

# “Drive and Wave”: The Response to LAPD Police Reforms After Rampart

Canice Prendergast

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## Abstract

We study LAPD police reforms after the Rampart scandal, when formal oversight rose discretely in 1998, and then fell in late 2002. We offer a simple model to interpret how police behavior is affected by changed accountability to the public. We show how officers responded by a practice they labeled “drive and wave”. The arrest-to-crime rate fell 40% after accountability to the public rose, then rebounded to its original level when accountability fell. For the “victimless” crimes of narcotics and prostitution, arrests fall almost 50% and then rebound. No such effects arise for the Los Angeles Sheriff Department, even for those stations surrounded by areas policed by the LAPD. We also see no effects on arrests made by other agencies within the LAPD’s jurisdiction. This impact was greatest in predominantly Hispanic neighborhoods, and felt least in White communities. Other behavioral responses - use of force and street stops - tell a similar story. We argue that much of the response may be attributable to an imbalance between oversight done by suspects compared to that done by the victims of crime. We also document an impact on homicides.

\*University of Chicago Booth School of Business. Email: [canice.prendergast@chicagobooth.edu](mailto:canice.prendergast@chicagobooth.edu). Many thanks to Bocar Ba, Jacob Leshno, Matt Notowidigdo, and Tom Wollman for very helpful comments and to Vincent Tanutama for excellent research assistance.

In the wake of a series of tragic incidents, police reform has become a central societal concern. We document how LAPD officers responded to two police reforms, where officer accountability increased in 1998, and then fell in late 2002. These reforms involved changes in how complaints from the public translated into investigation of officers and subsequent discipline. We show that officers responded to the first reform by disengaging from policing, actions they labeled “drive and wave”. This was manifested in the arrest-to-crime rate falling 40% by 2002. After oversight was reduced in 2002, this decline was entirely reversed by 2006. We offer a simple model to interpret these responses and to offer prescriptions for police reform. We also document the impact of these changes on crime.

The backdrop to our analysis is the Rampart scandal of the 1990s, initiated by illegal activities by a LAPD anti-gang squad. There are three key dates: 1998, 2001, and 2002. First, after the actions of Rampart officers became public in 1997, the LAPD implemented a policy in 1998 where any complaint against an officer automatically triggered an internal investigation. Complaints against officers soared. These were sustained at high rates, resulting in suspensions, resignations and terminations at levels far higher than before.

Second, the scandal heightened focus from the Department of Justice on the LAPD. As a result, it signed a Consent Decree that went into effect in June 2001. This required better documentation of police activities (for example, street stops), an early warning system for problem officers, and more formalized policies for the use of force. Notably, it did not change the complaints procedure, as it determined that the department was already in compliance with its objectives.

Finally, it is often claimed that LAPD officers were more accountable to the public under the Consent Decree than in the preceding period.<sup>1</sup> We show that the opposite occurred. In November 2002, the monitor of the Consent Decree recommended changes to the complaints procedure. This was due to a bureaucratic constraint that the backlog of complaints was clogging up the system. Five days later, oversight was changed, where commanding officers could now dismiss complaints they deemed to be frivolous. We show that beginning in 2003, sustained complaints fell dramatically, and disciplinary measures across the board became less likely, even when an

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<sup>1</sup>Reports continue to suggest that oversight increased in the post 2001 period. As an example, see history.com on the LAPD after 2002: “[They] used information technology to track misconduct and use of force, promoted diversity and disciplined officers instead of adhering to a code of silence.”

investigation ruled against the officer. The change to the complaints process was not publicized.

Our interest is in using these two changes to better understand police reform. To do so, we provide a simple model. In our formalization, the likelihood of an officer arresting a suspect depends both on whether he engages the suspect and uses excessive force (a euphemism for any actions beyond his legal mandate). The officer's actions are potentially revealed through an investigation, whose likelihood depends on a complaint from either the suspect or the crime's victim. We characterize the double-edged impact of investigations being more sensitive to suspect complaints. Specifically, it leads an engaged officer to eschew force, but also makes him less likely to engage. We use this tradeoff to identify an upper bound to suspect oversight, beyond which the officer disengages. This bound is relaxed when there is more accountability to victims. This allows us to offer suggestions for police reform, in particular the need for suspect and victim oversight to be complements, and to address more recent issues such as the likely impact of body cameras.

We then turn to measuring how officers responded to both oversight changes. We use arrest behavior, specifically the arrest-to-crime rate, as a measure of police productivity (Mas, 2008). The arrest-to-crime rate falls enormously after the first oversight change: by 40% from 1998 to 2002 for all crimes (Part 1 and Part 2), and by 29% for Part 1 crimes. When oversight was reversed in late 2002, arrest rates immediately increased and the rate for all crimes returned to its 1998 level by 2006. The Part 1 arrest rate reversed by half of the initial decline. The response in arrests for violent crime is as large as for less serious crime. We interpret these outcomes as evidence of “drive and wave” disengagement, and offer contemporaneous reports consistent with this.

We carry out a series of consistency checks. We first compare response differences across crimes. Remember that the concern is that officers choose not to appropriately investigate a crime. Part 1 crimes have victims, which may place limits on the failure of an officer to follow up. (For instance, officers are typically informed of Part 1 crimes through a radio call from the station.) By contrast, narcotics and prostitution are what are called victimless crimes, and often rely on the officer seeing the crime begin committed. We show a somewhat larger response for narcotics and prostitution arrests than for other crimes, with narcotics arrests falling 44% from 1998 to 2001, and then increasing by that amount afterwards.

Our second comparison is across police jurisdiction. Changes of this magnitude would require a significant shift in the crime landscape of Los Angeles if they were not caused by changed officer behavior. To address this, we compare LAPD outcomes to those of the Los Angeles Sheriff Department, which polices a range of unincorporated cities in Los Angeles. Unlike the huge swings for the LAPD, the total arrest-to-crime rate for the Sheriff Department is essentially unchanged throughout our study period. This is also true for narcotics arrests.

The geography of Los Angeles policing also allows a yet more precise cross-jurisdiction comparison. Nine LASD stations, which account for almost half of its crime, are *surrounded* by areas policed by the LAPD. We compare outcomes for the surrounded stations and the contiguous LAPD West Bureau. Once again, we find that the arrest-to-crime rate only varies substantively for the LAPD.

We then study arrests *within* the geographic jurisdiction of the LAPD. Other police agencies - most notably the FBI and the California Highway Patrol - make arrests in LAPD territory. The arrests of these other agencies show none of the variation in either the arrest-to-crime rate or total arrests exhibited by the LAPD.

We also study outcomes disaggregated to the station, crime and year level. We first use this to show how pervasive were the outcomes above. Specifically, 17 of 18 LAPD stations saw a decrease in the arrest-to-crime rate after the first oversight change, and a similar number saw an increase after 2002. Regression results also confirm the conclusions above, both for all stations and for the surrounded station comparison. Oversight year fixed effects show a reduction of roughly 20% in the arrest to crime rate for each year from 2000 to 2002. Station-level outcomes allow one additional insight: how these responses varied for different demographic groups. We show that after the first oversight change, the reduction in arrests was substantially larger for Hispanics, and was felt least by Whites.

Behavioral responses are not limited to arrests. The Consent Decree required that the LAPD collect and publish certain data after 2001. This allows us to show other responses to the 2002 change. Use-of-force per crime rises by 35% between 2001-2002 and 2003-2006. Street stops rise by 70%. These behavioral response are both large and consistent with the thesis of the paper.

Following this series of facts, we return to interpreting outcomes through the lens of the framework. We argue that the oversight changes largely transformed oversight by potential suspects rather than by victims. As a result, the police response

observed likely reflected an imbalance between suspect and victim oversight. This offers implications for the current debate on police reform. In particular, it shows that reforms that enhance oversight by suspects without strengthening the voice of victims is likely to backfire.

So far we have focused on the actions of police officers. Our final objective is to identify whether crime was affected. We focus on homicide. The reason is that arrests per crime changed vastly more for homicide than for any other Part 1 crime. LAPD homicides rose 49% from 1998 to 2002, while they were unchanged for the LASD. Homicides then fell 30% for the LAPD in the three years after 2002 while they rose for the LASD. A similar outcome arises when the surrounded LASD areas are compared to LAPD West Bureau. As a result, we believe that we can infer an impact on homicides, although different pre-trend homicides require that some caveats be applied.

An unusual feature of our study is that we can document police reforms that changed officer accountability to the public.<sup>2</sup> This allows us to better overcome a difficulty in identifying police response to oversight, which is often measured in the aftermath of a scandal, typically a police killing.<sup>3</sup> For example, scandals may change the willingness of the public to cooperate with the police, or the likelihood that the public makes 911 calls. We describe how our analysis controls for such difficulties. Most notably, the change in 2002 was caused by a bureaucratic constraint unknown to the public.

We begin in Section 1 with a simple framework. Section 2 documents the change in police oversight. We follow this by showing arrest behavior in Section 3, provide some consistency checks, and consider alternative explanations. Section 4 offers evidence on homicide and crime. We conclude in Section 5.

## 1 A Simple Framework

Assume that a crime has been committed by a suspect  $S$ . A police officer takes actions that affect both suspect and victim  $V$ . The likelihood of an arrest depends on two officer actions. He can engage the suspect or not,  $e \in \{0, 1\}$  where  $e = 1$

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<sup>2</sup>This paper returns to earlier preliminary work (Prendergast, 2001) that was hampered by an absence of sufficient data at the time.

<sup>3</sup>Shi, 2009, Heaton, 2010, Cassell and Fowles, 2018, and Devi and Fryer, 2020. Below we discuss Rivera and Ba, 2019, who also address monitoring impacts.

constitutes engagement at cost  $c \geq 0$ . If he engages the suspect, he chooses whether to use excessive force or not,  $f \in \{0, 1\}$ , where excessive force  $f = 1$  is costless to the officer. (Excessive force reflects any action taken beyond an officer's legal mandate.) The probability of an arrest is  $p(e, f) = p_0 + p_e e + p_f f$ , where  $p_i \geq 0$  is the change in probability if  $i = 1$ , and  $p_0$  the probability without excessive force or engagement.<sup>4</sup>

There is uncertainty when the officer engages. This reflects the potential for an interaction between the officer and suspect to “gets out of hand”, where an officer who does intend to use force ultimately does so. To reflect this, we assume that if the officer chooses  $f$ , then with probability  $\phi \geq \frac{1}{2}$  that outcome arises, but with probability  $1 - \phi$ , outcome  $f' \neq f$  is realized.<sup>5</sup> (This assumption could also reflect errors that are made in an investigation, where his action is misidentified.)

Without an arrest, the payoff to  $S$  and  $V$  are normalized to 0. The suspect incurs a cost of 1 from being arrested and the victim benefits by  $b > 0$ . Force costs the suspect  $F > 0$ . The officer has a private benefit of  $r > 0$  from arresting the suspect, which we interpret as the result of other incentives, either intrinsic or otherwise. Society values outcomes as the sum of the utilities of the three participants. We assume that society's preferred outcome involves the officer engaging without force, summarized in Assumption 1.

**Assumption 1:** (i)  $p_f(b + r) < F$ , and (ii)  $p_e(b + r) - c > 1$ .

We do not a priori make any assumptions on the choice between engagement with force, and disengagement. Oversight of the officer depends on complaints from the suspect and victim. The suspect receives a signal on  $e$  and  $f$ , while the victim observes a signal on  $e$ . The suspect complains if her signal says that the realized  $f = 1$ , while the victim complains if her signal says that the officer did not engage,  $e = 0$ .<sup>6</sup> The signals are imperfect: a complaint is credible with probability  $\mu_i$ ,  $i = S, V$ ,

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<sup>4</sup>Our interest is in how oversight changes can result in disengagement. We assume a linear arrest technology to avoid this being hard wired, as would arise if the change from engagement was increasing in force. This is not our interest here.

<sup>5</sup>The assumption that  $\phi > \frac{1}{2}$  is without loss of generality, because otherwise if the officer wished for action  $f$ , he would choose  $f'$ .

<sup>6</sup>Realistically, complaints are endogenous to how likely they are to be investigated. The number of complaints rose by a factor of three from 1997 to 2000. We could incorporate this in one of two ways here. First, to consider investigations as convex in  $\rho_i$ . This would simply change the curvature of the relationships below, but not the conceptual outcomes. Second, we could relabel  $\rho_i$  as the probability of an investigation, with no change in conceptual outcomes.

where  $0 \leq \mu_i \leq 1$ . Complaints are not always investigated. A complaint of type  $i$  is investigated with additional probability  $\rho_i$ ,  $i = S, V$ , where  $0 \leq \rho_i \leq 1$ . If an investigation arises and the complaint is credible, a penalty of  $\Delta$  is imposed on the officer.<sup>7</sup> (Below we discuss the case where the penalty depends on who complains.)

Let  $\rho(e, f)$  be the probability of a sustained investigation, where  $\rho(1, 1) - \rho(1, 0) = \mu_S \rho_S$  and  $\rho(0, 0) - \rho(1, 0) = \mu_V \rho_V$ . Furthermore let  $U(e, f)$  be the officer's utility. He chooses  $e$  and  $f$  to maximize  $U(e, f) = p(e, f)r - \rho(e, f)\Delta - ce$  with normalized<sup>8</sup> payoffs:

- $U(0, 0) = p_0 r - \rho_V \mu_V \Delta$ ,
- $U(1, 0) = (p_0 + p_e)r - (1 - \phi)\mu_S \rho_S \Delta - c$ , and
- $U(1, 1) = (p_0 + p_e + p_f)r - \phi\mu_S \rho_S \Delta - c$ .

We treat  $\mu_i$ ,  $\rho_i$ ,  $\phi$  and  $\Delta$  as parametric, and address how  $e$  and  $f$  vary with them. Outcomes depend on three critical values:

1. An officer who does not use excessive force engages if  $U(1, 0) \geq U(0, 0)$  or  $\rho_V \geq \rho_V^* = \frac{c - p_e r + (1 - \phi)\mu_S \rho_S \Delta}{\mu_V \Delta}$ .
2. If  $\rho_V < \rho_V^*$ , the officer engages with excessive force if  $U(1, 1) \geq U(0, 0)$  or  $\rho_S < \rho_S^{**} = \frac{(p_e + p_f)r - c + \rho_V \mu_V \Delta}{\phi \mu_S \Delta}$ . Otherwise he disengages.
3. If  $\rho_V \geq \rho_V^*$ , the officer engages with excessive force if  $U(1, 1) \geq U(1, 0)$  or  $\rho_S \leq \rho_S^* = \frac{r p_f}{\Delta \mu_S (2\phi - 1)}$ . Otherwise he engages without excessive force.

These critical values offer a number of relevant outcomes, summarized in Proposition 1.

**Proposition 1** • *If  $\rho_V < \rho_V^*$ , the officer disengages rather than engage without excessive force. Increasing suspect oversight makes it more likely that  $\rho_V < \rho_V^*$  as  $\frac{d(U(1, 0) - U(0, 0))}{d\rho_V} < 0$ .*

- *If  $\rho_V < \rho_V^*$ , the officer disengages if  $\rho_S > \rho_S^{**}$ . Otherwise he uses excessive force.*

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<sup>7</sup>For simplicity, we are assuming that the likelihood of an arrest does not change if an investigation occurs.

<sup>8</sup>These are normalized as we do not include the likelihood of an investigation when the agent engages without force.

- If  $\rho_V \geq \rho_V^*$ , the officer engages without force if  $\rho_S > \rho_S^*$ . Otherwise he uses excessive force.
- If  $\rho_V < \rho_V^{**} = \frac{c - p_e r + \frac{(1-\phi)r p_f}{2\phi-1}}{\Delta\mu_V}$ , the officer does not engage without excessive force for any level of suspect oversight.

Proposition 1 reflects the double-edged nature of suspect oversight. First, when victim oversight is high enough ( $\rho_V \geq \rho_V^*$ ), the officer engages without force rather than disengaging.<sup>9</sup> Then his only remaining choice is whether to use force, which he avoids if suspect oversight is sufficiently high. Intuitively, in this case an increase in suspect oversight is (weakly) beneficial as it helps to deter excessive force. This can only arise if victim interests are internalized enough: the officer only engages without force if both  $\rho_V \geq \rho_V^*$  and  $\rho_S \geq \rho_S^*$ . This can only occur if  $\rho_V \geq \rho_V^{**}$  in Proposition 1. Second, if  $\rho_V < \rho_V^*$ , the officer disengages rather than engaging without force. His remaining choice is between disengagement and engaging with force. Here he disengages when suspect oversight is sufficiently high, and suspect oversight is harmful if society prefers engagement with force over disengagement.

These two outcomes show how victim oversight determines the value of additional suspect oversight. Yet there is one final cost to suspect oversight: it makes it more likely that  $\rho_V < \rho_V^*$  in which case the efficient outcome is impossible. This is because  $\frac{d\rho_V^*}{d\rho_S} = \frac{(1-\phi)\mu_S}{\mu_V} > 0$ . Note that this relies on  $\phi < 1$ , for which we provide evidence below. This also implies that  $U(0,0) - U(1,0)$  is increasing in  $\rho_V$ , which means that an officer who was engaging without force may now disengage.

Outcomes can be easily seen in Figure 1. This translates oversight parameters  $\rho_i$  into  $(e, f)$  regions. The blue  $\rho_V^*(\rho_S)$  line plots the required engagement level of  $\rho_V$  as a function of  $\rho_S$  for an officer who does not use force, where below the line the officer chooses  $(0,0)$  over  $(1,0)$ . Then the remaining choice is between  $(0,0)$  and  $(1,1)$ , and he chooses  $(1,1)$  to the left of the red  $\rho_S^{**}(\rho_V)$  line. Here greater suspect oversight leads to disengagement. Above the blue  $\rho_V^*$  line, he chooses  $(1,0)$  over  $(0,0)$ , and his remaining choice is between  $(1,0)$  and  $(1,1)$ . He does not use force to the right of the black  $\rho_S^*$  line: here greater suspect oversight deters force. Importantly, the blue  $\rho_V^*$  line is upward sloping, reflecting the greater appeal of disengagement as suspect oversight increases. Finally,  $\rho_V^{**}$  shows the value of victim oversight below which  $(1,0)$  is impossible for any level of suspect oversight.

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<sup>9</sup> $\rho_V^*$  need not be positive as  $r > 0$ .

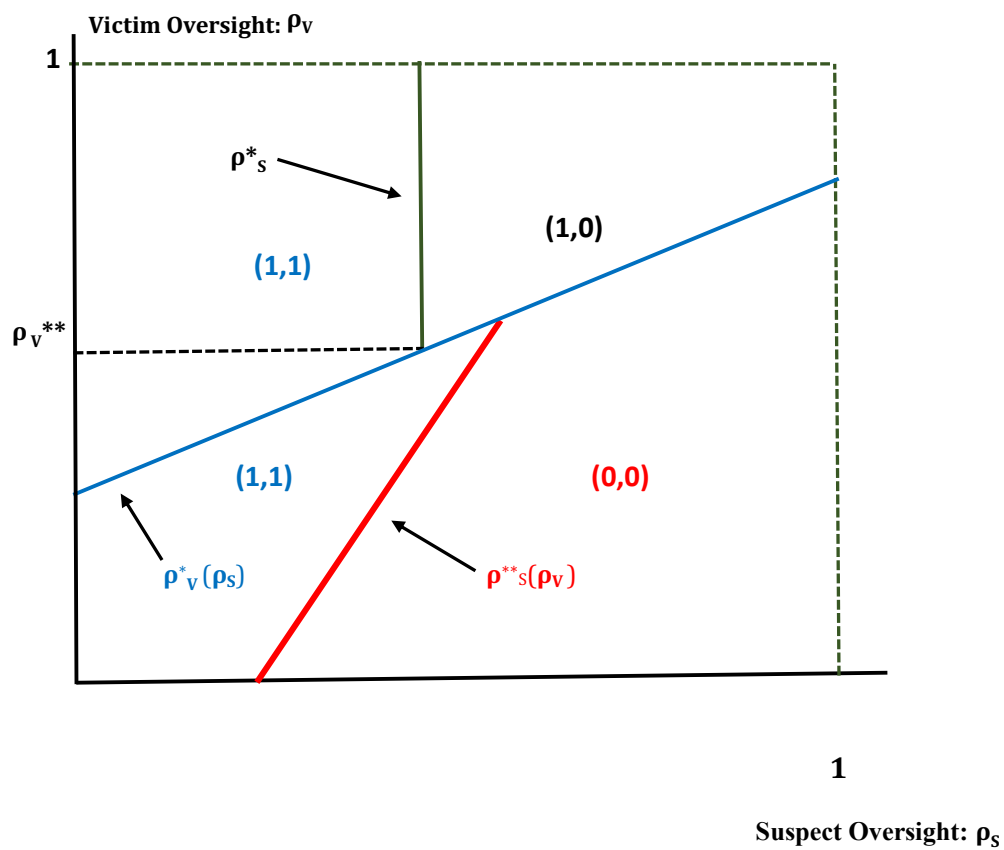


Figure 1: Model outcomes and  $(e, f)$  regions.

The officer here only interacts with a suspect and victim. Yet the model is intended to have more generality, reflecting the reality that the police interact with many other actors. In particular, the “victim” here refer to any constituency whose interests are harmed by the officer failing to investigate crime. Members of the public would be an example, though likely their  $\mu_V \approx 0$ . By contrast, “suspects” are any actors who benefit by the officer disengaging, and who can potentially lodge a complaint against him. An example here could be gang members, who officers believed were making false accusations to harm their careers.

**Rampart:** We represent potential Rampart outcomes in Figure 2. Our interpretation of the oversight change after 1998 is given by the horizontal green arrows, where suspect oversight increased with minimal change in victim oversight. We provide supporting evidence for this below. Our interpretation of the change in 2002 is a reversal.

We note three possible post-1998 implications by officers who were previously located at points  $A$ ,  $C$ , and  $D$ . The only transition for officer  $A$  is to a point such as  $B$ , where he disengages. Of more interest is an officer for whom engagement without force is potentially feasible. Consider officer  $C$ . A small enough change in suspect oversight leads to point  $D$ , reflecting the beneficial aspect of suspect oversight. However, if faced with a sufficiently large increase in suspect oversight, officer  $C$  overshoots to  $E$ , where he disengages. Finally, a cautionary note: consider officer  $D$  was engaging without force before the change. Here the change backfires, by moving him to point  $E$ , where he disengages.

We are agnostic as to where officers were located in Figure 2 before the oversight changes, as this depends on their personal values of  $r$  and  $c$ , and their beliefs about  $\phi$ . Given this, it is useful to address robust outcomes from increased oversight. First, it leads to fewer arrests, as shown by each green arrow. Note, however, that while the transitions for officers  $A$  and  $D$  are inefficient (assuming that disengagement is the least preferred outcome), officer  $C$ ’s movement to point  $D$  increases welfare. Put another way, arrests falling is not necessarily inefficient when excessive force leads to more arrests. Given this, three relevant empirical issues arise below. First, we show magnitudes of the arrest response for any welfare exercise. Second, transitions are inefficient when victim oversight is below the blue  $\rho_V^*$  line. We show evidence on low victim oversight below. Third, transitions are inefficient to the extent that they are

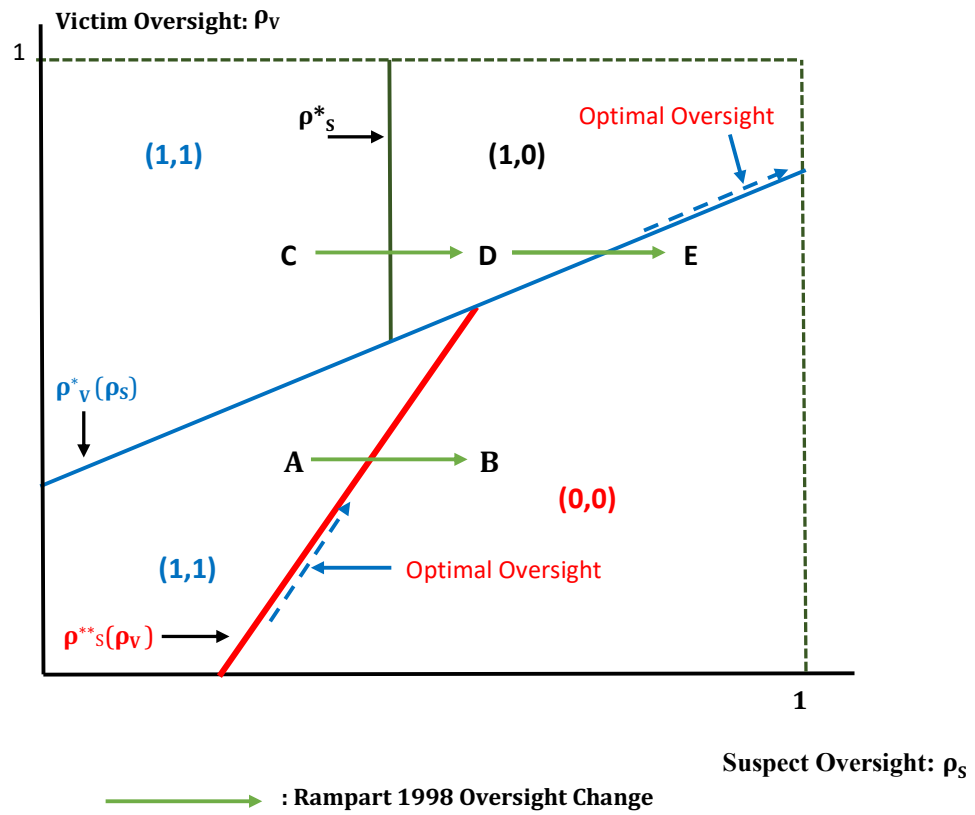


Figure 2: Rampart Oversight Implications.

generated by  $\phi < 1$ , where engaged officers are mistaken for those using excessive force. This becomes relevant for the transition from  $(1, 0)$  to  $(0, 0)$  for officer  $D$ . We show survey evidence on  $\phi$  to suggest the salience of this issue.

**Credibility of Complaints:** Achieving better outcomes implies that officers internalize the interests of victims. This relies on the credibility of victim complaints: formally, both  $\rho_V^*$  is decreasing in  $\mu_V$  and  $\rho_S^{**}$  is increasing in  $\mu_V$ . An empirical concern is that  $\mu_V$  is likely to be low. First, victims of crime may know little about what constitutes an effective investigation. Second, crimes like narcotics and prostitution are “victimless” and hence victim oversight does not apply. As a result, low credibility of victim complaints may imply that police reforms can only lead to disengagement. We show evidence below on how limited victim oversight seems to be.

**Other Instruments:** The concern here is that oversight leads to police disengaging. What other instruments could be used to alleviate this concern? One possibility would be to design a greater penalty  $\Delta$  for a complaint originating with the victim. Let  $\Delta_i$ ,  $i = S, V$ , be the penalty for an investigation that originates from a complaint by party  $i$ . One possibility to encourage engagement is to set  $\Delta_V > \Delta_S$ . The problem is that an upper bound to  $\Delta_i$  is likely the cost of being fired, with cost  $\Delta$ . The issue then becomes whether  $\Delta_S < \Delta$  can both induce engagement and eliminate force. The problem is that while reducing  $\Delta_S$  makes engagement more likely, it also makes force more likely.<sup>10</sup>

## 1.1 Lessons for Police Reform

The framework is primarily an aid to interpreting observed outcomes below. However, consider how society might design police oversight. Below we present a myriad of evidence to suggest that the impact of the Rampart reforms was to transition officers into the disengagement  $(0, 0)$  region of Figure 1. Despite this, the paper does not argue against police reform. Instead, its objective is to point to a possible problem with the Rampart reforms, and to suggest a potential path around these issues.

Specifically, although the setting is not traditional, the framework exhibits a familiar feature of contracting problems, namely multi-tasking (Holmstrom and Milgrom,

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<sup>10</sup>While  $\rho_S^{**} = \frac{[(p_e + p_f)r - c] + \rho_V \mu_V \Delta}{\phi \mu_S \Delta_S}$  is increasing in  $\Delta_S$ , so also is  $\rho_S^* = \frac{r p_f}{\Delta_S \mu_S (2\phi - 1)}$ .

1992). Police officers interact with a variety of constituencies - the public, potential suspects, the victims of crime, etc. - and their mandate is to appropriately respect the rights and objectives of each. We suggest below that the LAPD reforms likely not did provide incentives to do so. Instead, they disproportionately increased oversight by one constituency (potential suspects), and officers may have responded by aiding that constituency at the expense of victims. As such, police reform suggestions below focus on the need for suspect and victim oversight to be complementary.

Returning to the framework, society's objective is to locate outcomes in the  $(1, 0)$  region of Figure 1, but failing that would choose between  $(1, 1)$  and  $(0, 0)$ . If there are no constraints on choosing  $\rho_i$ , victim and suspect oversight can be chosen to induce engagement without force. This may not be feasible as investigations are costly and complaints may not be credible. Notable here is that LAPD oversight was changed in 2002 because of such constraints, where the backlog of cases was adversely affecting the implementation of the Consent Decree.

When the ability to investigate is limited, two issues arise. First, suspect oversight may need to be limited to avoid disengagement. This arises in two regions in Figure 1: at the point the blue line is crossed for  $\rho_V > \rho_V^*$ , and the point where the red line is crossed for  $\rho_V < \rho_V^*$ . This generates an upper bound to suspect oversight, where the capacity of suspects to complain may need to be *bounded by the ability of victims to seek redress*. Second, suspect and victim oversight may need to be complementary. To see this, consider a case where the objective is to maximize suspect oversight subject to not inducing disengagement.<sup>11</sup> Then if  $\rho_V = \rho_V^*$  is reached, suspect influence ( $\mu_S \rho_S$ ) can only be further increased if  $\mu_V \rho_V$  is also increased. This is shown by the hashed blue arrows in Figure 2.

How to empirically implement measures that boost victim interests may be challenging. To see this, consider using other incentives, modeled above by  $r$  above. A conceptually natural response would be where an officer's promotion or retention would depend on something like his (her) conviction or arrest rate, as these reflect engagement. Even if union collective bargaining constraints could be overcome to allow this, it is still likely to be problematic. First, LAPD street officers arrest an average

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<sup>11</sup>The framework is bare bones, in order to show tradeoffs. Once the officer engages and does not use force, the first best arises, and there is no reason to increase oversight further. Realistically, there are many reasons for doing so - the possibility of a false arrests, evidence missed, and so on. These are ignored here for expositional simplicity.

of only *five to six* suspects per annum for Part 1 crimes.<sup>12</sup> With such small numbers, it would be difficult to condition careers on statistical measures. Second, a concern with contracting on arrests is the danger of providing incentives to make false arrests. Finally, while rewarding on arrests encourages engagement ( $\frac{d\rho_V^*}{dr} = -\frac{p_e}{\mu_V \Delta} < 0$ ), it also makes force more likely ( $\frac{d\rho_S^*}{dr} = \frac{p_f}{\Delta\mu_S(2\phi-1)} > 0$ ). As a result of these concerns, it is hard to see a magic contracting bullet.

Instead, it is likely that victim oversight would need to be enhanced by case-by-case investigations of how officers behaved. There are two likely avenues. First, a failure to investigate crimes is considered a Neglect of Duty infraction. We show below that these are rare in our data. One possible way to encourage engagement would be lower the hurdle needed for a complaint to launch such an investigation, or to reduce its burden of proof. Yet as  $\mu_V$  is likely to be low, this may be insufficient. An alternative is to carry out *random monitoring* of unsolved cases, or random monitoring of officers if evidence on many cases is needed to determine disengagement. This monitoring would be focused on identifying if the officer followed up appropriately on crime investigations. In this way, a balance between suspect and victim interests could potentially be attained.

**The Use of Technology:** A key issue for police reform is the use of monitoring technology. A recent relevant development is body cameras and cell phone evidence, which have likely increased the credibility of suspect complaints.<sup>13</sup> A problem is that while higher  $\mu_S$  makes an engaged officer less likely to use force ( $\frac{d\rho_S^*}{d\mu_S} < 0$ ), it also make disengagement more likely ( $\frac{d\rho_V^*}{d\mu_S} > 0$  and  $\frac{d\rho_S^{**}}{d\mu_S} < 0$ ). If suspect (victim) oversight is low (high) enough a (say at point *C* in Figure 2), body cameras can improve outcomes by reducing force.<sup>14</sup> However, if this is not the case, body cameras and cell phones can induce disengagement by rendering investigations more threatening to officers (points *A* and *D* in Figure 2). As a result, there is no necessary reason to see technology as a panacea.

It is with these issues in mind that we now address chosen oversight in Los Angeles and its ramifications.

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<sup>12</sup>There are 10,000 officers in Los Angeles, of which say half are on the street. The total number of Part 1 arrests in Los Angeles in 2002 was approximately 29,000.

<sup>13</sup>It is not clear why video evidence affects  $\mu_V$ .

<sup>14</sup>See Kim, 2020, for evidence to support this.

## 2 Oversight

During the early 1990s, the LAPD instigated an anti-gang squad known as CRASH. By 1997, it became clear that its activities in Rampart went beyond its legal mandate. Among these was a bank robbery carried out by one officer, the self-defense killing of a CRASH agent by an undercover LAPD officer, and the theft of three kilos of cocaine from the evidence room by Officer Rafael Perez. When discovered, Perez cooperated with investigators and offered evidence on other officers. The aftermath resulted in over 100 convictions being overturned, and the LAPD settling lawsuits amounting to \$125m. This resulted in a series of police reforms.

**1998:** In 1998, the LAPD introduced a policy whereby the Internal Affairs Division investigated all complaints against officers. This was known as the “1.28 system”, after the complaint form filled out by members of the public. Any complaint was transferred to Internal Affairs, who then either instigated a formal investigation, or returned less serious complaints to the station commander for any disciplinary action.

After its introduction, complaints increased substantially: from 2,712 in 1997 to 6,965 in 1998, 6,830 in 1999, 9,244 in 2000 and 7,450 in 2001.<sup>15</sup> 50% of complaints were sustained in 1997, 53% in 1998, and over 50% in 2000 (Parks, 1999). Sustained complaints rose from 539 in 1997 to 1,372 in 1998. Penalties rose dramatically. Between 1992 and 1997, an average of 13 officers per annum were removed from the force for malfeasance. In 1998, 60 officers were terminated, with 44 in 1999. Cannon (2000) quotes the Chief of Police that in the two years after 1998, over 800 officers were disciplined, 113 terminated, and many left the force rather than be investigated.

The complaints process was lengthy. This mattered as an officer could not be promoted or transferred while a complaint case was open against him or her. A complaint had to be first forwarded from the station to IAD. In June 2001, this took an average of 60 days, and many took over 100 days.<sup>16</sup> Following this, an investigation occurred: the average investigation time was 8.8 months in 1999, and 6.3 months in

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<sup>15</sup>See *LAPD: State of the Department*, 2004. Before 1997, data is available on only complaints that were filed and closed. There were 2,051 such complaints in 1991, 2,359 in 1992, 2,017 in 1993, 1,529 in 1994, 973 in 2005, 1,706 in 1996 and 1,912 in 1997 (“Los Angeles, Internal Investigations”, *Shielded from Justice*, 1998). Note that under the new “1.28” filing procedures noted above, 2,712 complaints were made in 1997. Compared to the 1,912 complaints reported above, this suggests that these earlier numbers undercount true complaints by about a third.

<sup>16</sup>Report of the Independent Monitor for the Los Angeles Police Department, Second Quarterly Report, 2002.

2000.<sup>17</sup> Many complaints took over a year at this stage. By the end of 2000, 9,512 complaints were pending against officers, and 9,122 the following year.

The oversight change was not well received by officers, especially as many believed that gang members were coordinating to make complaints against effective officers in order to deny them promotions. Wilms et al., 2002, note that “the “1.28” is hated by the vast majority of officers...Most officers think the system is unfair and gives undue power to citizens who can make unfounded complaints without penalty”. One feature that played an important role in the framework was  $1 - \phi$ , the uncertainty that officers faced when engaging suspects. Officers were first surveyed on this issue in 1999: 80% reported that “I fear being punished for an honest mistake”, with 58% saying that their “career had been harmed by a complaint made by a member of the public”.<sup>18</sup> Another survey in 2003 found that over 90% of officers either agreed or strongly agreed that “the threat of community complaints prevents police officers from being proactive on the street”, while almost 90% also felt that “because of fear of being unfairly disciplined, many LAPD officers are not proactive in doing their jobs”.<sup>19</sup>

**Consent Decree:** The Rampart scandal increased scrutiny by the Department of Justice, leading to a Consent Decree in June 2001. A primary component of the decree was more systematic policies on Use of Force, and documentation of Street Stops. It also introduced a warning system for repeat offenses by officers. Notably for our purposes, it made no change to the complaints procedure, deciding that it was already in compliance. The Consent Decree did, however, mandate that complaints be resolved within five months.

**Late 2002:** The Consent Decree itself did not change the complaints procedure. Despite this, many of the 1998 changes were reversed during its era. The Monitor of the Decree noted that “the City continues to experience difficulty in functionally

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<sup>17</sup>Status Report, 2001, page 113.

<sup>18</sup>Another survey in 2000 showed officers strongly disagreeing with the statement that “department administers discipline fairly and appropriately” (3.67 on a Likert scale of 1 to 4). Complainants were also unsatisfied with the process. A survey of 152 complainants from 1997 to 1999 showed that only 22.4% believed that their complaint was thoroughly investigated by the Department, and a quarter felt “intimidated” and that they were “discouraged from making a complaint” (Report of the Rampart Independent Review Panel, 2000, p.83).

<sup>19</sup>Stone et al., 2009.

complying with and monitoring the 5 month investigative time frame”.<sup>20</sup> Only 51% of complaints in 2002 were handled by that time limit. This became a pressing issue because “by City Charter, a suspension or discharge of an officer must be imposed within one year of discovery of the underlying violation” (Rampart Review Board, 2000). In 1999, 60 cases were so delayed that the officers were exonerated without the case being heard. 231 such cases exceeded the statute of limitations in 2002, and by May 2003, 1,861 complaints had been open for more than a year.

As a result, on November 15, 2002 the Monitor noted that the complaints process resulted in “thousands of complaints per year that required investigation and virtually stagnated/severely slowed the Department’s complaint process.” This “directly affects the morale of the LAPD. An officer who is the subject of an open complaint could not be transferred or promoted within the Department. This issue, if unresolved, threatens the successful implementation of the Consent Decree”.<sup>21</sup> Five days later, the LAPD announced a new complaints process. Its stated objective was to give the Department the ability to eliminate less important or frivolous complaints. To do so, commanding officers could designate a complaint as “non-disciplinary”, meaning that no disciplinary action would be taken.<sup>22</sup> The internal memo, which predicted that “morale within the rank and file should soar”, is reproduced in the Appendix. This change in oversight was not publicized.

We now show how this change affected the prevalence of investigations, sustained complaints, and penalties, the analog to  $\rho_i$ ,  $\mu_i$ , and  $\Delta$  in the framework above.<sup>23</sup> To do so, we rely on Discipline Reports mandated by the Consent Decree, which are available after 2002. Table 1 shows how complaints sustained ( $\mu_i\rho_i$ ) and discipline ( $\Delta$ ) changed. We focus on outcomes for the first half of each year as the Department did not provide consistent data for the second half of 2006. (The second half of the other years has similar outcomes.)

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<sup>20</sup>Executive Summary, page 3.

<sup>21</sup>Report of the Independent Monitor for the Los Angeles Police Department, Sixth Quarterly Report, 2002, page 34.

<sup>22</sup>One component of this is if “the complaint, as stated, would not amount to the commission of a felony or misdemeanor crime”. Notice that the sub-heading of the memo announcing the change was “..welcome news for all..” reflected how this was likely to be perceived by officers.

<sup>23</sup>LAPD data is found at lapdonline.com, while data for the Sheriff Department is available at lasd.org.

Table 1: Sustained Complaints and Penalties

|                                                 | 2002 | 2003 | 2004 | 2005 | 2006 |
|-------------------------------------------------|------|------|------|------|------|
| <b>Sustained Complaints (first six months)</b>  | 3256 | 1325 | 1973 | 985  | 916  |
| <b>Resigned/Retired</b>                         | 860  | 329  | 383  | 109  | 117  |
| <b>Suspended</b>                                | 980  | 318  | 602  | 283  | 273  |
| <b>Termination</b>                              | 18   | 5    | 5    | 24   | 4    |
| <b>Admonishment</b>                             | 583  | 276  | 555  | 343  | 248  |
| <b>No Penalty</b>                               | 148  | 134  | 126  | 64   | 51   |
| <b>Sustained Complaints (second six months)</b> | 1849 | 1604 | 1235 | 914  |      |
| <b>Annual Total</b>                             | 5105 | 2929 | 3208 | 1899 |      |

The era of the Consent Decree entailed fewer sustained complaints: from 3256 in 2002, they fell to 916 by 2006. This reduction did not arise from low numbers of complaints. Complaints do not fall below 5,000 from 2002 onwards.<sup>24</sup> Instead, the rate at which complaints were sustained (the  $\mu_i$  of the framework) fell. In 1999 and 2000, slightly over 50% of complaints were sustained against officers. The LAPD only offers systematic data on the rate at which complaints are sustained only after 2005. Each year after, it remains relatively constant at 15-20%.

The rate of 15-20% masks a startling distinction. Complaints largely come from two sources: the public and from the Department itself. Common complaints made by the Department are Preventable Car Collisions, Insubordination, or the Failure to Qualify for required tests. Racial Profiling, Unauthorized Force, Discrimination and Discourtesy derive from the public. Almost 90% of complaints came from the public, yet only 15% of sustained complaints did so. The reason is that complaints from the public are sustained at very low rates.<sup>25</sup> This can be most easily see from data available from 2006 to 2008, and shown in Table 2.<sup>26</sup> Departmental complaints are sustained at rates between 80% and 90%. Those typically made by the public are vastly lower, between 0% and 3%, with only 41 out of 2095 claims of discrimination, racial profiling, unauthorized force, and discourtesy being sustained. No complaints of racial profiling or discrimination were sustained.

<sup>24</sup>In 2003, 5,701 complaints are recorded, while in 2005 and 2006, 5,663 and 5,662 complaints arise.

<sup>25</sup>For example, in 2005 complaints of officer discourtesy were sustained 3.6% of the time, with unauthorized force at 1.6%, and not a single accusation of racial profiling or discrimination was sustained.

<sup>26</sup>In the fourth quarter of 2008, the LAPD began offering data on complaints and outcomes for the the previous three years. Discipline Report for Quarter 4, 2008.

Table 2: **Combined Complaints from 2006 to 2008 (4th quarter)**

|                                  | Complaints Sustained | Complaints | Percent Sustained |
|----------------------------------|----------------------|------------|-------------------|
| <b>Discrimination</b>            | 0                    | 63         | 0%                |
| <b>Racial Profiling</b>          | 0                    | 150        | 0%                |
| <b>Unauthorized Force</b>        | 8                    | 821        | 1%                |
| <b>Discourtesy</b>               | 33                   | 1061       | 3.1%              |
| <b>Preventable Car Collision</b> | 274                  | 315        | 87.0%             |
| <b>Insubordination</b>           | 19                   | 23         | 83.0%             |
| <b>Failure to Qualify</b>        | 107                  | 133        | 80.5%             |
| <b>All Complaints</b>            | 965                  | 6357       | 15.2%             |

These data are for the fourth quarter of each year. For all of 2007 to 2009, 0 of 800 complaints of racial profiling were sustained, while 36 of 2869 accusations of unauthorized force were, with 112 discourtesy complaints sustained. By contrast, *in the first half of 2002 alone*, there were 159 sustained complaints of discourtesy, 18 of unauthorized force, 83 of improper remark, 17 of ethnic remark and 10 of gender bias.<sup>27</sup> The combined data above are far from these levels.<sup>28</sup>

Not only did sustained complaints fall, but so also did penalties ( $\Delta$ ) in the event that a complaint was sustained. Table 1 also shows disciplinary outcomes arising from sustained complaints. Most serious are Resignation, Retirement or Termination, with No Penalty and Admonishment less serious. All penalties fall after 2002: Resignations or Retirements by a factor of 6, Suspensions by a factor of almost four, and Admonishment and No Penalties by a factor of 3. We aggregate Termination, Resignation, Retirement, and Suspension as “Serious”, and Admonishment, No Penalty, No Action, or Official Reprimand as “Lenient”. In Table 6 in the Appendix, we show that Lenient penalties become more frequent after 2002, rising from 41% in 2002 to 46% to 50% after then. As a result, the change in oversight not only resulted in many fewer sustained complaints, but also lower penalties in the event that they were.<sup>29</sup>

<sup>27</sup>For all of 2002, 453 such complaints were sustained.

<sup>28</sup>For a more limited set of complaints, we have earlier data - for 2005 and 2006 - which paints a similar picture. Preventable car collisions accusations were sustained at a 97% rate, while Failure to Qualify complaints were sustained 86.2% of the time. By contrast, complaints of discourtesy were sustained at a 3% rate, unauthorized force at a 0.6% rate, and 0 of 337 racial profiling complaints were sustained.

<sup>29</sup>This becomes even more stark after 2006. The preponderance of penalties is exoneration, admonishment, or suspension. For example, of the 222 complaints that were sustained in that final quarter of 2008, only 23 complaints resulted in the departure of the officer from the force by resignation, retirement, removal, or termination. Over 100 involved either an admonishment or no penalty.

This is especially relevant as the narrative of the change was to eliminate frivolous complaints: despite this, it is the most severe penalties that seem to fall most.

We can also document which complaints were sustained. More serious accusations are Neglect of Duty, Unbecoming Conduct, Dishonesty, and Racial Profiling. A less serious complaint is Discourtesy. There are large and consistent decreases in sustained complaints in all of these categories. As an example, sustained Discourtesy complaints fell from 159 in 2002 to only 39 in 2006, yet complaints for Unbecoming Conduct fell from 726 to 154. As such, the outcome feels far from one that only eliminated less serious accusations.

**Victim Oversight:** The framework distinguishes between suspect oversight  $\rho_S$  and victims oversight  $\rho_V$ . Victim complaints are a primary instrument to deter and officer from disengaging. In our data, this would be reflected in “Neglect of Duty” complaints. Data at this level of detail are only available after 2005. Roughly 20% of all sustained complaints are for neglect. However, they rarely involve a failure to investigate. Instead, they overwhelmingly consist of officers failing to carry out Departmental procedure.<sup>30</sup> For instance, in the first quarter of 2005, only 9 of 71 sustained complaints for Neglect of Duty involved the failure to appropriately investigate.

In the language of the framework above, this reflects  $\mu_V \rho_V$  being low. This is likely because victims may have little way of credibly identifying the failure of an officer to investigate appropriately. As Part 1 crimes typically only lead to an arrest about 20% of the time, it is likely difficult for victims to accurately identify disengagement by officers. This is why we characterized the Rampart change in Figure 1 as a horizontal arrow, where (in 1998) the suspect became more influential without affecting the voice of the victim, which was reversed in 2003.

**Updated Beliefs of Officers:** We offered survey evidence above on police uncertainty  $1 - \phi$  after the first oversight change. Officers were re-surveyed in 2009 (Stone et al., 2009). Compared to the earlier survey, the percentage of officers fearing being punished for “making an honest mistake” fell from 80% to 65%. Even more striking

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<sup>30</sup>Three randomly chosen Neglect of Duty complaints sustained in the third quarter of 2005: “Failed to use a seatbelt to secure complainant while transporting in the back of the police vehicle,” “Failed to conduct an accurate money count, resulting in a monetary shortage”, and “Failed to properly inventory items at the time of booking”.

is that those who felt that “their career has been negatively affected by civilian complaints” fell from 58% to 23%. As a result, the accountability changes documented above have permeated into the beliefs of officers.

### 3 Outcomes

We have documented two discrete changes in oversight: in 1998, and at the end of 2002. We now show responses. To do so, we use the arrest-to-crime rate as a measure of police productivity. Data on arrests are not available before 1997, which limits our ability to examine behavior before the first change. After documenting the arrest to crime rate, we parse outcomes by crime to address whether those crimes where detection is harder ( $\rho_V$  particularly low) had more disengagement. We also compare the LAPD to the Los Angeles Sheriff Department, and the arrest behavior of agencies such as the FBI within the LAPD’s jurisdiction. We then consider other measures of engagement: street stops and use of force.

**Arrest to Crime Rates:** Figure 3 shows the arrest-to-crime rate for all crimes (Part 1 + Part 2) and for more serious Part 1 crimes, where we normalize to 1 in 1998.<sup>31</sup> From 2000 to 2003, arrest-to-crime rates for Part 1 and Part 2 crime fall by 40%, but by 2006 have recovered to their 1998 levels.<sup>32</sup> Part 1 arrest to crime rates fall somewhat less, by 29% and recover to a level 14% below their 1998 watermark.<sup>33</sup>

Note that the response to the first oversight change is delayed, with major effects arising in 2000. While there is a 3% reduction in the arrest-to-crime rate for Part 2 crimes in 1999, it takes until 2000 to be manifested for Part 1 and for the large changes described above. This should not be seen as surprising, as we noted above

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<sup>31</sup>In 2005, the LAPD changed the definition of Aggravated Assault. These related to domestic violence disputes. After 2005, the LAPD changed most domestic assaults to be defined as Simple Assaults in Part 2 offenses. As a result, the arrest-to-crime rate for Aggravated Assault rises in 2005 but it is partly caused by redefinition. However, including Part 1 + Part 2 crimes above overcomes this issue, as all are included as crimes in the denominator in that case. We also computed the arrest to crime rate for Part 1 crimes excluding Aggravated Assault, whose definition changed in 2005. In that case outcomes are identical to all Part 1 except that recovery by 2006 is only 35% of the initial decline.

<sup>32</sup>Note that we normalize arrests by crime, which itself is potentially endogenous. Total arrests are shown in Figure 7, and have a similar pattern.

<sup>33</sup>In Figure 16 in the Appendix, we show the arrest-to-crime rate for each Part 1 crime. All seven fall after 1999, and six of the seven crimes reverse after 2002.

that the complaints procedure is slow, taking up to a year between the act and the resolution of the complaint. After that, it likely took additional time for outcomes to disseminate such that officers realized the implication for their careers.

We now carry out a series of consistency checks. Our first comparison is across crimes. First, one possible interpretation of the outcome above is that oversight led to officers avoiding only marginal arrests, those for less serious crimes. If that were the case, the costs of changed police behavior might not be large. However, Figure 3 plots the arrest-to-crime rate for violent crime, which show a similar profile to those for other crimes.<sup>34</sup> We also show below that the largest absolute decline in arrest rates is for homicide, the most serious crime.

Second, some crimes are easier for officers to avoid detection. The Independent Rampart Review Panel noted that “many officers say they will act only in response to radio calls to avoid having to justify why they approached an individual...It has become a common belief that the way to stay out of trouble and to increase one’s chances for promotion is to respond to radio calls, and to do no more than is absolutely necessary.” Both Narcotics and Prostitution are “victimless” with typically no radio calls: instead, it relies on the officer often observing the crime. (In the framework, disengagement became more likely when  $\rho_V$  was low.) Figure 3 shows arrests for narcotics and prostitution compared to other arrests.<sup>35</sup> From 1998 to 2002, narcotics arrests fall by 45%, but recover completely by 2006. Prostitution arrests also fall by 40% from 1998 to 2002. This provides some corroborating evidence that these changes reflect behavioral responses by officers. However, these differences are not large: we return to this below.

One final issue is that officers may be able to choose whether they write up an infraction as a crime. Changed oversight could alter their decision to do so. To address this, Figure 3 also plots the ratio of arrests not to crime but instead to (i) the number of telephone calls received by the LAPD (both 911 and seven-digit), and (ii) the number of units dispatched. Their outcomes are very similar to the other series. As a result, is unlikely these outcomes are generated by police reporting issues.

The changes in arrest-to-crime rates are enormous. For responses of this magnitude to arise other than through changed officer behavior likely requires a considerable

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<sup>34</sup>These crimes are murder, rape, robbery and aggravated assault.

<sup>35</sup>We document arrests here because not only do many narcotics and prostitution crimes not get reported, but there is a mechanical relationship between arrests and crimes, as these are counted as crimes often only when an arrest occurs.

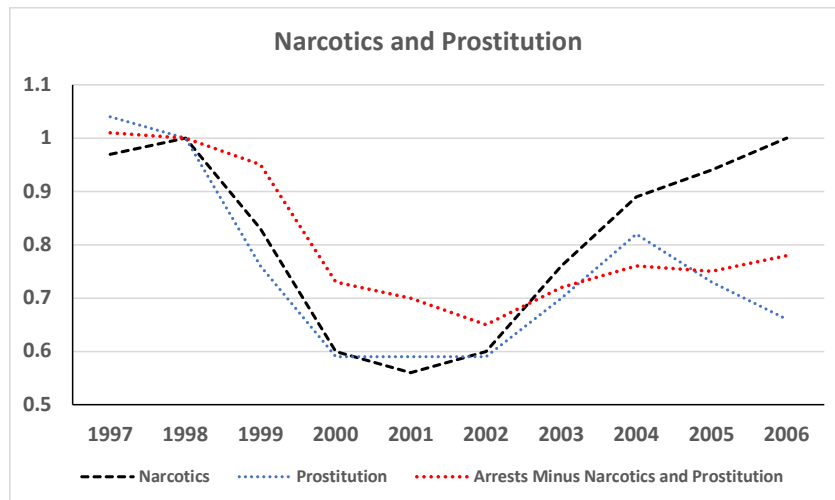
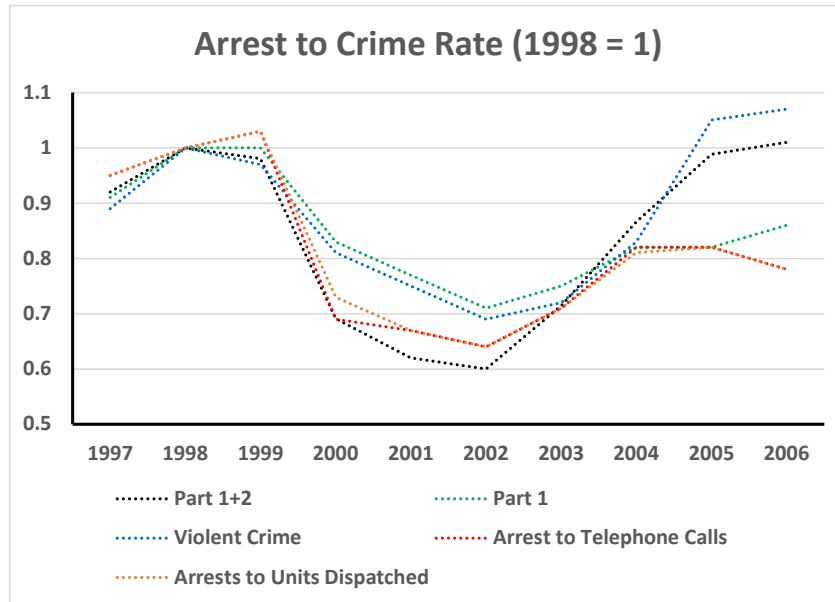


Figure 3: Arrest to Crime Rate

change in the Los Angeles crime landscape. To address this, we compare the LAPD to the Los Angeles Sheriff Department. The Sheriff Department provides law enforcement to 42 of the county's 88 incorporated cities, and also to 130 unincorporated communities. A map is offered in the Appendix. Its demographics - both of the police force and population - are similar to that of the city of Los Angeles.<sup>36</sup> The LASD had no change in oversight during this period, and given its geographic proximity and the similarity in demographics and police forces, seems a natural comparison.<sup>37</sup>

We provide data on stations continuously policed by the LASD throughout our 1997 to 2006 period.<sup>38</sup> Data on the total arrest-to-crime rate is given in Figure 4. Put simply, there is no substantive variation for the LASD. After 1998, it varies by no more than 4% compared to the 40% decline and rebound seen for the LAPD.

We can also compare arrest-to-Part 1 crime differences with the LASD. However, based on a recommendation from the federal government, both the LAPD and the LASD redefined Aggravated Assaults to no longer include most domestic disputes. Instead they were reclassified as Non-Aggravated Assaults, a Part 2 crime.<sup>39</sup> By combining Part 1 and Part 2 crimes above, we overcome the impact of this reclassification. However, to carry out a part 1 crime comparison, we offer two alternative LASD benchmarks. First, we exclude Aggravated Assaults. Second, we include all Assaults (Aggravated + Non-Aggravated). Figure 4 shows that for both counterfactuals, we see a gradual decline in the Part 1 arrest to crime rate for the LASD after 1999, but it has none of the stark swings that characterize the LAPD.

Figure 5 compares LAPD narcotics arrests to those of the LASD, and also to other arrests for both jurisdictions. (The LASD does not provide data on prostitution arrests.) Differences are considerably greater for narcotics. While there is a decline for the LASD in 1999, it is followed by a large increase in arrests. By contrast, LAPD narcotics arrests fall by 45% and then rise 45%.

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<sup>36</sup>In 2019, African Americans are 9% of the city, and 8.9% of the county, with Hispanics 48.6% in each. As for their police forces, in 2004-5, African Americans were 12.9% of the LAPD and 10.4% of the LASD. Hispanics were 36% of the LAPD, and 30.4% of the LASD (LASD 20th semiannual review, 2005).

<sup>37</sup>Above we showed data on complaints against LAPD officers. The number of complaints made against LASD varies little over the 1998 to 2006 period, ranging from 1,999 to 2,496.

<sup>38</sup>The LASD took over policing Compton and Cerritos in 2001. These are not included here. In addition, each of three stations split into two during our sample: Palmdale+Lancaster, San Dimas + Walnut, and Crescenta + Altadena. We consider the sum of those split stations here.

<sup>39</sup>The LAPD did so at the end of our observation period 2006, but the LASD did it between 2000 and 2002.

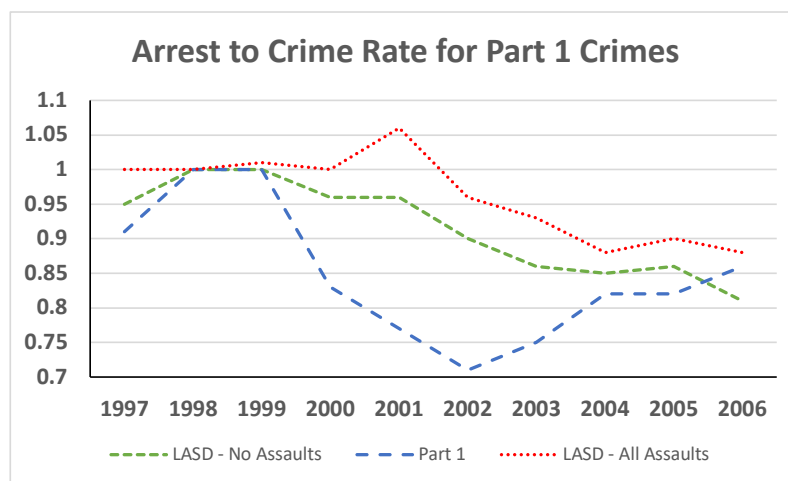
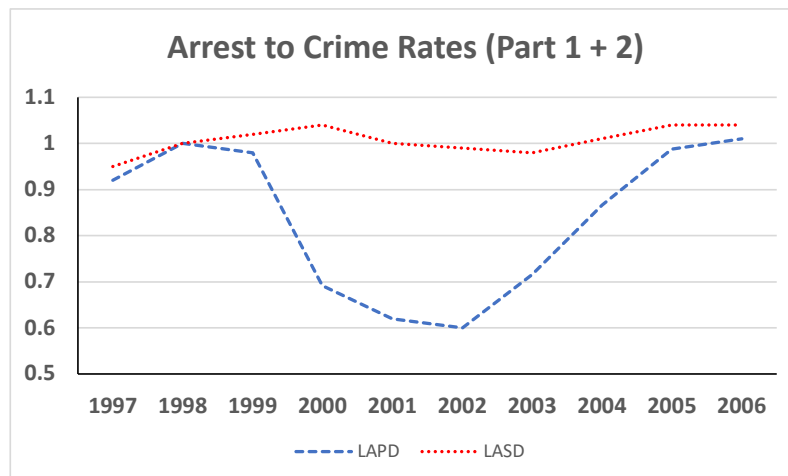


Figure 4: **LASD**

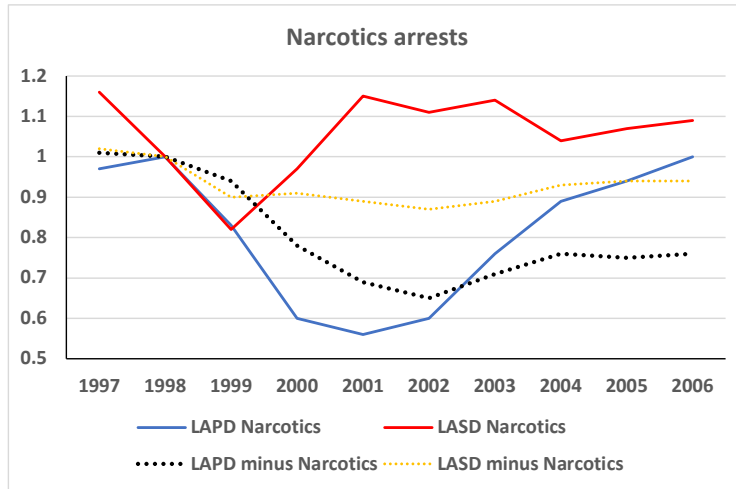


Figure 5: **Narcotics Arrests**

**Surrounded LASD stations:** The geography of Los Angeles policing allows us to carry out a more precise test. Nine stations in the South and Central Patrol Divisions of the LASD are surrounded by areas patrolled by the West Bureau of the LAPD.<sup>40</sup> See the Appendix for a map of these stations. These stations account for roughly half the crime of the LASD. In Figure 5 we compare the arrest-to-crime rate for these stations to both the West Bureau of the LAPD, and to the LAPD overall. Again, we see little variation for the LASD, while the West Bureau is similar to the overall LAPD experience. Figure 6 also provides data on narcotics arrests for the West Bureau and the surrounded LASD stations. The data for the surrounded stations is somewhat noisier than the Sheriff Department overall (particularly a large decline in arrests in 1999). However, its arrests show none of the huge reduction in LAPD narcotics arrests that continues to 2002, followed by the rapid increase to 2006.

**Arrests by Other Agencies in LAPD areas:** Agencies other than the LAPD, most notably the California Highway Patrol and the FBI, make arrests *within* the LAPD’s jurisdiction. We compare arrests by these other agencies to those of the LAPD. (We do not normalize by crime for these other agencies as no crime figures are reported.) Figure 7 compares other agency arrests to both LAPD arrests and its arrest-to-crime rate. Arrests for these other agencies show none of the variation from 1999 to 2004 that we argue arises from oversight changes for the LAPD. As a result, we see it as yet another piece of supporting evidence for the impact of the oversight changes on police behavior.<sup>41</sup>

Our conclusion from the evidence above is that officers withdrew from policing in order to avoid complaints that could adversely affect their careers. This aligns with contemporaneous reports. Cannon, 2000, notes that “residents say that officers, now concerned about being perceived as overly aggressive, too often cruise down the street in their patrol cars - a practice known within the LAPD as drive and wave”.<sup>42</sup> This

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<sup>40</sup>The stations are West Hollywood, Century, East Los Angeles, Marina Del Ray, Carson, Lakewood, Lomita, Norwalk, and Pico Rivera. The tenth station, Compton, is excluded as the LASD only began to police there in 2001.

<sup>41</sup>Note that arrests by other agencies increase from 1999 to 2002. It is tempting to see this as substituting for disengagement by the LAPD. Caution is needed for two reasons. First, much of this is the Chicago Highway Patrol, which is not substituting for other crimes investigated by the LAPD. Second, total arrests by these other agencies are only about 5% of all arrests, so the quantitative impact of any such substitution is likely to be limited.

<sup>42</sup>In a similar vein, Newton, 1996, quotes the president of the Los Angeles Police Protective League: “the way to get identified as a problem officer is by generating personnel complaints, and the way

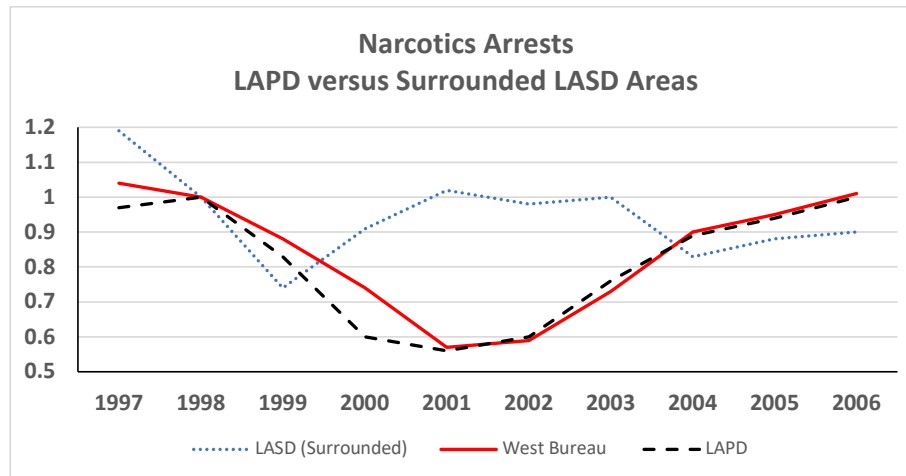
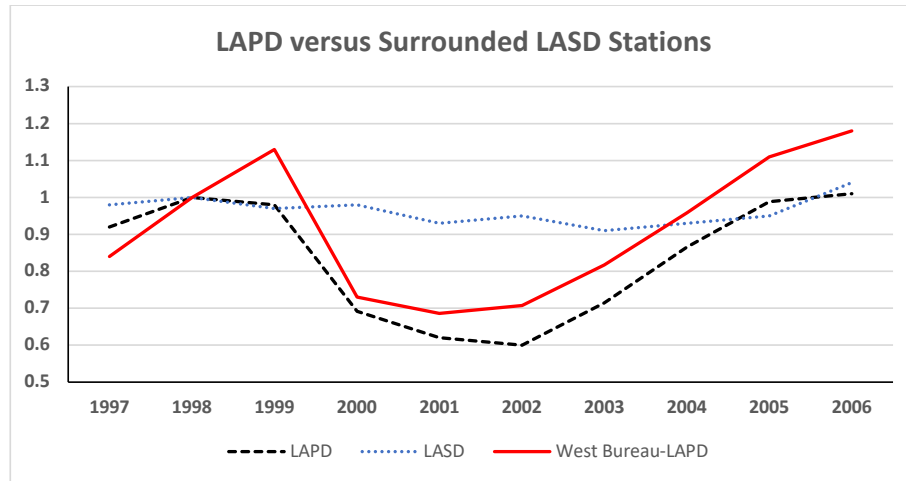


Figure 6: LASD: Surrounded Stations

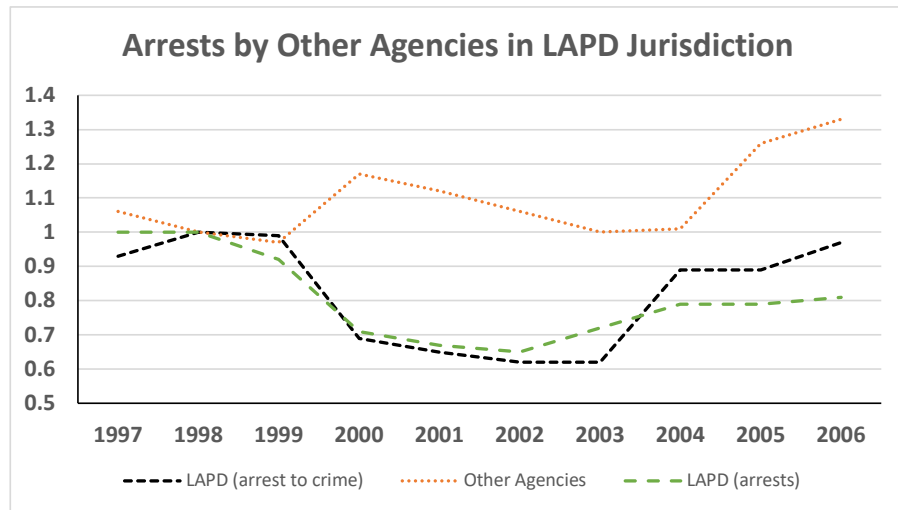


Figure 7: Arrests by Other Police Agencies within LAPD Jurisdiction

paper quantifies this incentive on police behavior. Finally, the Rampart Independent Review Board notes that “officers further believe that the 1.28 system undermines law enforcement, because it discourages officers from addressing problems and responding to crimes they may observe on the street. Fearing that any interaction with a member of the public may generate a complaint, officers say they are reluctant to initiate contact, even when they see what they believe to be criminal activity”.

An additional piece of data can potentially cast light on the changed nature of interactions between officers and suspects during the 2000 to 2002 period. In Figure 22 in the Appendix, we offer data on the number of reported assaults *on* officers while on duty. There is a notable increase from 2000 to 2002, increasing from an average of 560 such assaults in the three years before then to 840 during these three years, only to return to an average of 621 until 2006 after oversight changed. Note that this occurred while arrests fell considerably during this period. This may represent either suspects believing that they have greater latitude on their interactions with the police, or alternatively may represent offices preemptively reporting potential assaults for fear that a complaint could be registered against them.

### 3.1 Station-Level Outcomes

We now disaggregate to the station and crime level. There are 18 LAPD and 20 LASD stations. Data is available at the station-crime-year level, for example the number of larceny arrests by North Hollywood station in 2004. For arrest-to-crime outcomes at the individual crime level, we consider only Part 1 crimes. This is because we can observe both arrests and crimes for these offenses.

We first use station level data to show the pervasiveness of the police responses above. In Table 7 in the Appendix, we show that the arrest-to-crime rate fell for all but one of the 18 LAPD stations after 1998, and then rose after 2002 for all but one station. We also show that the station level average in responses accords with the outcomes above.

Second, we carry out regression analysis to compare the LAPD and the LASD at the station-crime-year level. Let  $Y_{ist}$  be an outcome variable for Part 1 crime  $i$  and station  $s$  in year  $t$ , where  $Y$  is the Arrest-to-Crime Rate ( $AC$ ), or Arrests ( $A$ ). Furthermore, let  $D_i$  be a indicator for crime  $i$ ,  $D_s$  an indicator for station  $s$ ,  $D_t$  an

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to generate complaints is by making arrests”.

indicator for year  $t$ , and let  $D_p$  be an indicator for a station being LAPD.

We first provide a year-by-year measure of oversight on the arrest-to-crime rate via:

$$\log(\mathbf{AC}_{ist}) = \beta_0 + \beta_i \mathbf{D}_i + \beta_s \mathbf{D}_s + \beta_t \mathbf{D}_t + \beta_{is} \mathbf{D}_i \mathbf{D}_s + \beta_{st} \mathbf{D}_i \mathbf{D}_t + \beta_{pt} \mathbf{D}_p \mathbf{D}_t + \epsilon_{ist}, \quad (1)$$

Controlling for station, crime, year, and interactions between station and crime and between crime and time,  $\beta_{Pt}$  is the marginal impact of being an LAPD station in year  $t$ . Our prediction is that  $\beta_{Pt} < 0$  between 1999 (or 2000 depending on how long the policy change took to be internalized by officers) and 2002, and that  $\beta_{PA} > \beta_{PO}$  after 2002. We estimate this relationship for all Part 1 crimes excluding Aggravated Assault. We do so for both our entire sample and for the surrounded LASD stations. We also offer specifications where we weight observations by crimes ( $C_{ist}$ ).<sup>43</sup> For some of the smaller LASD stations, there are sometimes zero arrests or crimes (almost always homicide or rape) and we exclude those observations. Robust standard errors are clustered at the station level.<sup>44</sup>

The annual crime-weighted impact of being a LAPD station is given in Figure 8 (outcome for the unweighted regressions are in Figure 17 in the Appendix and are similar). These show a decline of 20% in the Part 1 arrest-to-crime rate by 2002, and then an increase. The pattern is consistent with the outcomes above. We also show similar outcomes for the surrounded stations.<sup>45</sup>

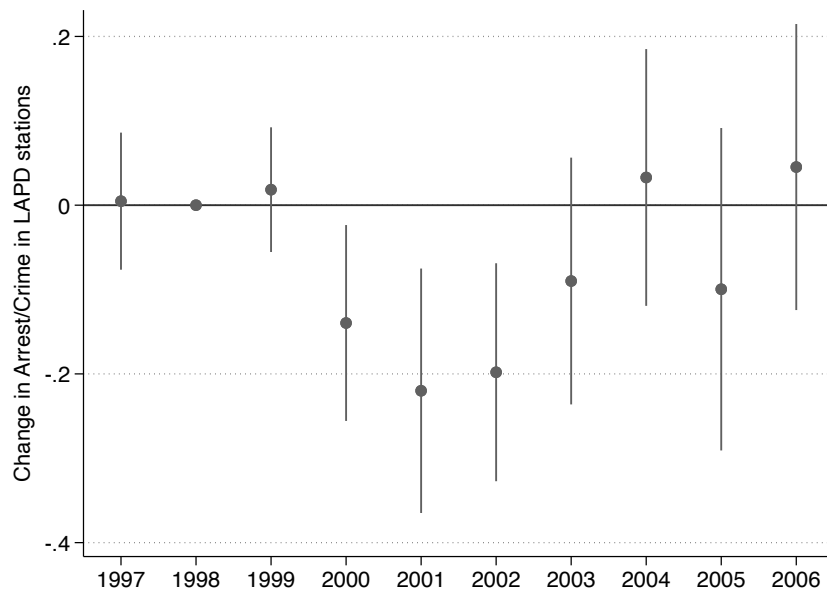
We also estimate an average response to each oversight change. Let  $D_O$  be a dummy for the year being between 1999 and 2002, and  $D_A$  a dummy for the year being between 2003 and 2006. We replace  $\beta_{Pt} \mathbf{D}_p \mathbf{D}_t$  in (1) with  $\beta_{PO} \mathbf{D}_p \mathbf{D}_O + \beta_{PA} \mathbf{D}_p \mathbf{D}_A$ .  $\beta_{PO}$  ( $\beta_{PA}$ ) is then the average impact of the first (second) oversight change. Table 8 in the Appendix shows that for the full sample without crime weights, the arrest to crime rate falls 25.7% between 1999 and 2002 and recovered roughly half after

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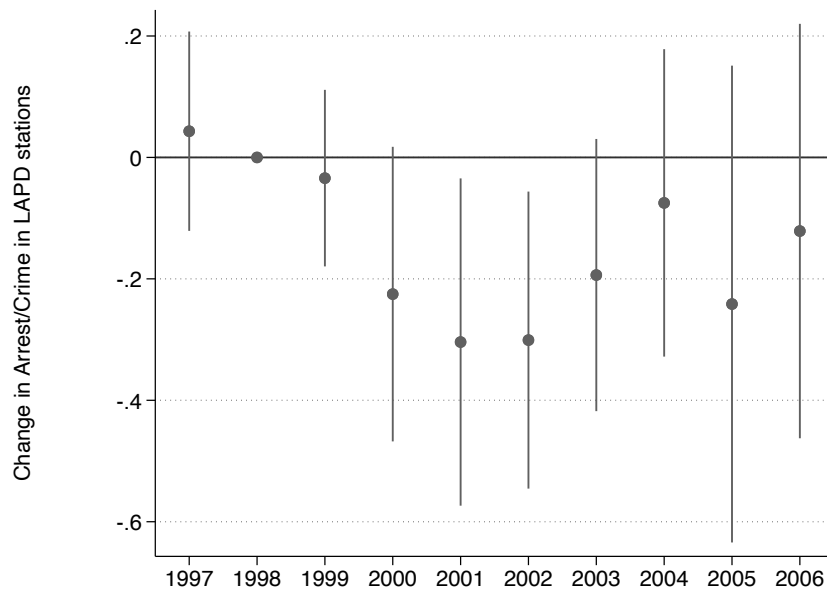
<sup>43</sup>This renders a crime the unit of analysis rather than a station. For example, there are over a hundred times more burglaries than homicides, so without doing so we would overweight the impact of homicides by a factor of 100.

<sup>44</sup>We have also tested for possible biases generated by two way fixed effects described in de Chaisemartin and D'Haultfouille, 2020, and the results do not change.

<sup>45</sup>These regressions include interactions between crime and year, and also crime and station. This implies estimating 286 additional coefficients for the whole sample and 162 coefficients for the surrounded stations. Table 9 in the Appendix provides results where crime x station interactions are dropped. This reduces coefficients that need to be estimated by 227 and 77 for the two samples. The results do not change.



Event Study coefficients: Crime weighted, all stations.



Event Study coefficients: Crime weighted, surrounded Stations.

Figure 8: Year by Year LAPD coefficients

oversight is reversed. When weighted by crime, the initial impact falls to 12%, with no effect in the second period.<sup>46</sup> For the surrounded stations, the first oversight change reduces the arrest-to-crime rate by 21%, with the second change having outcomes indistinguishable from the pre-1998 period. These results are consistent with  $\beta_{PO} < 0$  and  $\beta_{PA} > \beta_{PO}$  as predicted.

### 3.2 Demographic Impact

Station level data also allow us to address how these responses affected different racial or ethnic groups.

Data on the racial and ethnic make-up of each LAPD station’s population is available for 2002.<sup>47</sup> Let  $\omega_{sd}$  be the proportion of people living in the geography of LAPD station  $s$  that is demographic group  $d = \{\text{White, African American, Hispanic, Other}\}$ . Let  $\bar{\omega}_d$  be its average across all stations. Let  $AC_{sT}$  be the station-level average arrest-to crime-rate for three time periods ( $T$ ) reflecting our oversight periods: 1997 to 1998 ( $T = 1$ ), 1999 to 2002 ( $T = 2$ ), and 2003 to 2006 ( $T = 3$ ). Then  $R_{sT} = \frac{AC_{(T+1)s}}{AC_{Ts}}$  measures the change in the arrest-to-crime rate for station  $s$  after the  $T$ th oversight change, with  $R_T = E_s \frac{AC_{(T+1)s}}{AC_{Ts}}$  its average. Then  $\omega_T^d = E_s \frac{\omega_{sd} R_{sT}}{\bar{\omega}_d R_T}$  measures the impact of the  $T$ th oversight change for a random member of demographic group  $d$  compared to the average change. These are given in Table 3, where the impact for the average White is normalized to 1. It shows that the average Hispanic resident of Los Angeles faced a 10% greater reduction in the arrest-to-crime rate after the first oversight change than her White counterpart.

Table 3: **Impact on Demographic Groups**

| Weighted Impact | White | Hispanic | African American | Other |
|-----------------|-------|----------|------------------|-------|
| $\omega_1^d$    | 1     | 0.90     | 0.96             | 0.96  |
| $\omega_2^d$    | 1     | 1        | 1.01             | 1.06  |

In the Appendix (Figure 18), we plot  $R_{s1}$  against each station’s Hispanic population. It shows a huge reduction in arrests in overwhelmingly Hispanic communities such as Newton and Hollenbeck. We formalize outcomes in Table 10 in the Appendix,

<sup>46</sup>The reason for this difference with unweighted crime is that this more heavily weights rarer crimes. As the arrest to crime rate for the rarest crime, homicide, fell most after 1999, the coefficient rises.

<sup>47</sup>Analysis Group, 2006.

where station and crime level regressions relate demography to the arrest-to-crime rate. We show that when station x crime and time x crime interactions are allowed, the arrest to crime rate fell disproportionately in Hispanic neighborhoods after the first oversight change, though the coefficient is only significant at the 10% level.

### 3.3 Other Police Behavior

Changed oversight potentially affects other police behaviors. We begin by showing evidence on Use of Force in Table 4. Because of the Consent Decree, consistent data are only available by the LAPD from 2001 onwards.<sup>48</sup> Use of Force per part 1 crime rose 35% from 2002 to 2003 and remained at that level afterwards.<sup>49</sup> By contrast, there is no significant change at the Sheriff Department, at least until 2006 (due to different reporting standards across police departments, we do not discuss the differences in levels).

Table 4: **LAPD Non-Categorical Use of Force and LASD Use of Force per 1000 Part 1 Crimes**

|      | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|------|------|------|------|------|------|------|
| LAPD | 0.85 | 0.85 | 1.19 | 1.13 | 1.21 | 1.17 |
| LASD | 2.87 | 2.70 | 2.93 | 2.91 | 3.07 | 3.34 |

Use of Force data can be also used to inform the validity of the modeling assumptions above. An assumption above is that the exercise of force increases the likelihood of an arrest. In Figure 19 in the Appendix, we provide time series evidence that is consistent with this, where after 2001 both use of force and the arrest to crime rate increase for the LAPD, while we see no change in either for the LASD.

The Consent Decree also required the LAPD to document Motor Vehicle and Pedestrian Stops, “Street Stops” in more common parlance. This data is only available from 2002 onwards. A significant ramp up in Street Stops can be seen in Table

<sup>48</sup>Procedures for reporting changed in 2001 (Report of the Independent Monitor, Second Quarterly Report, February, 2002).

<sup>49</sup>Non-categorical use of force includes non-lethal force. It is the vast majority of all use of force outcomes. A similar increase is evident if we do not normalize by crime, as use of force rose from 1653 incidents in 2002 to 2139 in 2003. There are two observations for the LAPD - the second half of 2001 and the first half of 2002 - which do not offer data for all months of the year. Here we normalize by the crimes in the included months.

5, with an increase of 60% from 2002 to the average of 2004 onwards.<sup>50</sup>

Table 5: **Street Stops**

|              | 2002   | 2003   | 2004   | 2005   | 2006   |
|--------------|--------|--------|--------|--------|--------|
| <b>Stops</b> | 587201 | 670896 | 868917 | 881841 | 873701 |

We see these additional responses as further evidence supporting the relationship between increased oversight and disengagement of police.

### 3.4 Returning to the Framework

It is useful at this point to interpret our empirical evidence through the lens of the framework above. The framework offers three instruments to change officer behavior: suspect oversight ( $\mu_S \rho_S \Delta$ ), victim oversight ( $\mu_V \rho_V \Delta$ ), and other incentives ( $r$ ). Before 1998, arrest-to-crime rates suggest that  $r$  was high enough and  $\rho_S$  low enough that engagement with force was used by at least some officers. Disciplinary measures shown in Section 2 suggest that  $\mu_S \rho_S \Delta$  was large enough and the survey evidence salient enough to lead many officers to disengage into the (0,0) regions of Figure 1. This was manifested in the arrest-to-crime rate falling 40% after 1998. This was reversed after 2002.

The framework also allowed for the possibility that oversight could help, by an engaged officer eschewing force. Yet this relies on victim interests being internalized enough. Our interpretation of the evidence is that it disproportionately increased suspect oversight over that of victims, thereby facilitating disengagement. First, we showed in Section 2 that it was very rare for an officer to be disciplined for failing to investigate, as manifested in Neglect of Duty complaint outcomes. Second, we showed responses for the victimless crimes of narcotics and prostitution. Our framework has two empirical implications here. First, as  $\rho_V \geq 0$ , the response for victimless crimes should be at least as large for crimes with victims. This was shown in Figure 3. Second, (all else equal) the difference in outcomes for victimless and other crimes identifies the impact of  $\mu_V \rho_V \Delta$  on police behavior. Of interest here is that the differences between narcotics and other arrests in Figure 3 are not large.

<sup>50</sup>Stone et al, 2009, also note the increase in street stops from 2002 to 2009. This calculation relies on the number of 587,200 total stops for 2002 reported by Stone et al. The LASD does not offer data on street stops.

Between 1998 and 2002, narcotics arrests fell 40% compared to 34% for other crimes. This suggests that victim oversight played a limited role, in which case the likely response to oversight is disengagement.

To address this issue more formally, we use station level data to predict arrests, and extend our sample of crimes to include Narcotics:

$$\log(\mathbf{A}_{\text{ist}}) = \beta_0 + \beta_{\text{i}}\mathbf{D}_{\text{i}} + \beta_{\text{s}}\mathbf{D}_{\text{s}} + \beta_{\text{t}}\mathbf{D}_{\text{t}} + \beta_{\text{is}}\mathbf{D}_{\text{i}}\mathbf{D}_{\text{s}} + \beta_{\text{it}}\mathbf{D}_{\text{i}}\mathbf{D}_{\text{t}} + \beta_{\text{Pt}}\mathbf{D}_{\text{p}}\mathbf{D}_{\text{t}} + \beta_{\text{PNt}}\mathbf{D}_{\text{p}}\mathbf{D}_{\text{t}}\mathbf{D}_{\text{N}} + \epsilon_{\text{ist}}, \quad (2)$$

where  $D_N$  is a dummy for Narcotics.<sup>51</sup> The annual impact of victimless crimes on arrests is  $\beta_{\text{PNt}}$ . Estimated coefficients are given in Figure 9. While the outcomes for all stations are negative and significant for the 2000 to 2002 period, they are also negative in 1997 and 2003. Only one of the coefficients for the surrounded station regression is significant. Overall, the results do not show a strong pattern.<sup>52</sup> As a result of these issues, we conclude little evidence of victim oversight playing a pivotal role, facilitating police disengagement.

### 3.5 Alternative Explanations

We now address other possible interpretations of our results.

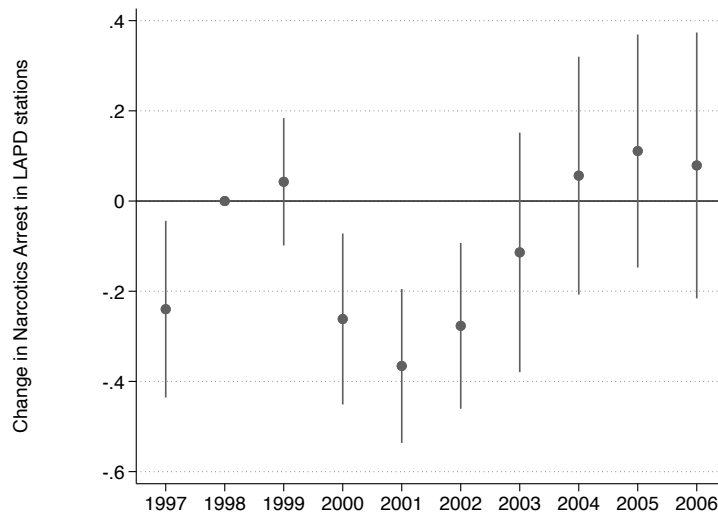
**Spotlight Effects:** An important issue is the “what for” exercise of what would have happened without the oversight changes. Previous work measures the response of officers to changes occurring in the aftermath of tragic incidents, typically a police killing (Shi, 2009, Heaton, 2010, Cassell and Fowles, 2018, Devi and Fryer, 2020). A problem is that such events can also directly affect crime and arrest rates. For instance, distrust of the police may rise, reducing the willingness of the public to cooperate with officers, or heightened community tension could affect crime. There is also evidence that scandals reduce the likelihood that members of the public make 911 calls (Desmond et al., 2016).

Consider such confounds here. The 2002 reform was generated by a bureaucratic

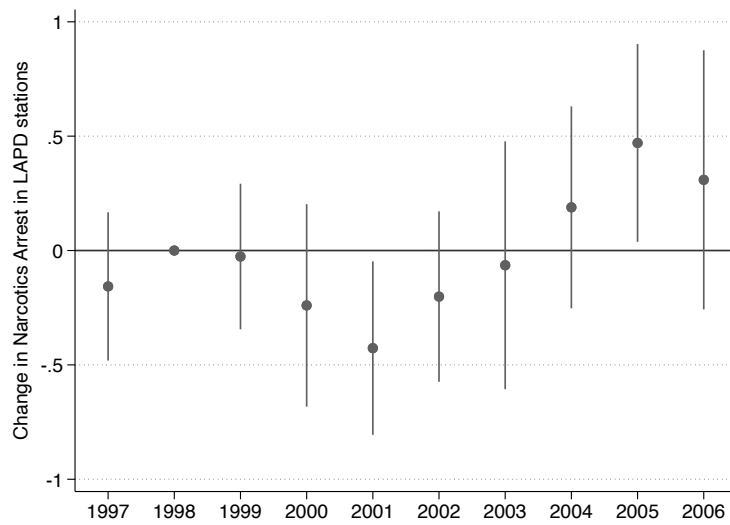
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<sup>51</sup>We cannot address Prostitution as the LASD does not offer data on such arrests.

<sup>52</sup>In Table 11 in the Appendix, we aggregate these effects by estimating an average impact for each oversight change. For all stations and for the surrounded stations, the Narcotics oversight coefficients are the right sign, but are not statistically significant.



Crime Weighted, All Stations



Crime Weighted, Surrounded Stations

Figure 9: Annual Coefficients on Narcotics Arrests

overload largely unknown to the public. Furthermore, the public was not informed of the oversight change. It may never have become aware of the reduction in oversight, as reports continued to describe how the LAPD under the consent decree increased officer oversight. As a result, the impact of our 2002 change seems proof to these kinds of confounds. In this sense, the closest analog to our approach is Rivera and Ba, 2019.<sup>53</sup>

The 1998 change did occur in the aftermath of the Rampart scandal. However, we do not feel our results are significantly affected by the scandal per se for a number of reasons. First, the timing of our responses do not align with that of the scandal. The Rampart scandal occurred in 1997 and 1998.<sup>54</sup> Our responses only arise in 2000.<sup>55</sup>

Second, the Rampart scandal was not generated by a single tragic event. There were no riots after Rampart. As a counterpoint, the experience after the Rodney King beating is instructive. Public outcry when four LAPD officers were acquitted in April 2002 led to widespread protests that lasted six days. In its public response, it vastly surpassed that of the Rampart episode. Yet its impact was lower than that seen here. Evidence from 1990 to 1996 is only available on total arrests (Part 1 + Part 2) and Part 1 crime.<sup>56</sup> We compute the ratio of Part 1 + Part 2 Arrests to Part 1 Crimes before and after the Rodney King scandal. We compute this measure averaged from 1992 to 1996 to the average for the two years before, 1990 to 1991. There is a response. However, the arrest-to-crime rate falls by 18% between the two periods. The fall in the equivalent arrest-to-crime rate from 1998 to 2002 is 39%. This again suggests that we are largely identifying oversight effects even for our 1998 change.

Third, the Rodney King aftermath led to protests in many areas not policed by the LAPD (for instance, Inglewood, Hawthorne, Gardena, Compton and Long Beach). Yet we see little change for the LASD or for other agencies operating within the jurisdiction of the LAPD. As a result of all of the issues above, we believe that the

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<sup>53</sup>They study the effect of internal union memos to Chicago police officers that warned them of the implications of complaints on their careers.

<sup>54</sup>Two issues led to public scrutiny. First, the killing of African American CRASH officer Kevin Gaines by a white LAPD undercover officer. Second, a bank robbery carried out by another CRASH officer. Both of these occurred in 1997, and the task force on Rampart was in operation by early 1998.

<sup>55</sup>We documented how the complaints procedure took about a year to resolve at that point. We did this to explain why officer responses from the change in oversight are likely only to be seen from at least 1999 onwards.

<sup>56</sup>“Five Years Later: A Report to the Los Angeles Police Commission”, 1996, p.5.

earlier period is largely proof to these concerns.

**The Consent Decree:** Any confounds caused by the Consent Decree likely heighten the estimate of the second oversight change.<sup>57</sup> Specifically, many of the provisions of the Consent Decree were designed to constrain officer discretion. Yet arrests per crime, use of force, and street stops *increase* discretely during this period. As a result, the true effects of oversight are potentially larger than those documented above.

**Complaint Quality:** Our interpretation is that the oversight changes involved the LAPD responding differently to a given complaint. An alternative possibility is that the quality of complaint changed, in a way consistent with outcomes observed. For instance, the change in 1998 could have led to the public being more likely to make serious complaints against officers and that was the cause of more investigations. This does not change the overall implication of oversight on police engagement, but rather its interpretation. However, while this interpretation is possible, it seems unlikely. Instead, it seems more plausible the when complaints are least likely to result in an investigation, only the most serious complaints are likely to be pursued.

**Other Changes in Police Behavior:** After 2002, complaints were less likely to be sustained, and for issues like excessive force or racial bias, almost never sustained. Furthermore, penalties decreased even when complaints were sustained. Could police officers have changed their behavior such that (i) a higher fraction of complaints were sustained from 1998 to 2002, but (ii) a lower fraction after 2002? For instance, could officers have simply started behaving “better” after 2002? Two piece of data suggest otherwise. First, complaints remain at levels seen in 1998-99, even though crimes and arrests fell after 2002. Second, arrests-per-crime, Use of Force and Street Stops typically generate complaints. All rose considerably after 2002. As a result, it seems more likely that the effects documented above represent a change in how the Departmental handled complaints.

**Race:** We have not addressed in much detail the impact of these changes on race. For instance, did the changes result in less concentration of police actions against Hispanics or African-Americans? In the Appendix, we show that this is not true,

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<sup>57</sup>See Stone et al, 2009, for an evaluation of the Consent Decree.

at least after 2001 when data is available by demographics. We provide data on the demographic distribution of arrests, Street Stops, and Use of Force from 2001 to 2007. While some variation arises from year to year in the racial composition of arrests, there is little systematic variation. As a result, there is little evidence overall that the change affected the behavior of officers with respect to race or ethnicity.

## 4 Homicides

We now address crime. Before doing so, it is useful to consider an input to how crime is likely to be affected by the responses outlined above. Deterrence likely relies on perpetrators identifying a change in the probability that they are arrested. Figure 9 shows the change in the number of arrests per crime compared to 1998. Arrests typically changed by about 5 points. For instance, the likelihood of a burglary arrest changed from 0.17 in 1998 to 0.12 by 2002. Such changes may be small enough that potential perpetrators could not identify them. The one stark exception is homicides, whose arrest rate falls from 1.08 arrests per crime to only 0.67. This change is far larger than for other crimes, and vastly higher than for LASD homicides (given by the hashed line). As a result, we posit a greater impact on homicides than other crimes.

We first show Part 1 crime from 1988 to 2006 in Figure 10.<sup>58</sup> After a long decline for both jurisdictions, LAPD crime rises between 1999 and 2002, and then falls dramatically, while LASD crime remains relatively constant from 1998 to 2008.<sup>59</sup> Despite these data, we are cautious about concluding any impact of oversight. First, any inferences rely on assumptions about the continuation of the trend in LAPD crime. There is clearly a break in the LAPD trend from 1999 to 2005, but it is unclear that the counterfactual would have been a gradual decline. Second, we show mixed evidence for the surrounded LASD stations in Figure 19. Third, we compare LAPD crime to a broader set of jurisdictions in Figure 21 - to the rest of California, and the neighboring jurisdictions of Anaheim, Long Beach, San Diego, Santa Ana, and Santa Barbara. The LAPD experience between 1998 and 2002 does not stand out. As a result, we are agnostic about any impact on total crime.

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<sup>58</sup>Total crime data are only available after 1996 and are offered in Figure 20 in the Appendix. Remember that we include stations that are in our sample throughout the period. Total LASD crime rose in the early 2000s, but only as it took over policing Compton in 2001.

<sup>59</sup>Note that the decline in 2005 for the LAPD is largely caused by the reclassification of Aggravated Assaults.

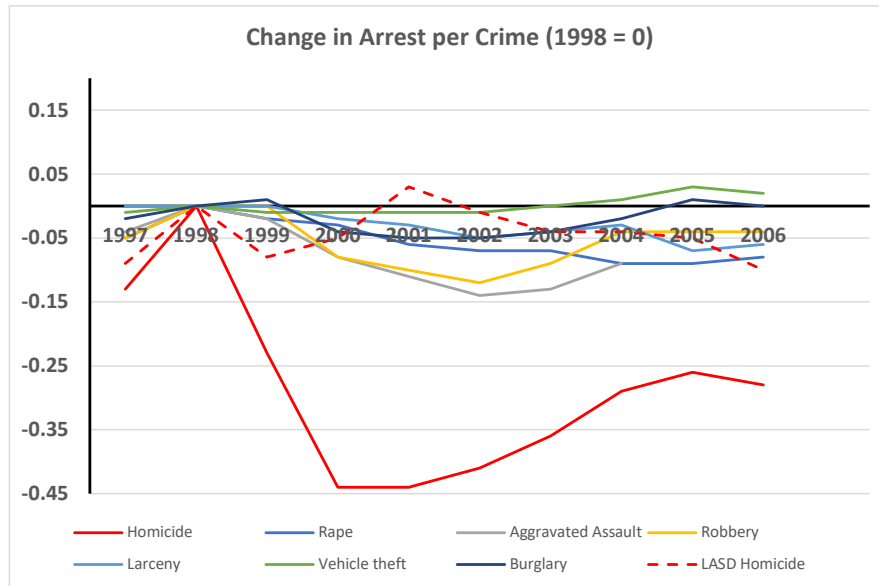


Figure 10: The Change in the Probability of an Arrest by Crime Types (1998= 0).

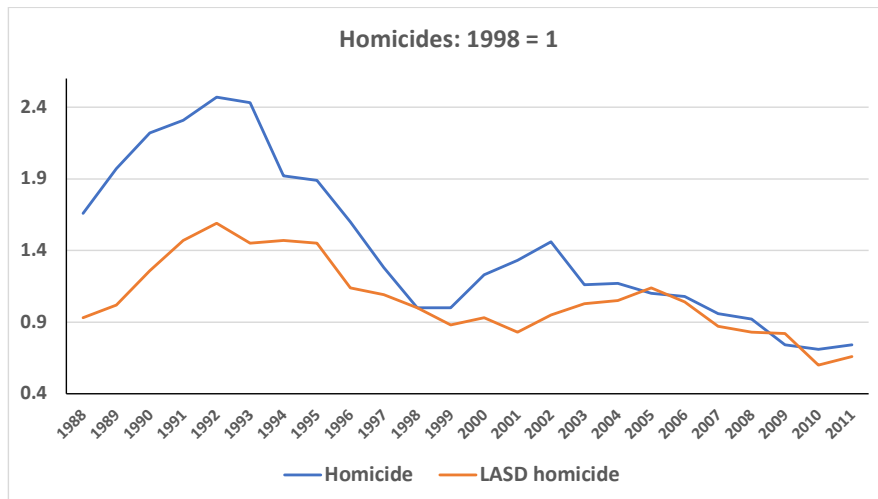
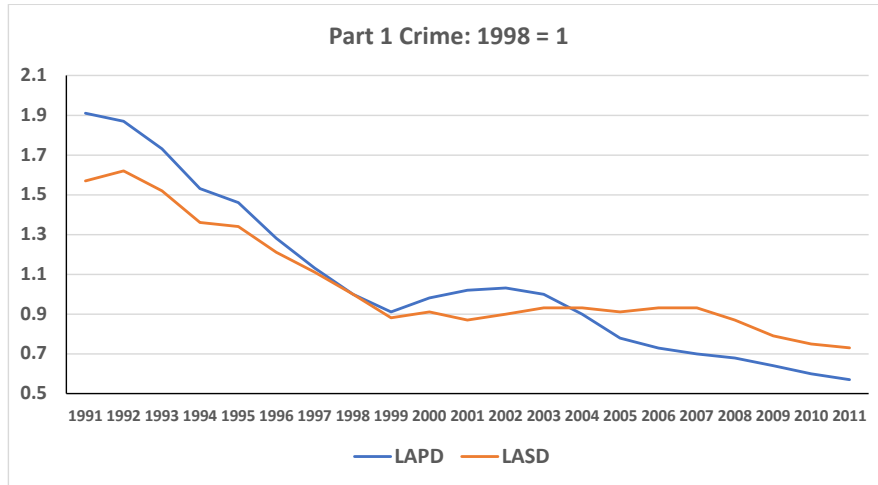


Figure 11: **Crime (1998 = 1)**

Figure 10 focuses instead on homicides from 1988 to 2011. The response after the first oversight change was much larger than for total crime: LAPD homicides rose 49% from 1998 to 2002, but did not change for the LASD. After 2002, LAPD homicides fell 35% by 2006 but on average rose 5% for the LASD until 2006. The post-2006 period also closely aligned between the two jurisdictions.<sup>60</sup> Homicides also increased when we compare the West Bureau of the LAPD to the surrounded LASD stations in Figure 10. Finally, we compare the LAPD to (i) the rest of California, and (ii) the sum of homicides in the neighboring jurisdictions of Anaheim, Carson, Fontana, Inglewood, Long Beach, Santa Ana, Santa Barbara, and San Diego in Figure 12.<sup>61</sup> While the latter measure is noisier, we once again see the large homicide spike from 1999 to 2002, followed by a big drop the following year, only arising for the LAPD.<sup>62</sup>

Despite our conclusion of an effect on homicide, one caveat remains. While both the LAPD and LASD saw large declines in homicides after 1992, the LAPD decline until 1998 was greater. While the long time frame in Figure 11 illustrates the break in homicide from 2000 to 2004, it is in the backdrop of a pre-trend of declining homicides that is greater for the LAPD.<sup>63</sup>

## 5 Conclusion

Potential police reforms are hard to evaluate, both because they are difficult to measure, and because they often occur in the aftermath of scandals. We linked behavior to formal changes in how complaints from the public were investigated, and observed discipline based on sustained complaints. Its conclusion does not offer easy answers.

<sup>60</sup>Much of the variation in homicides is gang related, shown in Figure 21 in the Appendix.

<sup>61</sup>We add more police departments (compared to those above) and combine their outcomes because there is so much variation year to year in homicides for smaller departments. We also could have included neighboring jurisdictions such as Huntington Beach, but as homicides are so rare there, it would have not changed the calculation.

<sup>62</sup>While homicides rise by 17% in the neighboring areas from 1998 to 2002, the LAPD increase is 49%. The large increase in the neighbor measure in 2004 is generated solely by a one year spike in the murder rate in Long Beach.

<sup>63</sup>We also consider homicide outcomes at the station level. Homicide incidence at the station level is quite volatile, especially for low crime areas. As with arrest-to-crime rates, we compute average outcomes for three periods: 1997-98, 1999-2002, and 2003-2006. 11 of 18 LAPD stations saw an increase in homicides in 1999-2002, while 14 saw a reduction after the second oversight change. We do not comparison to LASD homicides at the station level because half the LASD stations have almost no homicides. Comparisons including those stations merely reflects noise with such small numbers.

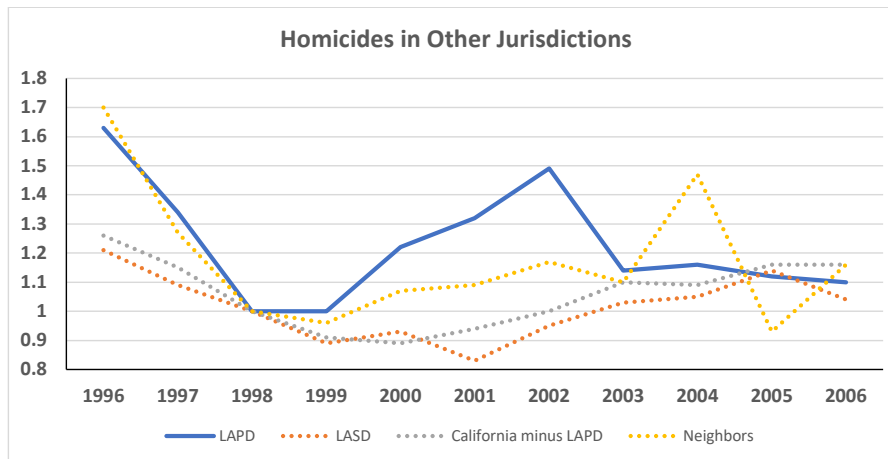
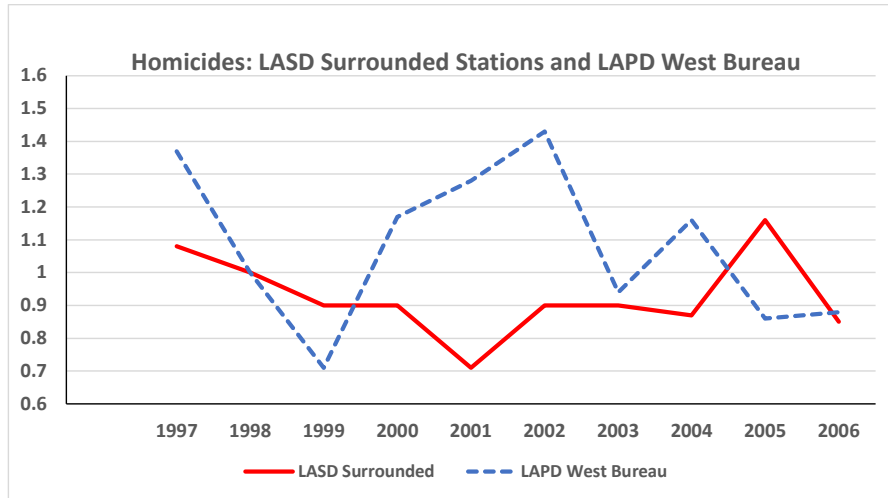


Figure 12: Homicides for Surrounded LASD stations and the West Bureau of the LAPD.

Instead, a particular kind of police reform - namely, using complaints from the public as a way of investigating officers - resulted in withdrawal. As such, it offers a complication to simple prescriptions about police accountability. Yet this is not meant to be an argument against police reform: instead, it raises this issue as an obstacle to be addressed. For instance, one outcome of the modeling framework was the need for complementary responses to victim concerns.

The fields of organizational economics and contract theory have, for the last forty years, been focused on how best to oversee workers. Even without the myriad of institutional constraints that restrict investigations, police officers are especially difficult to oversee. First, it is next to impossible for superiors to observe police behavior. Second, pay for performance is unlikely to be wise. Instead, oversight often depends on interested parties claiming that an officer misbehaved. Conceptually, this is not unusual: for instance, it happens when our Amazon package does not arrive, and we complain. However, when Amazon does not hear from us, the package has arrived. The analog is not the case here. Instead, when suspects do not speak up, this could reflect that the officer did not do his/her job. The key distinction is that the interests of Amazon consumers are aligned with those of the company, which is not the case here.<sup>64</sup>

We have not discussed the mechanism by which officers changed their behavior. Each individual officer could be making a decision independent of all others, or it could have involved some coordination among them. In particular, we can say little about the extent to which superiors were aware of and tried to deter disengagement. The Rampart Review Board does note however that “the perception that some community members file complaints in an organized and systematic way, to punish and discourage particular officers, is shared by captains and other supervisors in the field”. As a result, it would not be surprising if they were willing to overlook disengagement.

It is tempting to conclude by addressing whether the oversight changes were “inefficient”. This strikes us as too narrow. There is no consensus in the population for how we trade off any costs of police actions on the public versus any benefits that may ensue through solving or deterring crime. For example, many would disagree on where the line exists between justifiable and excessive force by police officers. Instead, the purpose of our analysis is twofold. First, to show how large the responses

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<sup>64</sup>This idea is analyzed in Prendergast, 2003, 2016. Note also that in many ways, complaints are akin to a limited rating system (Carrell and West, 2010, and Athey, Castillo, and Chander, 2019.)

to arrest rates can be from a particular form of oversight. Second, to argue that one reason for this may be the absence of oversight by a key constituency, namely the victims of crimes. It is hoped that these issues can be used to inform future police reform measures.

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## LAPD's Revised Personnel Complaint Process

### ... welcome news for all ...

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#### LAPD's Revised Personnel Complaint Process

After several months of work, the Police Commission was presented with the Department's newly revised Personnel Complaint Process by Chief of Police William Bratton. Commissioner Rose Ochi led the team that has been putting this together since last summer.

Los Angeles Community Policing has been following this issue all along, and LACP congratulates Commissioner Ochi for helping the group come up with such a positive and welcome revision.

While officers will still be held to strict standards, the complaint process itself will be much more fair. Those complaints that commanding officers deem to be minor or "frivolous" will often be completely resolved in a couple of days.

Morale within the rank and file should soar ...

The three most significant new features of the process are:

- 1) the establishment of a new category, "NON-DISCIPLINARY COMPLAINTS",
- 2) an alternative method of conflict resolutions, and
- 3) a new complaint form which is much more user friendly.

Commissioner Ochi praised the many people who participated in shaping the new system, stressing that, while they'd sought to return a significant amount of discretion to the chain of command, the group made no changes in the requirements for discipline itself. Officers' conduct will continue to be held to a high standard.

Because we know this will be of major interest to all the officers (and the public, too) we've presented the entire **REVISED PERSONNEL COMPLAINT PROCESS** for you below. You will find a complete version here, except for a few sample forms which were attached to the Chief's presentation.

There are two small sections that will be modified slightly so that the language used in them comes into line with requirements of Consent Decree paragraphs 93 & 94 (we marked them like this --> **DOJ issue**). Their spirit will not change.

We've done our best to be true to the original document, but the Board of Commissioners will of course pass the final version (with these two minor changes), at which time a **SPECIAL ORDER NUMBER** will be assigned and the final revised process will go into effect.

Chief Bratton was pleased to submit the following on behalf of the Department:

Key:

**IV. DISCIPLINARY COMPLAINTS.** The procedure for handling Disciplinary cases is not changed by this Order. V. **NON-DISCIPLINARY COMPLAINTS.** A watch commander, section OIC, or civilian equivalent, may only classify a complaint as Non-Disciplinary when all of the following criteria are met at the time the complaint is initiated:

Figure 13: The new complaints process in 2002

The complaint, as stated, would not amount to the commission of a felony or misdemeanor crime;

The complaint, as stated, may not result in discipline against the employee, or the complained of act or omission by the employee has no nexus to the employee's position with the Department;

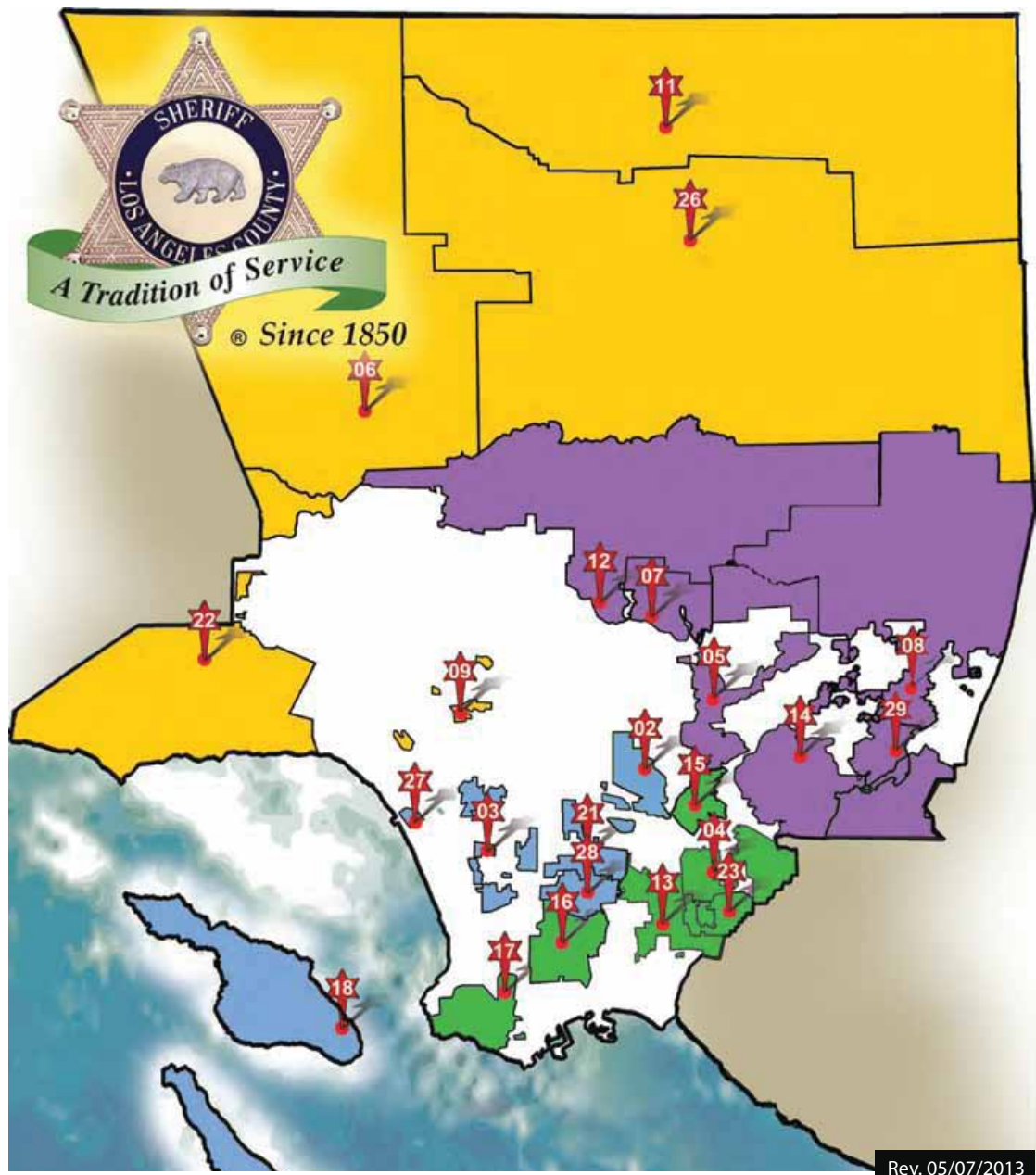
**DOJ issue =>** The complaint does not allege any of the following that if true, would result in discipline: unauthorized force; discrimination of any kind; unlawful search and / or unlawful seizure of person or property; dishonesty; domestic violence; improper / illicit use of alcohol, narcotics, or drugs; sexual misconduct; theft, or retaliation/retribution against another employee;

**DOJ issue =>** The complaint was not as a result of concerns arising out of a criminal prosecution, OR, dismissal of California Penal Code Section 148 charges, OR otherwise initiated by a judge or prosecutor due to officer credibility;

The accused employee has no apparent pattern of similar behavior (should normally be limited to the past five years) for which he / she is accused; and,

The complaint was not initiated in response to civil suits or claims for damages involving on-duty conduct and civil lawsuits regarding off-duty conduct required to be self-reported by employees.

Figure 14: The new complaints process in 2002



## LASD Patrol Divisions

| North Patrol Division   | Central Patrol Division | South Patrol Division | East Patrol Division  |
|-------------------------|-------------------------|-----------------------|-----------------------|
| <i>Stations*</i>        | <i>Stations*</i>        | <i>Stations*</i>      | <i>Stations*</i>      |
| 11 Lancaster            | 18 Avalon               | 16 Carson             | 07 Altadena           |
| 22 Malibu/Lost Hills    | 21 Century              | 23 Cerritos           | 12 Crescenta Valley   |
| 26 Palmdale             | 28 Compton              | 13 Lakewood           | 14 Industry           |
| 06 Santa Clarita Valley | 02 East Los Angeles     | 17 Lomita             | 08 San Dimas          |
| 09 West Hollywood       | 27 Marina del Rey       | 04 Norwalk            | 05 Temple             |
|                         | 03 South Los Angeles    | 15 Pico Rivera        | 29 Walnut/Diamond Bar |

\*The numbers represent the historical order in which each station was opened.  
Not all of the numbers are sequential due to consolidations of stations and the formation of other units that require numerical designations."

Figure 15: LASD Patrol Areas

Table 6: **Percent of Sustained Complaints With Lenient Penalties**

|                            | 2002 | 2003 | 2004 | 2005 | 2006 |
|----------------------------|------|------|------|------|------|
| <b>First half of year</b>  | 41.1 | 46.8 | 46.0 | 50.1 | 47.8 |
| <b>Second half of year</b> | 39.1 | 31.7 | 35.7 | 49.8 |      |

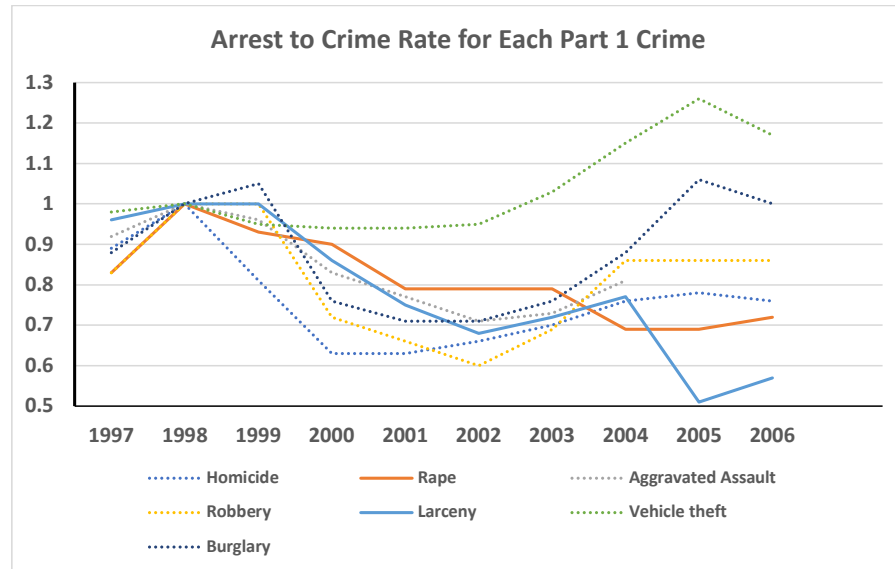


Figure 16: Arrest to Crime Rate for Each Part 1 Crime. Note: Aggravated Assault data not provided for 2005 and 2006 as the definition changed.

**Station-Level Outcomes:** Consider the arrest to crime rate  $AC_{sT}$  for three time periods ( $T$ ) reflecting our oversight periods: 1997 to 1998 ( $T = 1$ ), 1999 to 2002 ( $T = 2$ ), and 2003 to 2006 ( $T = 3$ ). Table 9 offers two station-level measures of impact: (i) the % of stations for which  $AC_{s(T+1)} - AC_T < 0$ , and (ii) the station level average of the ratio  $\frac{AC_{s(T+1)}}{AC_{sT}}$ . 94% of LAPD stations (17 of 18) have declining arrest-to-crime rates after the first oversight change, but only 6% after the second. There is no variation for the LASD. A similarly stark outcome arises with the ratio test, where it falls 25% after the first change for the LAPD, and then increases by a similar amount. Once again, there is no pattern for the LASD.

Table 7: **Station-Level Arrest-to-Crime Outcomes**

|              | $Prob(AC_{s2} - AC_{s1} < 0)$ | $Prob(AC_{s3} - AC_{s2} < 0)$ | $E_s \frac{AC_{s2}}{AC_{s1}}$ | $E_s \frac{AC_{s3}}{AC_{s2}}$ |
|--------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| <b>Crime</b> | Part 1 + 2                    | Part 1 + 2                    | Part 1 + 2                    | Part 1 + 2                    |
| <b>LAPD</b>  | 0.94                          | 0.06                          | 0.75                          | 1.24                          |
| <b>LASD</b>  | 0.37                          | 0.37                          | 1.08                          | 1.02                          |
| <b>Crime</b> | Part 1                        | Part 1                        | Part 1                        | Part 1                        |
| <b>LAPD</b>  | 0.94                          | 0.50                          | 0.84                          | 0.98                          |
| <b>LASD</b>  | 0.42                          | 0.89                          | 1.05                          | 0.86                          |

Table 8: **Arrest to Crime Rate**

|                         | <i>Dependent variable: <math>\log(\text{Arrest}/\text{Crime})</math></i> |                  |                  |                   |
|-------------------------|--------------------------------------------------------------------------|------------------|------------------|-------------------|
|                         | All Sample                                                               | All Sample       | Surrounded       | Surrounded        |
|                         | (1)                                                                      | (2)              | (3)              | (4)               |
| $\beta_{PO}$            | -0.257*** (0.054)                                                        | -0.124** (0.048) | -0.215** (0.069) | -0.294*** (0.074) |
| $\beta_{PA}$            | -0.136** (0.064)                                                         | -0.01 (0.076)    | -0.158 (0.099)   | -0.239* (0.119)   |
| Crime Weights           | No                                                                       | Yes              | No               | Yes               |
| Year x Crime F.E.       | Yes                                                                      | Yes              | Yes              | Yes               |
| Station x Crime F.E.    | Yes                                                                      | Yes              | Yes              | Yes               |
| Adjusted R <sup>2</sup> | 0.88                                                                     | 0.88             | 0.88             | 0.88              |
| Observations            | 2160                                                                     | 2160             | 650              | 650               |

*Note:*

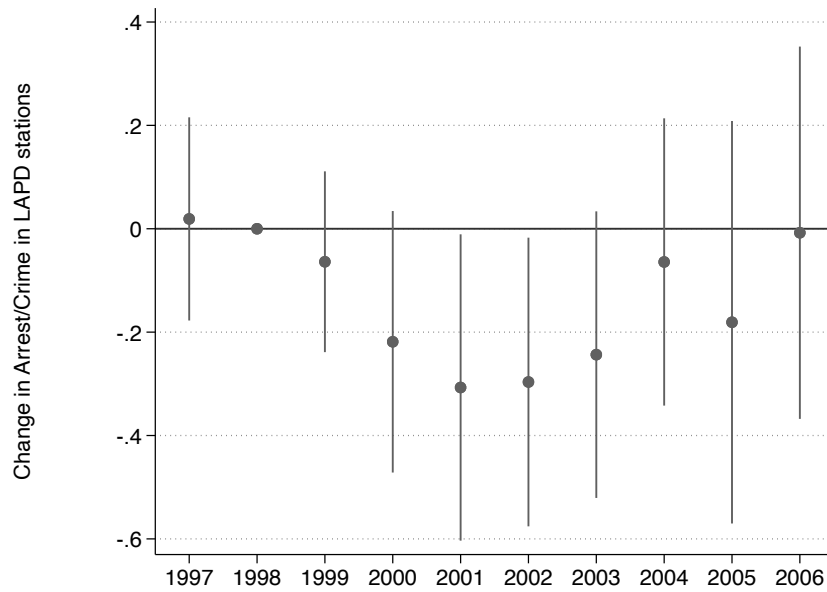
\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Table 9: **Arrest to Crime Rate, No Station x Crime Interactions**

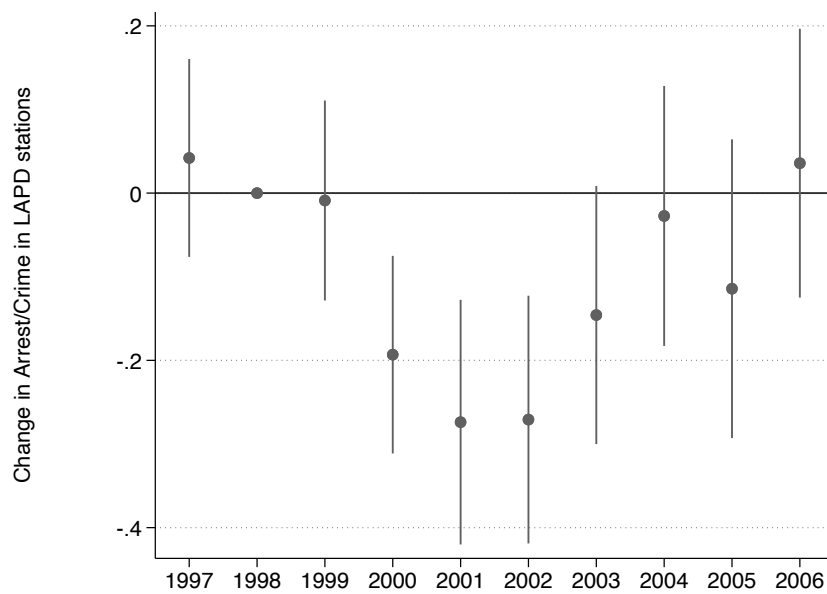
|                         | <i>Dependent variable: <math>\log(\text{Arrest}/\text{Crime})</math></i> |                  |                   |                   |
|-------------------------|--------------------------------------------------------------------------|------------------|-------------------|-------------------|
|                         | All Sample                                                               | All Sample       | Surrounded        | Surrounded        |
|                         | (1)                                                                      | (2)              | (3)               | (4)               |
| $\beta_{PO}$            | -0.262*** (0.054)                                                        | -0.105** (0.054) | -0.294*** (0.081) | -0.217*** (0.074) |
| $\beta_{PA}$            | -0.144** (0.062)                                                         | 0.013 (0.08)     | -0.158 (0.099)    | -0.241* (0.112)   |
| Crime Weights           | No                                                                       | Yes              | No                | Yes               |
| Year x Crime F.E.       | Yes                                                                      | Yes              | Yes               | Yes               |
| Station x Crime F.E.    | No                                                                       | No               | No                | No                |
| Adjusted R <sup>2</sup> | 0.75                                                                     | 0.46             | 0.74              | 0.59              |
| Observations            | 2160                                                                     | 2160             | 650               | 650               |

*Note:*

\*p&lt;0.1; \*\*p&lt;0.05; \*\*\*p&lt;0.01



Event Study coefficients: Unweighted, all stations



Event Study coefficients: Unweighted, surrounded stations.

Figure 17: Year by Year LAPD coefficients for unweighted regressions

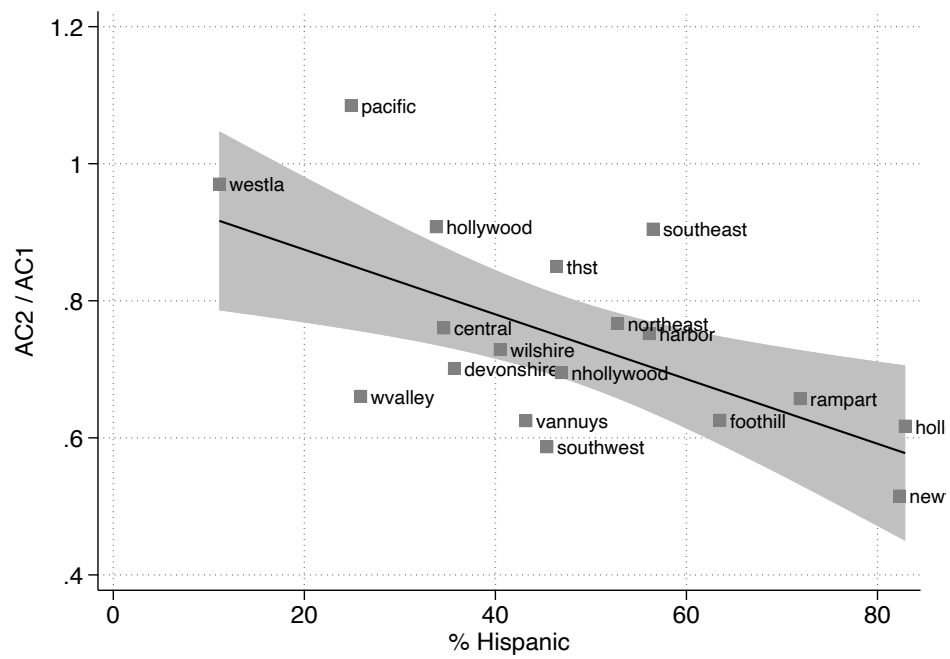


Figure 18: The Change in the Arrest to Crime Rate (1999-2002 compared to 1997-98) by % Hispanic

**Demographic Impact:** Here we estimate

$$\begin{aligned} \log(\mathbf{AC}_{\text{ist}}) = & \beta_0 + \beta_i \mathbf{D}_i + \beta_s \mathbf{D}_s + \beta_t \mathbf{D}_t + \beta_{is} \mathbf{D}_i \mathbf{D}_s + \beta_{it} \mathbf{D}_i \mathbf{D}_t + \beta_{HO} \mathbf{H}_s \mathbf{D}_O \\ & + \beta_{WO} \mathbf{W}_s \mathbf{D}_O + \beta_{HA} \mathbf{H}_s \mathbf{D}_A + \beta_{WA} \mathbf{W}_s \mathbf{D}_A + \epsilon_{\text{ist}}, \quad (3) \end{aligned}$$

where  $H_s$  ( $W_s$ ) is the percent Hispanic (White) in station area  $s$ . Our primary interest here is in  $\beta_{HO}$  and  $\beta_{HA}$ . Results are given below.

Table 10: **Demography and the Arrest to Crime Rate**

| <i>Dependent variable: log(Arrest to Crime Rate and Demographics)</i> |                 |
|-----------------------------------------------------------------------|-----------------|
| All Stations                                                          |                 |
| (1)                                                                   |                 |
| $\beta_{HO}$                                                          | -0.285* (0.142) |
| $\beta_{HA}$                                                          | -0.294 (0.317)  |
| $\beta_{WO}$                                                          | -0.058 (0.135)  |
| $\beta_{WA}$                                                          | -0.115 (0.267)  |
| Year x Crime F.E.                                                     | Yes             |
| Station x Crime F.E.                                                  | Yes             |
| Observations                                                          | 1080            |
| Adjusted R <sup>2</sup>                                               | 0.87            |
| <i>Note:</i>                                                          |                 |
| *p<0.1; **p<0.05; ***p<0.01                                           |                 |

**Narcotics Arrests:** Here we estimate

$$\begin{aligned} \log(\mathbf{A}_{\text{ist}}) = & \beta_0 + \beta_i \mathbf{D}_i + \beta_s \mathbf{D}_s + \beta_t \mathbf{D}_t + \beta_{is} \mathbf{D}_i \mathbf{D}_s + \beta_{st} \mathbf{D}_s \mathbf{D}_t + \beta_{Po} \mathbf{D}_p \mathbf{D}_o \\ & + \beta_{PA} \mathbf{D}_p \mathbf{D}_A + \beta_{PON} \mathbf{D}_p \mathbf{D}_O \mathbf{D}_N + \beta_{PAN} \mathbf{D}_p \mathbf{D}_A \mathbf{D}_N + \epsilon_{\text{ist}}, \quad (4) \end{aligned}$$

where  $D_N$  be a dummy variable equal to 1 if the crime is Narcotics. Our primary interest here, following Figure 4, is whether arrests for the victimless crimes are more sensitive: we predict  $\beta_{PON}$  to be negative and  $\beta_{PAN} > \beta_{PON}$ , and to be 0 in the case of full reversal. Results are given below.

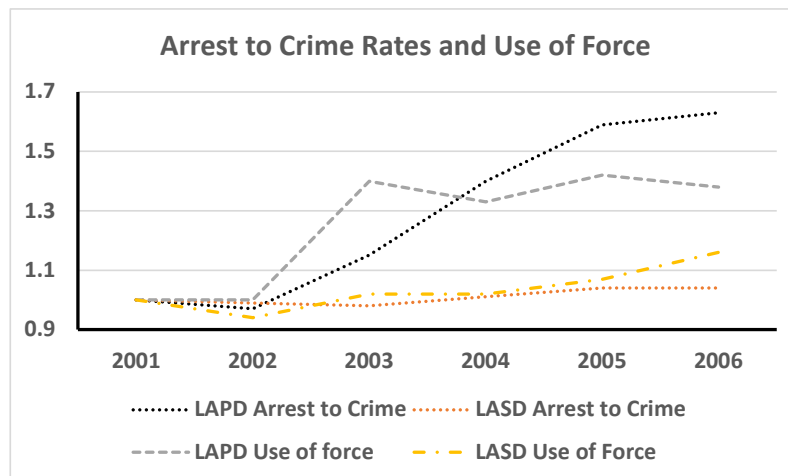
Table 11: **Arrests**

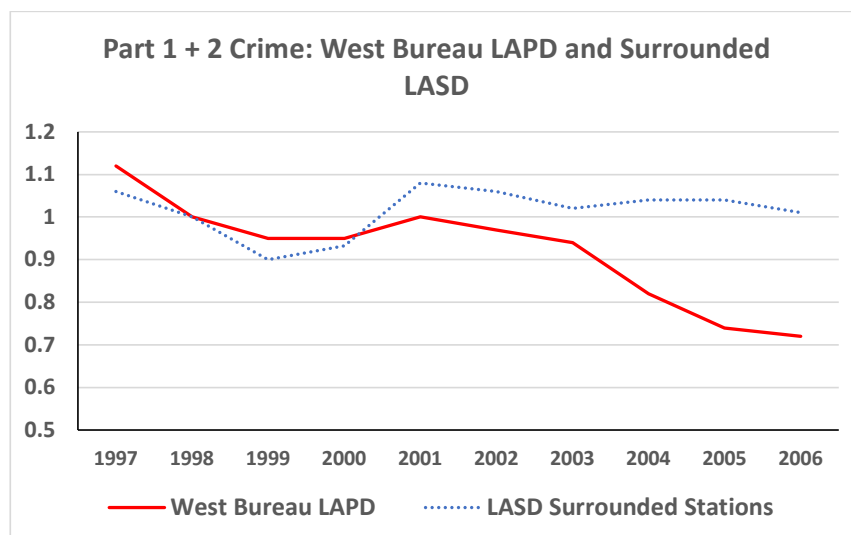
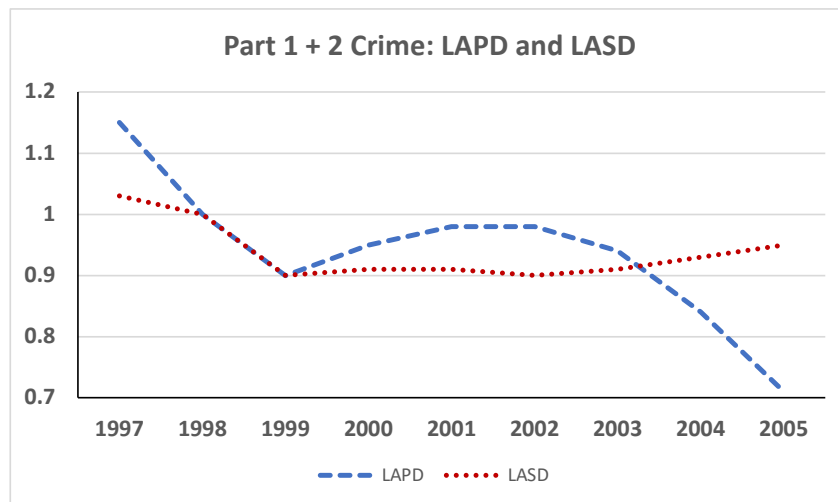
|                         | <i>Dependent variable: log(Arrests)</i> |                  |
|-------------------------|-----------------------------------------|------------------|
|                         | All Stations                            | Surrounded       |
|                         | (1)                                     | (2)              |
| $\beta_{PO}$            | -0.258*** (0.078)                       | -0.26*** (0.077) |
| $\beta_{PA}$            | -0.307** (0.069)                        | -0.421** (0.094) |
| $\beta_{PON}$           | -0.055 (0.09)                           | -0.145 (0.137)   |
| $\beta_{PAN}$           | 0.194 (0.118)                           | 0.305 (0.21)     |
| Year x Crime F.E.       | Yes                                     | Yes              |
| Station x Crime F.E.    | Yes                                     | Yes              |
| Observations            | 2539                                    | 761              |
| Adjusted R <sup>2</sup> | 0.97                                    | 0.97             |

*Note:* \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

The coefficients for Narcotics are of the right sign, but are not statistically significant. This is likely because there is so much randomness in arrests at a station level at the individual crime level.<sup>65</sup> A similar outcome arises when comparing the West Bureau to the surrounded stations.

<sup>65</sup>Note that both overall coefficients  $\beta_{Pi}$  are negative. The reason for the reversal for the second oversight period compared to above is because crime fell so much for the LAPD after 2003, and we are not normalizing by crime here.





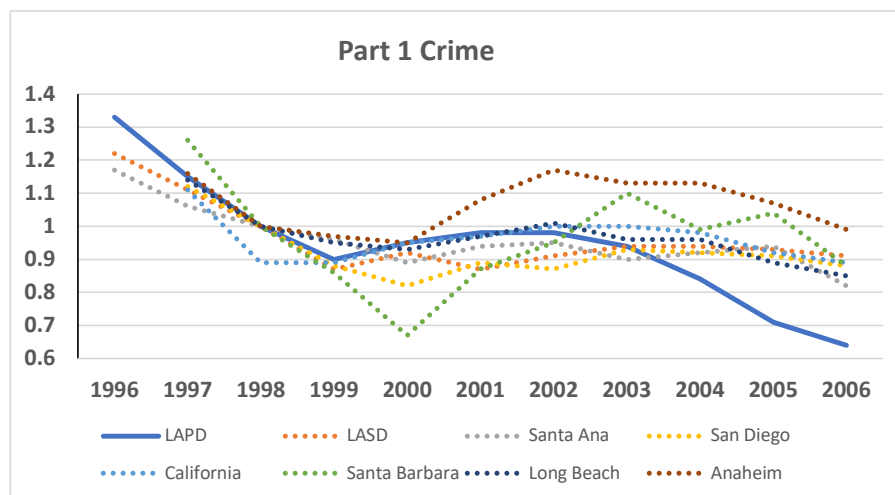


Figure 21: Neighbors and Gang Homicides

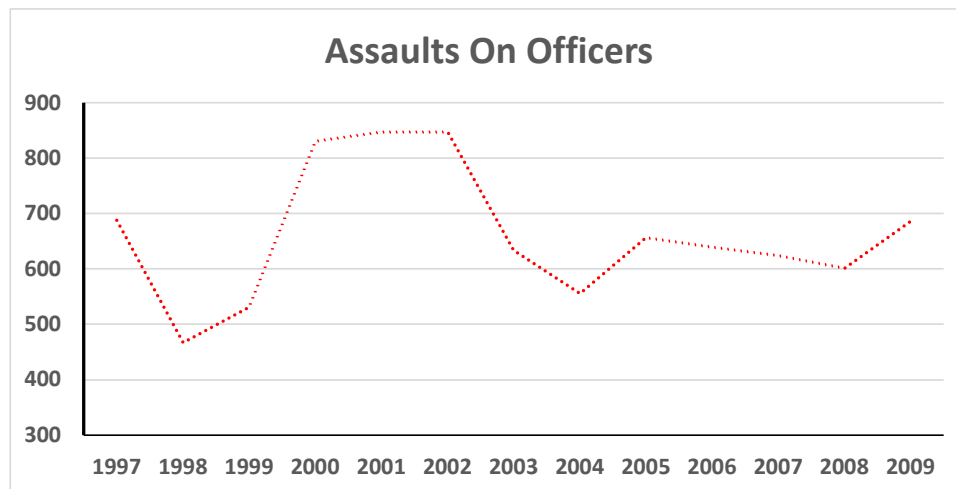


Figure 22: The Number of Assaults on Officers while on Duty

Table 12: Use of Force by Race

|                         | 2001  | 2002  | 2003 | 2004  | 2005  | 2006  | 2007  |
|-------------------------|-------|-------|------|-------|-------|-------|-------|
| <b>Hispanic</b>         | 38.5% | 34.3% | 38%  | 37.7% | 46.4% | 38.2% | 43.2% |
| <b>African American</b> | 44%   | 45%   | 41%  | 44.7% | 39%   | 41%   | 38.1% |

Table 13: Arrests by Race

|                         | 2001  | 2002  | 2003  | 2004  | 2005  | 2006  |
|-------------------------|-------|-------|-------|-------|-------|-------|
| <b>Hispanic</b>         | 43.3% | 43.7% | 42.9% | 41.8% | 42.6% | 43.9% |
| <b>African American</b> | 30.2% | 28.1% | 28.6% | 30%   | 32.3% | 30.3% |

Table 14: Street Stops by Race

|                         | 2001 | 2002 (Second Half) | 2003  | 2004  | 2005  | 2006  |
|-------------------------|------|--------------------|-------|-------|-------|-------|
| <b>Hispanic</b>         | N.A. | 39.3%              | 39.5% | 37.7% | 38.6% | 38.5% |
| <b>African American</b> | N.A. | 22.6%              | 23.6% | 23.7% | 24.8% | 24.0% |