1	0.18	1	Percentage of residents living in same house as year prior

Table 2. Summary Statistics for Changes

Variable	Mean	SD	Min	Max	Description
Change in # of 311 Calls	29.96	2417.1	-174954	100363	Change in number of calls to 311 between 2016 and 2017
Change in # of Evictions	-0.51	7.29	-97	75	Change in number of evictions between 2011 and 2016
Change in % White	0	0.15	-0.75	0.94	Change in percentage of residents that are White between 2011 and 2016
Change in % College Graduates	0.04	0.11	-0.53	0.63	Change in percentage of residents that graduated from college or above between 2011 and 2016
Change in Median Age	0.55	6.7	-31.4	31.2	Change in median age between 2011 and 2016
Change in % in Poverty	0	0.13	-0.76	0.55	Change in percentage of residents with income below poverty line between 2011 and 2016
Change in % Never Married	0.01	0.12	-0.46	1	Change in percentage of residents that have never been married between 2011 and 2016
Change in % Female	0	0.08	-0.42	0.33	Change in percentage of residents that are female between 2011 and 2016
Change in % Homes Vacant	0.53	0.25	-0.35	1	Change in percentage of housing units that are vacant between 2011 and 2016
Change in Median Year Home Built	0.56	8.34	-58	69	Change in median year homes were built between 2011 and 2016
Change in Total Population	83.51	399.41	-1431	4594	Change in total population between 2011 and 2016
Change in Housing Density	209.89	3279.75	-53000	26333.33	Change in houses per square mile between 2011 and 2016
Change in % Living in Same House	0.01	0.11	-0.59	0.68	Change in percentage of residents living in same house as year prior between 2011 and 2016

Table 3. Cross Sectional Regressions

	(1)	(2)	(3)
	DV: Calls to 311 in 2016 (logged)		
# of Evictions (logged)	-0.057*** (0.011)	-0.021** (0.0095)	0.048*** (0.0086)
% White		-0.091*** (0.032)	-0.038 (0.026)
% College Graduates		0.20*** (0.047)	0.049 (0.040)
Median Age		0.0067*** (0.0013)	0.0067*** (0.0010)
% in Poverty		-0.60*** (0.066)	-0.14** (0.057)
% Never Married		0.42*** (0.076)	0.93*** (0.063)
% Female		-0.31** (0.12)	-0.36*** (0.100)
% Homes Vacant		0.78*** (0.045)	0.23*** (0.039)
Median Year Home Built		-0.011*** (0.00066)	-0.011*** (0.00055)
Total Population (logged)		0.70*** (0.018)	0.61*** (0.016)
Housing Density (logged)		-0.14*** (0.011)	-0.13*** (0.012)
% Living in Same House		0.77*** (0.10)	0.27*** (0.085)
Boston			0.18*** (0.039)
Denver			0.23*** (0.034)
Los Angeles			0.20*** (0.028)
New York City			0.34*** (0.040)
Philadelphia			-0.56*** (0.040)
San Francisco			0.61*** (0.046)
Constant	5.64*** (0.011)	22.9*** (1.31)	22.1*** (1.09)
Observations	7,041	7,041	7,041

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 4. Regression for 1 Year Change in Eviction

	(1)	(2)	(3)
	DV: Change in Calls to 311 (2017-2016)		
Change in # of Eviction	-0.65*** (0.16)	-0.57*** (0.17)	-0.44*** (0.16)
% White		-1.84 (3.47)	0.68 (3.19)
% College Graduates		11.0** (4.30)	4.07 (4.09)
Median Age		0.35*** (0.11)	0.15 (0.10)
% in Poverty		-36.3*** (6.04)	-12.6** (5.79)
% Never Married		26.3*** (7.00)	35.9*** (6.73)
% Female		-11.8 (11.5)	1.37 (10.9)
% Homes Vacant		28.0*** (4.16)	-10.2** (4.09)
Median Year Home Built		-0.41*** (0.058)	-0.13** (0.061)
Total Population (logged)		21.8*** (1.99)	17.2*** (1.75)
Housing Density (logged)		-6.54*** (1.00)	-2.93*** (1.09)
% Living in Same House		39.2*** (8.01)	0.17 (8.00)
Boston			41.3*** (4.20)
Denver			20.8*** (3.96)
Los Angeles			53.1*** (3.01)
New York City			30.2*** (4.27)
Philadelphia			6.21* (3.47)
San Francisco			52.8*** (5.28)
Constant	26.1*** (0.80)	658*** (114)	144 (120)
Observations	7,041	7,041	7,041

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 5. Regressions for 5 Year Change in Eviction

	(1)	(2)	(3)
	DV: Change in Calls to 311 (2017-2016)		
Change in # of Eviction	-0.47*** (0.12)	-0.45*** (0.12)	-0.18* (0.11)
Change in % White		4.12 (4.97)	12.4*** (4.64)
Change in % College Graduates		-8.38 (6.97)	-1.88 (6.63)
Change in Median Age		0.37*** (0.12)	0.20* (0.11)
Change in % in Poverty		5.78 (5.79)	0.74 (5.34)
Change in % Never Married		6.84 (6.26)	9.30 (5.81)
Change in % Female		-0.62 (8.63)	-4.85 (8.05)
Change in % Homes Vacant		6.58** (3.04)	-9.36*** (2.94)
Change in Median Year Home Built		-0.014 (0.090)	0.068 (0.089)
Change in Total Population		0.0046* (0.0026)	0.0055** (0.0023)
Change in Housing Density		-0.00032 (0.00030)	-0.00030 (0.00029)
Change in % Living in Same House		10.7* (6.47)	11.0* (5.99)
Boston			39.7*** (3.56)
Denver			17.3*** (3.69)
Los Angeles			52.8*** (2.46)
New York City			23.7*** (2.90)
Philadelphia			2.75 (2.48)
San Francisco			53.9*** (4.44)
Constant	29.8*** (0.78)	26.0*** (1.70)	3.60 (2.60)
Observations	7,004	7,004	7,004

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 6. Robustness Check – Potholes in Austin, Texas

	(1) # of Calls (logged)	(2) Change in Calls	(3) Change in Calls
# of Eviction (logged)	0.080* (0.048)		
1 Year Change in # of Eviction		-0.072*** (0.027)	
5 Year Change in # of Eviction			0.00061 (0.022)
Constant	40.6*** (8.09)	-100*** (36.2)	-0.53 (0.41)
Observations	435	435	449
Full Model	Yes	Yes	Yes

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Figure 1. Map of Cities Studied



Appendix A. Potholes in Austin Full Results- Cross Sectional and 1 Year Changes

VARIABLES	(1) # of Calls (2016)	(2) Change in Calls (2017-2016)
# of Evictions (logged)	0.080* (0.048)	
1 Year Change in # of Eviction		-0.072*** (0.027)
% White	0.012 (0.37)	1.23 (1.27)
% College Graduates	0.77*** (0.25)	0.60 (0.97)
Median Age	-0.0024 (0.0092)	0.042 (0.033)
% in Poverty	-0.20 (0.48)	1.04 (2.28)
% Never Married	1.62*** (0.46)	-0.014 (1.79)
% Female	1.04 (0.72)	-2.00 (2.91)
% Homes Vacant	0.53 (0.34)	-1.51 (1.28)
Median Year Home Built	-0.022*** (0.0039)	0.050*** (0.018)
Total Population (logged)	0.45*** (0.093)	-0.40 (0.40)
Housing Density (logged)	-0.27*** (0.063)	0.50 (0.33)
% Living in Same House	0.68 (0.49)	-0.96 (1.94)
Constant	40.6*** (8.09)	-100*** (36.2)
Observations	435	435

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Appendix B. Potholes in Austin Full Results - 5 Year Changes

VARIABLES	(1)	(2)
	Change in Calls (2017-2016)	
5 Year Change in # of Eviction	0.00061	0.00061
	(0.022)	(0.022)
Change in % White	-0.62	-0.62
	(0.91)	(0.91)
Change in % College Graduates	1.46	1.46
	(1.73)	(1.73)
Change in Median Age	0.079**	0.079**
	(0.037)	(0.037)
Change in % in Poverty	1.56	1.56
	(1.82)	(1.82)
Change in % Never Married	0.43	0.43
	(1.39)	(1.39)
Change in % Female	-2.68	-2.68
	(2.17)	(2.17)
Change in % Homes Vacant	-0.56	-0.56
	(0.75)	(0.75)
Change in Median Year Home Built	0.030	0.030
	(0.034)	(0.034)
Change in Total Population	0.0011	0.0011
	(0.00073)	(0.00073)
Change in Housing Density	-0.000011	-0.000011
	(0.00043)	(0.00043)
Change in % Living in Same House	-0.60	-0.60
	(1.35)	(1.35)
Constant	-0.53	-0.53
	(0.41)	(0.41)
Observations	449	449

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1