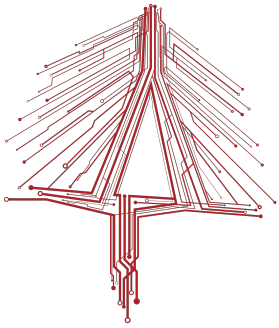
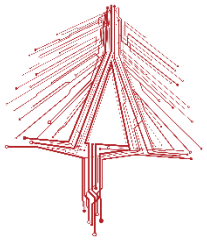


Boston Area Research Initiative

The Practice and Science of Problem Properties

Summer 2022

The Boston Area Research Initiative



Boston Area Research Initiative

The Boston Area Research Initiative (BARI) advances place-based, civically-engaged research, research that leverages a robust use of data to benefit local communities. We do so through partnerships with policymakers, community organizations, and other stakeholders, collaboratively identifying pressing questions, co-designing research activities, and jointly translating results into action. BARI is an interuniversity consortium based at Northeastern University's School of Public Policy and Urban Affairs and affiliated with Harvard University's Institute for Quantitative Social Science.

BARI's Problem Properties Research Team

Prof. Daniel T. O'Brien, PhD, Associate Professor in the School of Public Policy and Urban Affairs and the School of Criminology and Criminal Justice; Director, Boston Area Research Initiative; Northeastern University

Dr. Alina Ristea, PhD, Lecturer, Security and Crime Science, University College of London; former Postdoctoral Associate, Boston Area Research Initiative, Northeastern University

Dr. David Hatten, PhD, Postdoctoral Associate, Boston Area Research Initiative, Northeastern University

Dr. Michael Zoorob, PhD, Research Advancement Manager, Meta; former Postdoctoral Associate, Boston Area Research Initiative, Northeastern University

Riley Tucker, PhD, postdoctoral fellow, Mansueto Institute of Urban Innovation, University of Chicago; recent PhD graduate, School of Criminology and Criminal Justice and PhD Consultant, Boston Area Research Initiative, Northeastern University.

Forrest Hangen, PhD candidate, School of Public Policy and Urban Affairs, Northeastern University.

The Practice and Science of Problem Properties

Some properties contribute more to crime and blight than others. For instance, less than 1% of properties in Boston, MA account for more than half of the city's gun violence in each year, a pattern that is true for municipalities across the world. Even in so-called high-crime communities, most places produce no issues of note whereas crime, disorderly behavior, and failed property maintenance concentrate at a handful of properties, posing an undue burden on their neighbors. This has inspired numerous municipalities to pursue *problem properties initiatives* that target such properties.

Though problem properties initiatives are often data-driven, using crime reports, 911 dispatches, and 311 complaints to identify targets, the science of problem properties has failed to keep up. The Boston Area Research Initiative (BARI) has worked with the City of Boston's Problem Properties Task Force (PPTF) to answer some of the resultant unanswered questions. Are there different types of problem properties? How do they emerge and can we predict them? What property owner strategies are prone to issues? Are problem properties interventions effective, or do they simply displace crime down the street or around the corner?

This document shares these insights with municipalities and advocates worldwide to support their own thinking and activities regarding problem properties. It also acts as an invitation to develop new collaborations that will further advance science and practice in this area and enable a new generation of problem properties interventions that support communities in ways that are not only effective but also equitable, inclusive, and collaborative

The Boston Area Research Initiative (BARI)

BARI is an interuniversity partnership based at Northeastern and Harvard Universities that convenes researchers, policymakers, practitioners, and community leaders to envision and realize the future of the city. Our primary goal is to leverage data and technology to enhance equity, justice, and sustainability. We pursue this mission through research-practice collaborations with public agencies and community-based organizations. Often these collaborations occur in greater Boston, though the objectives and discoveries are extensible to other municipalities worldwide.

The BARI-PPTF Collaboration

Since 2012 BARI and the City of Boston's Problem Properties Task Force (PPTF) have partnered to advance the science and practice of problem properties interventions. This collaboration was accelerated in 2019 thanks to a National Science Foundation grant supporting the work. This research-practice collaboration has centered on the coordination of numerous data sets capturing events and conditions at all properties in Boston over a decade. The work has entailed the utilization of advanced data science techniques to reveal the longitudinal dynamics of problem properties and, importantly, has provided evidence of the effectiveness of the PPTF.

Guide to this Document

This document summarizes the insights of the BARI-PPTF collaboration in four sections: What are problem properties?; Do neighborhoods still matter?; The role of non-governmental actors; and The effectiveness of the PPTF. A concluding section describes the remaining questions and the ways in which BARI would be excited to collaborate with other communities.

Contents

What Are Problem Properties?

Defining a problem property is fundamental to addressing them. The strict legal definition will vary by jurisdiction, of course. In Boston, a property can be designated a problem property if it has four or more citations in a year in categories of concern, ranging from violent events to code violations. We looked at the quantity and mix of issues experienced at problematic residential properties, revealing multiple types of problem properties and trends in how they evolved.

The Different Types of Problem Properties

By examining the distribution of violent crime, social disorder (e.g., drunkenness), and physical disorder (e.g., dilapidation, graffiti) across properties, we identified six types of problem properties. *The main theme was specialization: most problematic properties generated a single type of issue.* Though this might seem surprising, we can understand by thinking about how a place becomes problematic. For instance, a property with a neglectful landlord may become dilapidated, but that does not guarantee that the tenants are disorderly. A family may have internal strife that manifests in domestic dispute calls, but those challenges need not bear upon physical upkeep. Thus, a given property is most likely to have certain vulnerabilities that lead to a characteristic profile of issues. We did, however, identify one group of problem properties that suffered from a robust mixture of violence, social disorder, and physical disorder. These *violent hubs* were very rare (0.2% of all properties in the city) but certainly present.

How Problem Properties Evolve

Across a decade of data, we found that properties tended to maintain the same profile of crime and disorder from year to year, especially when issues were more severe. Interestingly, those that suffered from concentrations of neglect to private spaces (i.e., code violations) or gun-related events were prone to escalating into violent hubs (see Figure 1). If the situation at the property de-escalated in future years, it was more likely to revert to the earlier state rather than some other profile of issues. This holds two lessons. *First, it helps us to anticipate which properties are vulnerable to becoming the most difficult. Second, it offers a perspective on desistance that is gradual, with clear, predictable stages of de-escalation.*

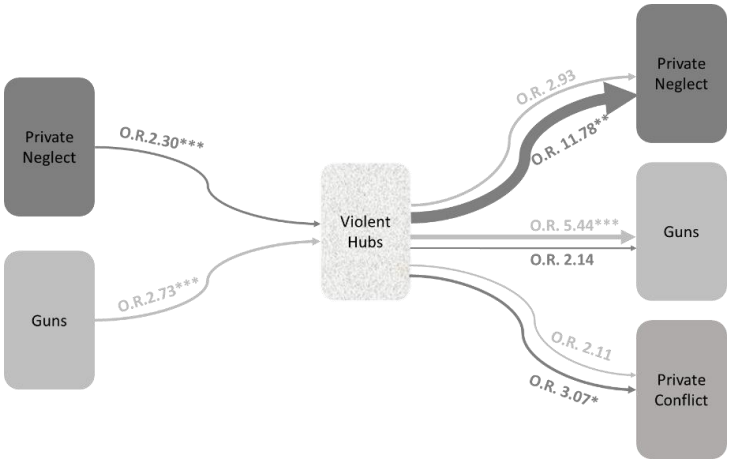


Figure 1. Pathways for problem properties to escalate into and de-escalate from violent hubs.

Do Neighborhoods Still Matter?

A focus on problem properties can be interpreted to mean that neighborhoods are no longer important for enforcement and mitigation of crime. This would raise questions about the relevance of classical neighborhood-oriented approaches, like community policing and broken windows policing. We find that the greatest value is in a perspective that considers the interplay between problem properties and their neighborhoods, thus enabling new ideas and enhancing old ones.

The Continued Value of Community Policing

Our work revealed that community context is crucial to understanding crime at both problem properties and their less acute neighbors. Problem properties in high-crime neighborhoods were more likely to persist than those in low-crime neighborhoods and were less likely to have issues disappear. *Thus, problem properties are not mere isolates, but are reinforced by the broader dynamics of the community.* Meanwhile, when we removed all problematic properties (i.e, >4 incidents of crime or disorder in a year), the remaining properties still depicted the familiar variation in crime across neighborhoods. As such, while problem properties merit especial attention, the challenges of a high-crime neighborhood are visible through the places that only experience occasional issues. *Problem properties interventions do not replace traditional community policing, meaning a comprehensive approach will integrate the two strategies.*

An Alternative to Broken Windows Theory

Broken windows theory (BWT) has been one of the most influential concepts in law enforcement over the last 40 years. It stipulates that disorder—low-level offenses (e.g., drunkenness) and neglect (e.g., the iconic "broken window")—emboldens others to commit more serious crimes. This has led police departments around the world to prioritize such issues. The evidence for BWT has long been mixed, and our work provides a potential answer. In Boston, disorder does predict future crime *but only at properties* and not for neighborhoods. Further when a neighborhood or street suffers from high levels of violent crime (see Figure 2), it most often emerges anew at properties that are experiencing disorder. This offers a more nuanced reformulation of BWT: *disorder is a sign that a property is vulnerable to more serious issues, provided they are already present in the community.*

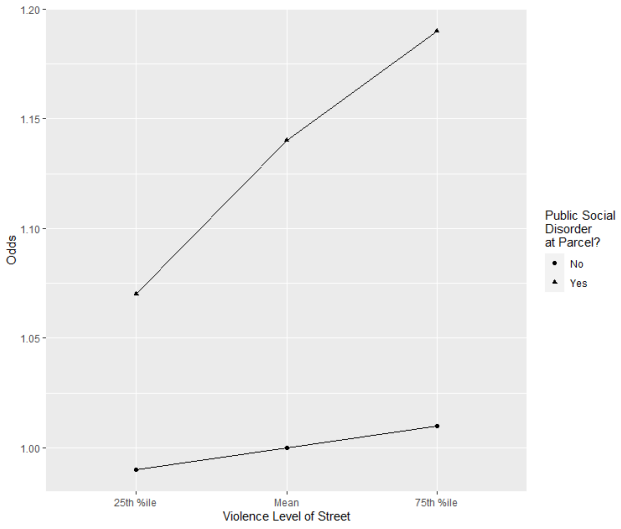


Figure 2. Properties with social disorder (top line) were more likely to experience violence the next year if the street had a high level of violence.

The Role of Non-Governmental Actors

Property Owner Strategies

Problem properties interventions assume that intervening with a property owner will produce results. But not all property owners are equal. We have found that property owners utilize different strategies that in turn affect the ways in which issues do or do not arise there. A major driver of these outcomes is the extent to which an owner is focused on profit maximization—as indicated by corporatization and amassment of many properties. For example, a property in low-income neighborhood with a single-unit, mom-and-pop landlord is substantially less likely to experience crime than a property owned by a large corporate landlord (see Figure 3), all other factors held equal. This offers two valuable insights when prioritizing interactions with landlords. First, properties owned by corporate landlords tend to be more vulnerable to issues. Second, there tend to be far more of these properties precisely because their owners hold many other properties. Thus, problem property initiatives can maximize the impact of their interventions by working, whenever appropriate, with larger landlord who are able to rehabilitate a larger swath of properties.

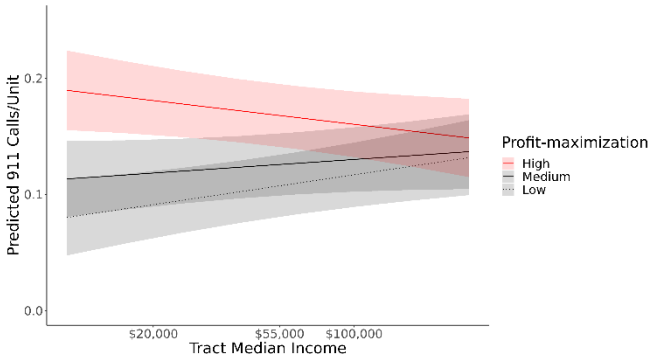


Figure 3. Properties owned by large, corporate landlords (i.e., "profit maximizing") tend to generate more 911 calls per unit than others, especially in low income neighborhoods.

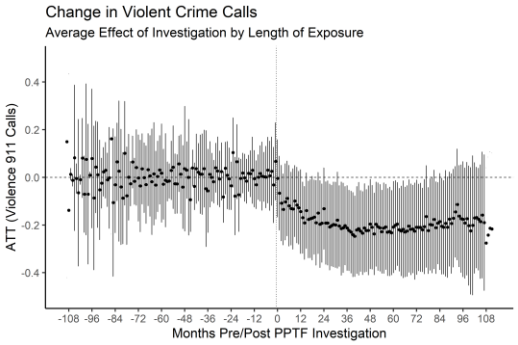
Identifying Problem Properties with Community Members

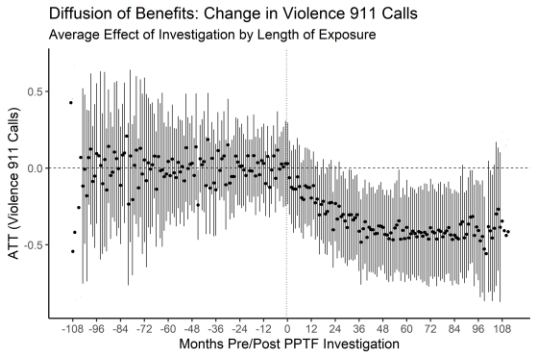
Problem properties interventions have the potential to be collaborations between public agencies and the communities they serve. In any given year, there are many properties with enough violations to merit investigation, thus community input is necessary for identifying the properties that most require intervention. On the flipside, it is possible that communities with less ability to advocate for themselves do not receive the supports that they need. Holding the frequency and severity of the issues at a given parcel constant, we found that parcels in some of Boston's neighborhoods were less likely to be investigated, potentially revealing two different processes. First, parcels were less likely to be investigated in predominantly residential neighborhoods relative to downtown areas. We find that this is driven by a tendency of city agencies to focus on areas with more activity and institutions. Second, communities with more Latinx residents were also less likely to be investigated, which appears to be because members of these communities are less knowledgeable about or less comfortable with advocating for such interventions.

The Effectiveness of Problem Properties Interventions

The crucial question for any innovation in law enforcement is whether it works. We evaluated the effectiveness of the PPTF's activities in Boston in four ways: (1) Does an intervention diminish issues at the property?; (2) Does an intervention diminish issues throughout the street?; (3) Does an intervention motivate a property owner to improve management of the property?; and (4) Does an intervention lead to improvements at other properties belonging to the same owner?

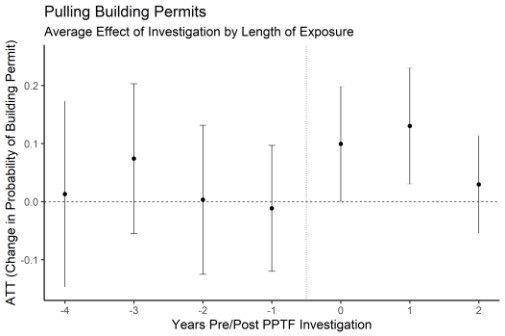
- *Interventions lowered crime and disorder at the focal property*. Properties that were investigated saw a drop in all six types of crime and disorder we tested in the following year and over multiple subsequent years. On average, properties that were investigated saw an annual drop of over 3 reports through 911 and 311.





- *Interventions lowered crime and disorder on the street*. Other properties on the same street as the intervention also saw drops in crime and disorder, albeit smaller ones. This suggests that the activities at the property were contributing to issues at nearby locations *and* that the intervention was successful at stopping those activities and their broader impacts.

- *Interventions motivated better property management*. Properties with interventions were more likely to apply for new building permits in subsequent years. They also were more likely to be sold, suggesting that some negligent owners decided to move on, potentially making way for a more responsible owner to take over.



- *The improved property management did not necessarily extend to the owner's other properties*. We found no evidence that crime and disorder went down at the owner's other properties, nor that there were more building permits or sales at those properties.

The Collaborations to Come

BARI is excited to continue advancing the science and practice of problem properties in collaboration with municipalities locally and globally. Such partnerships might take a variety of forms and target one or more objectives.

1. *Inform and initiate new problem properties initiatives.* All municipalities have problem properties, but they might differ in their frequency, intensity, and the types of issues from which they suffer. The strategy for dealing with such places will depend on all of these factors. Even if a municipality is just trying to determine the extent of the challenge and whether they want to develop a problem properties program, we would love to assist with database construction, analyses, and initial discussions.
2. *Conduct experimental evaluations for established programs*. We have seen the success of Boston's PPTF. What does this mean for the effectiveness of other problem properties initiatives? Building an evidence base for practice will depend on evidence for the impact such programs have (and have not) had across different contexts. BARI can apply our analytic infrastructure and experience with evaluating experiments and quasi-experiments to any municipality's problem properties initiative.
3. *Evaluating which types of issues and landlords are most responsive.* Even when an intervention is effective in a general sense, it will have successes and failures. Some targets will simply be resistant to change. As more evaluations of problem properties interventions are conducted, there will be sufficient information to determine whether these successes and failures are driven by certain factors. Are out-of-state landlords harder to engage? Do problem properties with high levels of violence or in high-crime communities need more intensive interventions? BARI wants to work with municipalities to answer such questions to better craft expectations for problem properties initiatives.
4. *Designing and evaluating tailored interventions*. Most problem properties interventions rely on a single, generalized approach or ad hoc strategies specific to each property. There are no guidelines for managing the diverse array of problem properties, however. What techniques are best for attending to properties with physical disorder vs. public violence? For engaging corporate landlords vs. mom-and-pop landlords? BARI would partner with municipalities to design and evaluate these differentiated strategies.
5. *Problem properties interventions as a collaboration with communities*. The stated purpose of problem properties initiatives is to improve communities. Problem properties are often nominated by community organizations and advocates. In many municipalities, they are investigated through data sources based on community complaints. But are such programs hearing the concerns of each community equally? Are their responses and resources evenly distributed? We want to work with municipalities to design the next generation of problem properties intervention, one that intentionally incorporates all community voices and pursues equitable enforcement aligned with community needs.