

Improving Police Effectiveness: The Rajasthan Experiment

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Over the last decade, research on economic development has increasingly focused on the importance of good governance, both as a precondition for economic development as well as a major factor directly affecting human welfare. Of all government functions, perhaps the most central is to ensure the safety of its citizens, and this in turn is the domain of the police. For the police to function effectively, they must be successful in performing their traditional tasks of maintaining law and order and investigating crimes, as well as gain the trust and understanding of the public. Yet in many countries, the police are not nearly as effective as they could be: problems such as inefficiency, corruption, and an insular police culture reduce police performance and create negative public perceptions.

These failures have led many nations to search for reforms that can improve policing and public security. Yet these reforms have themselves been plagued with difficulties. Many have taken broad, systemic approaches, which have been incompletely implemented. And even when implemented, the effects of these broad changes are difficult to measure and separate from other concurrent social movements—the cases of South Africa and the ex-Soviet states are illustrations of this difficulty. Other reforms have been implemented at a much smaller scale, usually driven by a single reforming officer or administration. While these reforms may have great promise based on their initial trials, their outcomes are often based on purely anecdotal evidence. Furthermore, in many cases the sustainability and scalability of these small intensive reforms can be impossible.

This paper documents an attempt to overcome these challenges in the Indian state of Rajasthan. The Rajasthan Police implemented four reforms in a randomly selected group of 162 police stations: (1) weekly duty rosters with a guaranteed rotating day off per week; (2) a freeze on transfers of police staff between stations; (3) in-service training to update skills; and (4) placing community observers in police stations. These reforms were subjected to a scientific evaluation, using data collected through two rounds of surveying including police interviews, decoy visits to police stations, and a large scale crime survey—the first of its scale in India. The results show that two of the interventions, the freeze on transfers and the training, do show potential to improve the public image of the police. The other reforms showed no robust effects, an outcome that may be due to their incomplete implementation.

Background

Like many other developing countries, independent India inherited a police force that had been established to protect the interests of the departing colonial power. The British authority had established the Indian Police, through the Police Act of 1861, in the wake of a major revolt in 1857. New senior officers were recruited through a competitive examination held in London

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that was initially open only to the British citizens. Local constables formed the main interface between the public and the police, but they were accountable only to the British colonial establishment they served. Fraternalization with the public was discouraged and there were no provisions for accountability to the citizens.

The onset of democracy after independence did little to change the colonial culture of policing. Although policing was devolved to the states, the inherited police institutions have largely been preserved. The Police Act of 1861, for instance, remains in effect. In 1977 the National Police Commission (NPC) was formed to provide recommendations for improving the performance of the police. Although many considered the NPC's recommendations progressive and practical, few of them have been put into practice. Subsequently there have been several other commissions, none of which have been implemented by the successive governments. In 1998, the Rebeiro committee called for a new legislation to replace the Police Act of 1861. In September 2005, the Government of India convened a committee, known as Soli Sorabjee Committee to draft a new Model Police Act that could guide state legislations in view of the changing role of Indian police in democracy. Taking queue from the Model Police Act many states have drafted their new police act, the implementation of which is still uncertain. In 2006, the Supreme Court of India in its judgment in Prakash Singh vs Union of India directed the Government to constitute institutions and draft mechanisms for improving the effectiveness and accountability of police. The judgment mandated security of tenure for police officers, streamline the process of appointment of police personnel, and constitute State Security Commissions, Police Establishment Board, and Police Complaints Authority etc. Unfortunately, not much progress has taken place despite this.

The motivation for introducing this new Police Act comes in part from the sentiment that the police is widely perceived to be both corrupt and unresponsive. This is also the reason why the senior staff of Rajasthan Police was interested in reforms, despite the fact that *based on police records* the Rajasthan Police is actually doing quite well: Rates of major crimes with victims—murder, theft, rape, riots—are all below their 1947 level. Moreover, compared with its neighbors, Rajasthan has been successful at preventing crime: in 1998 the murder rate in Rajasthan was 2.9 murders per 100,000 people; 3.0 in Gujarat; 3.3 in Punjab; 4.2 in Madhya Pradesh; 4.3 in Haryana; and 5.0 in Uttar Pradesh (Dreze and Sen , 2002).

There are, however, good reasons to believe that this data is not particularly reliable: With the possible exception of murder, most crimes do not get automatically reported to the police. The reporting rate may be low precisely because people are afraid of the police and expect them to be unresponsive. Moreover, the police may actively discourage the reporting of crimes in order to make their record look better. Non-reporting of crime is considered a serious problem even in developed countries (Levitt, 1998), and has often been mentioned as a very serious problem in India. The NPC states, "The unreliability of crime statistics in India is well known....Whenever a genuine effort was made to register all crime...the figures showed such fantastic jumps as were impossible with any normal increase in one year." (62.10) Verma (2000, 2004 II), Sidhu (2004), and Transparency International (2005) all make similar claims. Verma, for instance, quotes the Crime in India Report (1999) that in all of the states of Bengal and Uttar Pradesh there were only 47 cases of juvenile delinquency—out of a population of 30-40 million

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7-18 year olds. For this reason most countries, including the US, the UK, all of Europe, and many developing countries, use crimes statistics based on crime victimization surveys, household surveys conducted to measure crime, not on police reports.

The literature on police reforms in India highlights important sources of the system's difficulties. A first issue, identified by the 1979 National Police Commission (NPC) is that of transfers. The NPC describes a system where a police officer paid bribes to politicians to obtain a good posting, or to avoid being transferred. Verma (2003) and Transparency International (2005) both suggest that senior police officers benefit from payments extracted in exchange for good postings. This parallels an influential study by Wade (1985), which documents the transfer system in the irrigation department of South India state. He reports that virtually all officials paid bribes to higher officers or politicians both to obtain good postings, and to retain these postings over time. In response to this widely documented area of corruption, many have suggested regularizing posting periods. The NPC (1979) suggests a fixed one-year term for the state chief of police, while Transparency International (2005) suggests a more radical solution: "a system could be designed where postings are automatically generated by software after a given time interval for each employee" (p. 12) .

Another area of concern is the irrational use of manpower. India police staff at the station level have no fixed rest periods and remain on duty for twenty four hours a day, seven days a week. Several authors lament the long stretches of uninterrupted work by police officers, and the consequences for productivity and welfare (NPC, Sidhu, 2004). The provision of a weekly day off for all staff has also been advocated for some time within the police force. The NPC writes that, "The obligation to work even on Sundays should be compensated by having a strict system of giving one day off in a week by rotation" (3.19). Several other states have implemented the weekly day off, including the neighboring states of Gujarat and Punjab. Sidhu (2004), a senior Punjab Police officer, describes implementing the weekly off for the first time in Punjab. He reports that police personnel "felt that [weekly off] gave them more time for themselves and their families. The effectiveness and capacity for work had also increased personnel are also more willing to put in extra work on the remaining six days." This experience suggests that the weekly day off is very popular with police officers, which should make it possible to couple it with other, less popular interventions.

Another necessary area for reform that is emphasized in the literature is the lack of accountability of the police to the public. CHRI (2005) and Verma (1994, 2005, 2006) point out the importance making the police accountable to the public, through the creation of "citizens' boards" constituted at the district level, and with extensive power to investigate complaints against police personal, and evaluate police performance at the district level. Such experience have been tried in several developed countries, as well as the ex-Soviet States (Capari and Marenin (2005)) and South Africa (Bruce and Neild (2005)). Some, however, (e.g. Call, 2003) fear that the citizen role will be unacceptable to police leaders, and worry that successful accountability reforms are difficult to design. It is therefore important to design systems that are acceptable both to the community and to the public, and are not subject to easy manipulation by the police.

Finally, lack of skills is identified as a significant barrier to effective policing. The older constables were recruited only on the basis of physical strength, and lack the aptitude for

modern policing. Specifically, many have emphasized the need for additional interrogation skills to prevent officers from falling back on physical torture in cases where they felt that they had no other investigative option (Verma, 2004). The communication gap between police and public is another frequently reported failing of the police, and was commented upon as early as the NCP: "It is considered basic and fundamental...that every police officer develops an attitude of courtesy and consideration combined with sympathy and understanding towards any member of the public who comes to him seeking help." (41.09)

Interventions

At the preliminary stage, series of interviews were conducted with the stakeholders; police officers of all ranks and members of public including slum dwellers, shop keepers, lawyers, judges and the media. The responses varied widely, substantiating many concerns already raised in various reports. They converged on three broad issues: First, there seemed to be a major disconnect between the police self image as overworked and unappreciated and the public's perception of the police as high-handed and unresponsive. Second, many members of the police felt that the system of work assignments was unfair and corrupt, both in terms of the specific duties assigned within the police station, and in the posting of officers to different police stations. Finally, many respondents within the police attributed poor public relations to overwork and lack of communications skills on the part of the constabulary. With these three issues in mind, four interventions were designed and tested:

1. **In-service training program:** The training had two modules:
 - a. **Professional/Investigation Skills:** 292 investigation officers (Inspectors, Sub Inspectors and ASIs) were trained at the Rajasthan Police Academy with inputs on improving investigation procedures, such as field techniques and documentation, with an emphasis on the use of scientific techniques. It was six day training module.
 - b. **Soft skills:** 1540 police personnel of all ranks were trained on improving public relations with inputs on 'soft skills' such as communication, mediation, stress management, motivation, team building, leadership, attitudinal change, nutrition and health. A three-day training module was developed by IL&FS (ETS) and administered to the chosen staff in the districts in which they were posted.
2. **Community Observers:** Introduced for the first time in Rajasthan, the community observers were local volunteers chosen to sit in the police station for approximately three hours during its peak operating hours. The observers' sole task was to watch the activities within the police station and become familiar with the duties, procedures and challenges faced by the police. Each selected police station compiled a list of up to 100 community observers, each of whom was to visit the police station only once or twice before suggesting a replacement.

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The community observer program was designed mainly to bridge the gap between police and public perceptions. The goal was to give a group of citizens first hand experience with the police in a positive setting, and encourage them to share their experience with others. A second objective was to provide a community monitoring presence in the police station. The presence of the observer might have, at least during the hours when he or she was present, encouraged the police to treat complainants with more sympathy and patience.

- 3. Weekly day off and Duty roster system:** Under this program, the entire staff in selected police stations (except the SHO) received one day off every eight days. In smaller police stations, where the shortage of manpower might be more acute, the SHO had the option of extending the rotation period up to 15 days.

In addition, the various police station level duties, such as paperwork, night patrolling, court liaison, serving summons, etc., were allocated to staff on a rotating basis. The goal was to create a transparent and fair system of work allocation that would lead to lower stress, more flexibility, reduced corruption, better informed constabulary and higher overall productivity.

- 4. Freezing of transfers:** All administrative transfers of personnel posted in their police stations for less than two years were prohibited during the program period. Exceptions could be made for well documented cases of police misconduct requiring transfer.

The fundamental basis of selection of the above mentioned interventions has been; (i) they are low cost and simple enough to be implemented in any police station in Rajasthan (ii) capable of generating hard evidence of success, and (iii) could be scaled up in the state if successful.

Evaluation

A central component of the evaluation scheme, that makes it unique from previous reform attempts, is the element of randomization in the selection of police stations as well as implementation of interventions. Thus the major issue plaguing previous police reform—that programs were implemented only in areas that might have done better anyway—was eliminated by the randomization. Similarly, the staff members who received the training were chosen completely at random. To measure the spillover effects of training of one group of officers on the other officers in the police station, the percentage of staff trained within each police station was also randomized: while some had 0% officers trained, others had 25%, 50%, 75% or 100% of their investigating officers/ staff trained. Spillovers, if they indeed exist, should be visible in the improved performance of the non-trained officers when greater proportions of their colleagues received the training.

As part of the randomization process, five main groups of police stations were formed:

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Group	Program elements			
	Community observer	Weekly off and duty rotation	No Transfer	Training
1. All Interventions	Yes	Yes	Yes	Between 0 and 100% of staff
2. Community Observer + No Transfer	Yes	No	Yes	Between 0 and 100% of staff
3. Weekly Off / Duty Rotation + No Transfer	No	Yes	Yes	Between 0 and 100% of staff
4. No Transfer	No	No	Yes	Between 0 and 100% of staff
5. Control	No	No	No	Between 0 and 100% of staff

Note that wherever the community observer or weekly off/duty roster reforms were attempted, transfers were also frozen. This was done for two reasons: first, because long officer tenures were considered necessary for the staff to learn the new techniques and experience any effects they might have. Second, due to concerns about attrition. If the reforms themselves differentially affected the transfer rate, then the officers remaining in the different police stations might no longer be comparable at the end of the project.

Another concern was the Hawthorne effect—the possibility that the police stations participating in the program might change their responses or behavior simply because they were being observed by outside evaluators. These differences might be caused by true changes in attitude, for instance if police morale is improved by just the knowledge that there is some reform program occurring. Alternatively police respondents might simply modify their answers to suite what they have learned that the evaluators want to hear. Although we cannot experimentally distinguish between these possibilities, we test for the presence of either of them with an additional group of police stations— the “Special Control”. These police stations were not contacted by surveyors or otherwise informed of the program until the final endline survey, at which point they were surveyed like all other stations. No staff members from the special control stations were trained. The Hawthorne effect, where present, can be seen in the contrast between the control and special control groups of police stations.

The interventions were implemented in 162 police stations (including treatment, control and special control police stations) in eleven districts across Rajasthan: Ajmer, Alwar, Barmer, Chittorgarh, Pratapgarh, Dholpur, Hanumangarh, Jaipur City East, Kota City, Nagaur, and Udaipur for a period of one and a half years.

Surveys

Public Surveys

Of the two major goals of the police reform project—improving police performance and public satisfaction—improving the public image of the police is perhaps the most important and the most difficult to measure. As we discuss below, the public image of the police is based on a wide variety of often unreliable sources, and may react slowly to even the most dramatic changes in policing. These issues, combined with the fact that extremely few citizens actually

interact with the police, makes ascertaining the effects of reforms on public perception a challenging and multifaceted subject.

To address these challenges we designed a household survey that would be both in depth—to capture the various aspects of public perception—and large enough to detect a small change in opinions. In total 7,981 randomly selected households were interviewed, 2,451 in the spring of 2007 and 5,530 in the spring of 2008. Within each household, three modules were administered:

1. A general crime screener questionnaire administered to the head of the household, inquiring whether any member of the household had been a victim of a crime in the previous year.
2. A crime victim survey, administered to each individual crime victim in the household. This survey ascertained greater factual detail about the crime and the victim's satisfaction with police actions.
3. An opinion survey, administered to a randomly chosen adult in the household. The individual was asked about his or her contact with the police, and perceptions of police performance and integrity.

The crime-related surveys were broadly based upon the UNICRI's International Crime and Victimization Survey (ICVS), extended to include greater detail and localized to the Indian context and in order to make their results comparable with the crime categories of the Indian Penal Code. Like any crime victimization survey, these questionnaires do not capture "victimless crimes" such as gambling or drug use. We made no attempt to measure the incidence of domestic violence because of concerns about the accuracy of reporting and the possibility of decreased respondent cooperation on other questions.

Police Surveys

To measure the effects of the reform project on the police, a major survey was conducted of the police staff themselves. One half of all officers in treatment and control stations were randomly selected to be interviewed by surveyors on their satisfaction with their jobs, their relationship with the public, and their knowledge of police duties. This police moral/performance survey was conducted in two rounds, the first prior to the beginning of the project (January-April, 2007) and the second subsequent to its completion (March-April, 2008). In total, 2367 officers were surveyed, of whom 948 were interviewed twice: once in the baseline and again in the endline.

Case Review

The training of police investigating officers (IOs) in improved investigation techniques should have had its most direct effect on their case work. To measure this outcome, 982 case files were randomly selected from the project police stations and sent to a group of retired senior police officers for grading, half investigated before the training and half after. The retired officers filled out a detailed report about each case in which they graded the performance of the officer on both his actions at the site of the crime, and the care and diligence with which the documents in the case file had been prepared. Grades were given on a scale of 1 (worst) to 10 (perfect), with the instruction that the average grade should be around 5. In addition to their qualitative grades, the case reviewers also recorded whether the IO had used any scientific techniques.

Decoy

To provide an alternative indicator of police performance, a “decoy” surveyor program was developed in which surveyors visited police stations in the treatment and control groups and attempted to register cases for various types of crimes. These visits were unannounced and the surveyor did not disclose his identity except in case it seemed that the police would actually register the FIR, or if the situation otherwise required that the surveyor disclose his identity, for instance if the police threatened to prosecute him for filing a false case. Immediately after the visit to the police station, the surveyor completed a short form recording his success or failure in registration, the attitudes and actions of the police, and other details such as the total time taken and the names of the officers with whom he interacted.

Implementation Monitoring

Surveyors conducted five rounds of random, unannounced visits to all police stations. Upon entering the police station, the surveyor requested to meet with the SHO and two randomly selected constables. He then filled out a short form recording that station’s implementation of interventions that it had been assigned.

Public Opinion Results

The most striking aspect of the public opinion data is how few respondents actually have experience with the police or ever interacted with them. Only 11% of those surveyed have actually had an interaction with the police in their lives, and only 5% of women have ever spoken with the police. Even in the highest exposure group, urban men, only 24% of respondents replied that they had interacted with a police officer. In the absence of personal experience, 71% of those surveyed claimed that they had formed their opinions based on word of mouth conversations with other citizens, with 12% stating that they based their opinions on television and print news sources.

The opinions of the police that emerged from this word of mouth process were decidedly mixed. On the one hand most citizens felt that the police was generally cooperative: 71% responded that the police were mostly or always helpful, and 65% replied that the police were always or mostly courteous. Yet these positive impressions were balanced by negative perceptions of other aspects of police behavior: 53% think that the police work less hard than the average citizen, in sharp contrast with police staff’s self-perception of being overworked. Furthermore, 53% reply that they and citizens like themselves fear the police, a fear that is confirmed by the belief of 44% of the population that the police are always or usually cruel to those arrested or held in custody.

Another area in which public and police perceptions diverge is in the need for more police resources. While police officers unanimously called for more funding, manpower, and equipment for the police, the citizens of Rajasthan, however, are far less in favor of an increase in police forces: of those who answered the question, 61% replied that the police had sufficient personnel, and 68% replied that the police had sufficient money and other resources. Interestingly, these opinions persist despite the fact that, on average, respondents underestimated the number of staff at their local police station by 8.7.

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Since this survey covered such a broad range of qualitative indicators the fourteen major questions on police performance were aggregated into four broad categories in order to simplify the interpretation and guard against false positive results:

- A. Responsiveness of police to citizens
- B. Fear of police
- C. Corruption
- D. Adequacy of police resources¹

Tables 1 and 2 displays the effect of each reform on each category, both using data from the baseline and endline surveys (Table 2), and limiting the analysis to the endline in order to take advantage of the comparison between the “special control” police stations which were not informed that they would be part of the project, and the controls in which no project activity occurred by who were aware of their participation (Table 1). In order to ease interpretation, the “All Interventions” coefficient is defined is the difference between the police station in which all interventions where implemented and the controls, whereas the other intervention coefficients represent the marginal improvement from implementing that intervention. For instance, since the community observer program was always implemented where transfers were banned, the actual difference in program outcome between the police stations with community observers and the controls would be the sum of these Community Observer and No Transfer coefficients. The results are expressed in standardized effect size.

Of the 4 categories, the project shows a robustly significant effect at the 95% level only in the “Fear of Police” category. Here two interventions seem to have had an effect: First, the freezing of transfers seems to have had a substantial positive effect on increasing public trust. And second, this effect appears to be completely counterbalanced by the weekly off and duty rotation program. A potentially interesting although less robust result appears in the police responsiveness category in the endline only. Here we find a significant effect of being a stations simply being included in the project on the responsiveness indicator. Since this effect is counterbalanced by the no transfer intervention, this implies that the controls stations

¹ The questions incorporated into the categories were as follows:

Responsiveness of police to citizens: “How do the police behave with normal citizens?” “Do the police help citizens when they are required?” “How quick is the police response to distress calls by citizens?” and “How does the police’s performance compare to other government agencies, for instance roads or schools?”

Fear of police: “Do you think that citizens like yourself are afraid of the police?” “Are law-abiding citizens afraid of the police?” and when asked how the population thinks of the police, whether respondent volunteers that “They fear them”.

Corruption: “Would you say that the police in your area are generally honest or generally corrupt?” “Is it necessary to pay the police some money in order to get them to do their job?” and “Do policemen violate the law more or less than the average citizen?”

Amount of police resources: “Do the police have enough personnel to do the work required of them?” “Do the police have enough money and resources to do the work required of them?” “Should the size of the police force be increased, decreased, or stay the same?” and “Do you think that the government should spend more money on the police, even if it means spending less on things like education and roads?”

performed better on this outcome than both the special controls and the other program police stations.

To investigate this effect further, in table 3 we disaggregate the elements of the fear of police category. Here we find that the majority of the effect works through a single question—whether the respondent feels that other law abiding citizens fear the police. The effects for the other questions in this category are small and insignificant. [NOT SURE WHAT WE WANT TO MAKE OF THIS...]

The effect of the freeze on transfers might work through a variety of mechanisms. Perhaps due to less frequent transfers the public became more familiar with the same police officers and constables they therefore came to trust them more and fear them less. Alternatively, it is possible that once the police staff remained in a posting for a longer period of time, their behavior changed with respect to the inhabitants of that area and they became more approachable and less intimidating to the population.

The negative effects of the weekly off/duty rotation are such that they almost cancel out the positive effects of the freeze on transfers on public opinion in those police stations that implemented only those two interventions. A possible explanation for this negative interaction might be that the duty rotation, by moving staff from post to post within the police station, prevents the development of public/police familiarity that is means by which the freeze on transfers reduces fear of police.

Reporting of Crimes, Satisfaction with Investigation

Unlike the vast majority of the population who have little or no interaction with the police, the victims of crimes both have direct experience of police effectiveness and, in many cases have a personal impression of the police. To investigate how this important demographic perceived the police, all crime victims encountered in the household survey were administered an additional questionnaire asking about their satisfaction with the criminal investigation.

Just as most citizens never encounter the police, most crime victims never report their incidents to the police. Only 29% of those surveyed stated that they had visited the police station to report their crime, and even among those who reported their crimes, 19% did not succeed in filing an official case. While the biggest reason for not reporting a crime was its lack of importance (28%), substantial numbers of crime victims did not go to the police because they thought that the police were incapable of helping (20%) or unwilling to help (17%). Important cases such as motorcycle theft and assault were registered relatively more frequently (75% and 61%) than theft (12%) and vandalism (17%).

Table [X] shows that the baseline data on public satisfaction with the police work during investigations is very mixed.

Table 3	
In this entire case how satisfied were you with the police?	
Completely satisfied	19.05
Satisfied	14.97
Unsatisfied	23.81
Completely unsatisfied	38.1

Don't know/Case not finished	4.08
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The reasons for victim satisfaction are clear: there is a strong perception among crime victims that police are not truly interested in helping them or resolving their case. A total of 50% of victims stated that they were unsatisfied because the police “didn’t do anything special” or “didn’t take interest” in their case. In contrast, only 6% complained of police corruption, and another 6% complained of discourtesy.

These results suggest that it is not so much the lack of successful resolution of their grievances that citizens seem to mind; rather it is the lack of a credible police effort to address the problem. This observation implies that in cases where the police have shown some interest in the victim, the level of satisfaction should be higher. And indeed, this does appear to be the case. The probability that the victim expressed satisfaction with the police was 10% higher when the police simply contacted him or her again after the crime, 23% higher when the police made an arrest, and 51% higher when the police recovered property. Not surprisingly, when the police asked for a bribe satisfaction fell by 19%. All these differences are significant at the 97% or higher level.

Victims of extortion and hurt or grievous hurt are most likely to be satisfied with police work, while victims of eve-teasing and vandalism are least likely. Upper class Muslims are substantially (22%) less likely to be satisfied. Interestingly, wealthier victims (proxied by their vehicle ownership) were less likely to be satisfied with police efforts than agricultural laborers, who would tend to occupy a lower economic class in society. The gender of the victim (16% of crime victims are women) seems to have no effect on the level of satisfaction.

Effects of the Project:

Table 4 shows the results of the project on the probability that the respondent reports being “Satisfied” or “Completely Satisfied” with the police handling of his or her case. The training program shows a large, robust impact on the satisfaction of crime victim. The effect of going from 0% trained officers to 100% is to raise the probability that victims are satisfied with police investigation by between 35 and 50 percentage points, depending on the specification. Since on average only 27% of victims report being entirely or partially satisfied, these changes represent a more than twofold increase in satisfaction. In keeping with the positive findings from the public opinion survey, the estimate of the effect of freezing of is also large and positive, although the relatively small sample size implies that it is only marginally significant.

Finally, we note that in police stations where there was no training, the satisfaction of crime victims declined significantly. Stations randomly assigned to have zero staff members trained experienced a 19% drop in victim satisfaction from 2007 to 2008—a trend that was countered and even reversed in the police stations where staff received training.

Many of the variables included in the survey of public satisfaction may themselves be outcomes of the training. For instance, the investigation training may have lead officers to make more arrests, or to carry out more follow-up visits to the victims. We can test this by measuring the impact of the project on what actions the public reports that the police have taken after a crime has occurred. When we do so we find a significant impact of the training program on the probability that the police make an arrest: going from 0% to 100% training in a police station increases the probability of making an arrest by 26% (statistically significant at the

96% level). Furthermore, when we generate an index for whether the victim saw police take any positive action at all after the crime, including arrest, property recovery, collecting evidence, interviewing witnesses, etc., the effect of the training on police action increases to 30% (significant at 97% level). If arrests are removed from the index of actions, then the effect of training drops to 22% and it is only significant at the 90% level. (Note that all of these results include controls for crime type, district, and personal characteristics of the crime victim).

Thus it appears that the training program had two effects on police performance: First in that it encouraged the police into more active investigation of crimes, and second that it made crime victims more satisfied with the performance of the police, regardless of whether the police took action or were successful in arresting a suspect or recovering property. This is likely to be due to better treatment of the crime victim by the police.

Decoy Surveying Report

The decoy survey provides a different perspective on police treatment of crime victims, with a unique set of advantages. Its main advantage lies in the fact that choice of whether to report a crime is influenced both by the quality of the local police and the victim's own confidence. Crime victims who choose to report their cases are thus an endogenously selected group, which may bias their reports in multiple ways. Furthermore, the recollections of those victims who did register FIRs may be imperfect, and they may selectively recall certain elements and not others.

In total the police were willing to register FIRs from the decoy surveyors only 54% of the time. However, this rate was quite variable across types of crimes: for mobile phone theft, only 40% of cases were successfully registered, as opposed to 92% (11 out of 12) in the case of house breaking, or 66% in the case of a bicycle accident due to reckless driving. Surveyors rarely reported being discovered by the police prior to revealing themselves at the end of the visit.

Table 5 shows the effect of the various program components on the probability that an FIR is registered. The first two columns show the effects of the different interventions averaged across all decoy survey visits. No program shows any effect, although the decoy program itself appears to have a substantial impact. Although only marginally significant, each decoy visit increases the probability of FIR registration by an average of 6 or 7 percent. Since it is possible that these interventions only took effect gradually, in the third and fourth columns we interact the program elements with the date to allow their effects to change over time. Here we find that the no-transfer intervention began at a lower registration rate than the other groups, but appears to have caught up over time.

As they interacted with the police, surveyors took note remember the details of the police attitude. Their findings corroborate the generally positive opinions of police behavior in the public opinion survey. In 65% of all decoy visits the surveyor's complaint was immediately addressed by the police staff. Even in cases when the surveyor was made to wait, only in fewer than 5% of all decoy visits was the waiting period greater than 15 minutes. Surveyors also compared the behavior of police staff to the "normally polite" attitude they might expect from the staff in a private bank. They found that 69% of the time the police were polite, and 11% of the time they were "extremely polite". 60% of surveyors were addressed using the polite Hindi

pronoun, “aap” —although this politeness had a limit: only in 14% of cases did the police officer use the honorific “Shrimanji” or “Sir.

Table 6 investigates the impact of the program on police conduct, where the outcome is an indicator of whether the police were “extremely polite” with the decoy. Once again, no intervention shows any positive effect on average throughout the survey period, except for that of the decoy visits themselves, which appear to increase politeness. When the time factor is included it seems that all police stations involved in the project start are initially very polite and then decrease—however this result is entirely driven by two special control police stations accidentally visited in the first round of decoy surveying. When these observations are dropped, the coefficients on all program elements become small and insignificant. Thus modified, it seems that the only factor that consistently affects the conduct of the police is the number of times that the station knows that it has received a decoy previously.

These results are curious in the face of the evidence from the crime victim survey that the training had a positive effect. In the attempt to reconcile these findings, we matched the names of the officers with whom the decoy surveyor reported that he spoke with the list of names of the police staff who had receive the communications and public relations training. Although 24% of the police staff whom the decoys first encountered received public relations training from the police reform project, we found that they behaved no differently from other officers in any specification.

The decoy survey suggests that while the main interventions of the police project had little or no impact on the initial treatments of complainants at a police station, the decoy surveying itself—which was not intended to be an intervention at all—had a substantial effect on both FIR registration and politeness. Strikingly, training shows no effect at all—either from the individual officers that the decoy interacted with, or from the whole station effect. The effects of training on victim satisfaction must therefore come during the investigation stage, not at the initial police station visit.

Police Moral and Performance

We now turn to the other major subject of the project, the police themselves, and to the results gathered from the two rounds of the survey of the police staff posted in the project stations. A consistent feature of the police survey is a strong secular trend between the baseline and endline surveys: respondents seemed more willing to give “wrong” answers on the endline. For instance, the police appear to have become less satisfied by their jobs, less interested in becoming close to the public and more comfortable with police brutality. While the source of this change is unknown—it may represent a true trend, or simply the result of the police becoming accustomed to the surveyors—this effect should be constant across both treatment and control police stations, and therefore will not affect the accuracy of the evaluation of the results of the project.

Another, more serious concern with the results of the police survey stems from the high number of transfers among the police staff. Due to these transfers, only 65 percent of individuals interviewed in the baseline could be re-interviewed in the endline. As expected,

retention in the survey is affected by the no-transfer intervention but as table X shows, it varies significantly across the other interventions as well²:

Attrition			
	Percent Missing from Baseline	95% Confidence Interval	
All Interventions	37%	32%	42%
No Transfer	31%	26%	35%
Weekly off / duty rotation	37%	31%	43%
Community Observer	27%	22%	33%
Control	44%	38%	50%

This attrition raises the possibility that the sample of officers included in the final survey differs across treatments in important but unobservable characteristics. Therefore all results from the police survey come with the important caveat that they may be partially or entirely driven by sample selection.

Police Job Satisfaction:

Perhaps the most direct means to measure police morale is the simple question, “How satisfied are you with your job as a policeman?” However, when we asked this question at the baseline, an unbelievable 82% of police respondents claimed they could not be more satisfied—a 10 out of 10. Responses at the endline were more varied, with average rating of 7.6 and only 28% claiming to be completely satisfied. In view of this result, the analysis of this outcome in table 7 is limited to the endline.

The results show a substantial effect of the combination of all interventions, which increases reported job satisfaction by approximately .83 on the ten point scale. However, the bulk of the effect is due simply to the fact that there was *any* reform project going on. This implies that the “Control” police stations, where the staff knew that their progress was being monitored as part of the reform project, reported significantly higher satisfaction than the “Special Control” stations where the staff did not know of their involvement in the project until the endline. A possible explanation for this effect would be if police staff genuinely appreciate that the Rajasthan Police is making efforts to improve its performance. Alternatively, staff in project police stations may simply feel that they should report high satisfaction levels in order to appear supportive of the project. Two other interventions showed positive but insignificant effects: the Weekly off/Duty rotation and the training.

In addition to the differences in satisfaction caused by the project, several other factors consistently affected staff satisfaction levels. The most significant among these was the number of years that an individual has served in the police: the longer he or she has served, the higher satisfaction he or she reports. In addition, the longer it has been since the officer or constable met the SP, the less satisfied that individual is. While this result suggests that greater

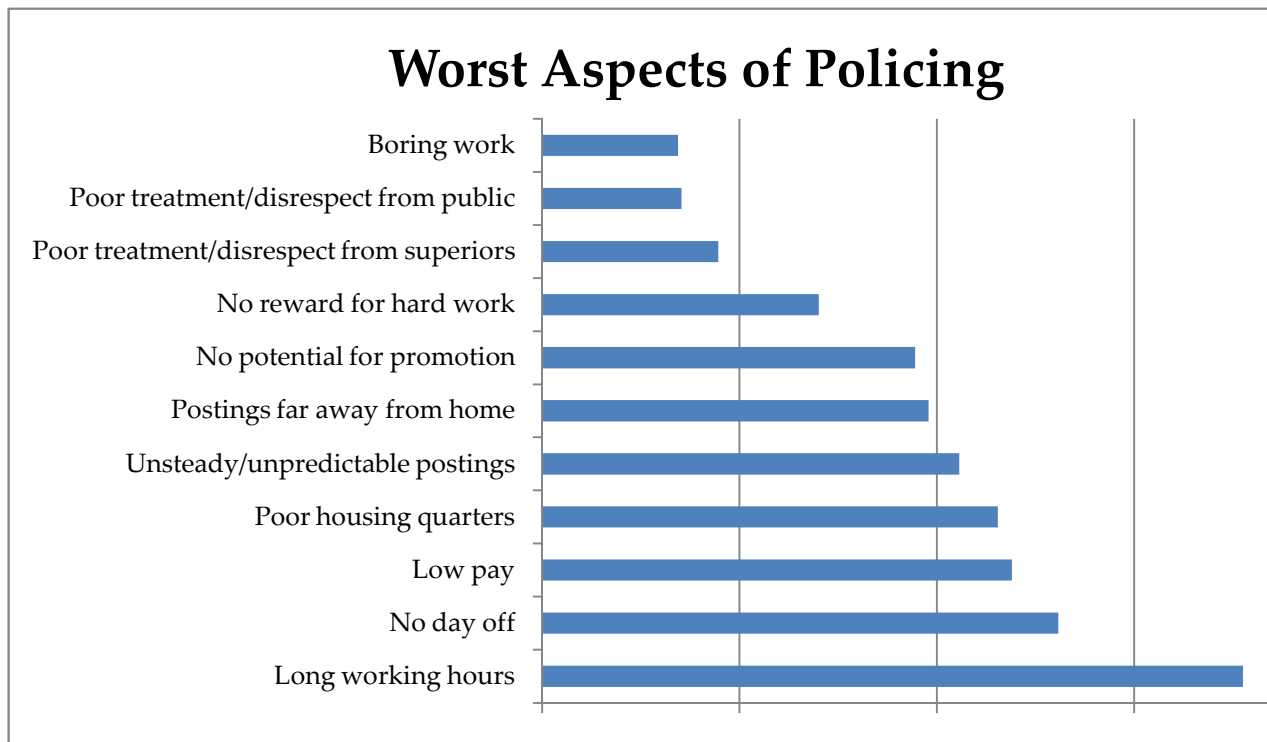
² While the relatively high attrition in the weekly off/duty rotation and all interventions groups might be attributed to the absence of staff on the day of the survey due to their being on weekly off, by the time of the endline we find no actual difference in days of leave between the stations employing weekly off and those not. For more details refer to the implementation section.

supervision from senior officers increases satisfaction, it might also be a result of the fact that more remote police stations, where the staff is already less satisfied, are visited less frequently by the SP.

Staff Complaints

Among the staff who expressed dissatisfaction with their positions in the police, there was substantial variation in the issues cited as the worst aspects of policing. Surveyors asked police officers to list what they perceived as the worst aspects of their job in the police. The surveyors then categorized the responses, which are displayed in figure [X]:

Figure 1



Many of these issues, for instance problems with low pay or low quality housing, were outside the scope of the police reform project. For those that were addressed by the reforms, table 8 shows the effect of each reform on the probability that the respondent lists a given issue as one of the worst aspects of policing. The most consistently significant result in table 8 is that of simply participating in the project. Selection into the reform project shows a large, often significantly negative effect in many specifications. Again, these results could either be due to familiarity with the surveyors, or a true increase in job satisfaction due to the existence of the project.

For the specific program elements the results are weak. The freeze on transfers shows some effects in reducing complaints about uncertain transfers (although this is not significant once station fixed effects are included). Furthermore, the freeze on transfers also seems to reduce complaints of poor relations with the public, re-enforcing the view from the public opinion survey that lengthening posting times may improve relations with the community. Another interesting result pertains to the complaints about long working hours: in stations with

higher percentages of trained staff, the officers complained more about long working hours and lacks of days off. Thus it seems that sending many staff members away for training, even for short periods, increased the burden on the rest of the staff. Finally, we should note that several interventions did not show the desired effects on police complaints: the weekly off/duty rotation had essentially no effect on complaints about lack of days off or boring work, and the community observer program did not seem to reduce complaints about lack of public respect.

In addition improving job satisfaction, many of the interventions were designed to affect the opinions of the police concerning their role as police officers and relationship with the public. To detect changes in these outcomes, the police survey contained a range of many specific questions about different aspects of policing. As with the public opinion survey due to the large number of these questions, they are grouped into several themes, each incorporating various individual questions as follows:

- A. Measures of public support
- B. Police Brutality
- C. Satisfaction with police system³

The results, presented in table 7 show that the community observer intervention made police staff give more favorable appraisals of public support for the police. Thus although police staff did not cease to complain about the lack of public support, it seems that they did experience the community observer program as an indicator of community encouragement. The results for police brutality, on the other hand, are perplexing: Officers and constables who underwent the training were *more* likely to give answers suggesting that police beatings and use of third degree methods were acceptable. Since the purpose of the training was to convey the opposite message, these results are difficult to explain. Perhaps they are due to the fact that trained staff felt more comfortable discussing their honest opinions with the surveyors than those that did not go through the training.

Although potentially biased by attrition, the no transfer program appears to have substantially increased the number of respondents claiming that the police system operates in a fair and transparent manner. Again, this may either be a result of the program itself, or perhaps because those officers with a greater tendency to complain on this issue had been transferred out of the no-transfer police stations.

Knowledge of Duties

One of the major objectives of the duty rotation program was to encourage all staff members to become acquainted with all the duties expected from a police man or woman of

³ **Measures of public support:** Indicators for whether respondent states that: “The public is very cooperative to the police”, “Police staff are respected by the population”, “The law-abiding public does not fear the police”

Police Brutality: Respondent states that: “It is never better to beat criminals as punishment (rather than pursue judicial means)”, “Third degree methods should not be used to extract information” and “Hard-core criminals should never be killed in encounters”.

Satisfaction with police system: “Respondent states that: “He/she is treated right by superiors” and “Duties are allocated in a fair and transparent manner”.

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their rank. We measured knowledge of duties through two different mechanisms: First, the police opinion survey asked each individual how familiar they felt with each duty. Second, we administered a separate “Duty Quiz” to all constables and head constables, in which we asked them a series of questions of various difficulties about each duty.

In the police opinion survey, constables were asked whether they felt “very experienced”, had “some experience”, “little experience”, or “no experience” in a variety of task including beat patrol, wireless, court l.c., and other common duties. The following table records the effect of the weekly off/duty rotation intervention on constables’ self-reported skill levels:

Number of duties at which respondent is:	Effect of weekly off /duty rotation	Probability that result is not due to random chance
Very experienced	0.155549	70%
At least some experience	0.253009	91%
At least a little experience	0.224802	98%

While the effect of the duty rotation is only significant when we analyze the difference between the number of duties that the respondent has no knowledge of versus those duties in which he/she has at least a little experience, the effect of the intervention is positive for all knowledge levels, suggesting a robust effect. The effect of the community observer intervention is also positive, although never significant.

Evidence from the duty quiz corroborates this finding: The following table shows the effects of each intervention on the final test score of the constables interviewed in the endline:

Intervention:	Effect on test scores	Probability that result is not due to random chance
Additional combined effect of all interventions	-0.60732	74%
No Transfer	-0.06793	13%
Weekly Off/Duty Rotation	0.734766	94%
Community observer	0.954357	99%
Any reform program	0.613166	66%
Percent of police station staff trained	-0.40171	69%
Whether individual was trained	0.522186	94%

The Weekly Off/Duty Rotation, Community Observer, and Training Program all show positive and significant (at the 6% level) effects on the number of test questions that the constables answered correctly. Interestingly the greatest effect comes from the community observer program, whose original objective was not to affect constable knowledge.

Review of Case Files

Scientific evidence is a crucial part of criminal investigations in all countries, but in India two factors make hard scientific data even more important: First, because plea bargaining is not possible, guilty pleas are extremely rare and most cases are decided on the basis of evidence and witness testimony. Second, during to the long period between arraignment and trial, witnesses often change or retract their statements, thereby making physical evidence all the

more important. However, the use of scientific evidence is far from universal in criminal investigations in Rajasthan. Only 19% of cases investigated in Rajasthan during 2006-2007 made any use of scientific investigation, and most of these were accident cases.

The results of the case reviews show that, in general, the higher the rank of an officer, the better quality his or her field investigation and documentation quality. The same appears true for scientific investigation quality, although the results are too noisy to be certain. Interestingly, Inspectors appear to use scientific techniques somewhat less than A.S.I.'s and certainly less than S.I.'s. Not surprisingly, if the investigating officer has received instructions from his superior officer all grades are higher, although it is not clear that there is a true causal effect of receiving instructions. Other factors, such as the location of the police station and the identity of the complainant do not appear to be important predictors of the grade the case receives. Specifically, the case or religion of the complainant had no effect on the perceived quality of the investigation, although cases involving Muslims tended to be investigated by higher ranking officers.

Also included in the analysis, although for brevity not presented in detail, are controls for which sections of the Indian Penal Code were cited in the case and for the identity of the retired officer who graded the case. The latter proved to be quite significant, with substantial variation in leniency or strictness across graders. There was also substantial variation across types of crimes: Cases involving physical violence tended to be graded higher: Murder (IPC section 302), Hurt/Grievous Hurt (324/338), preparation for dacoity (399) and the Arms Act, all scored significantly higher than other cases on both field investigation and documentation. In contrast, theft (379), breach of trust (406), and provocation (504) were graded significantly lower. Scientific investigation was used more in serious cases, particularly rape (376), and also in cases of tampering with evidence (201).

The grading sheet prepared by the retired officers contains a plethora of qualities on which case were evaluated. As in the earlier sections, to reduce the possibility of detecting false positive effects and to simplify presentation, we combine these outcomes into two aggregate measures—one of investigation quality, and the other of documentation⁴. The effects of the training these aggregated outcomes are displayed in the first set of six columns of table 10, which also controls for various other factors affecting the quality of the investigation. The second set of five columns focuses the analysis on the scientific investigation of cases, an area where the training might be expected to show a direct effect.

The results of this table are clear: the training had no effect on either the meta-outcomes of investigation and documentation quality or on the specific outcome of scientific investigation. The lack of impact is confirmed by a supplementary analysis of data from the forensic science laboratory, which finds that trained officers are no more likely to send cases in for scientific analysis than their untrained colleagues. Finally, the other police station level interventions also show no robust effects on investigation training.

⁴ The field investigation group includes grades for promptness, action taken at the scene of the crime, accuracy of site plan, use of scientific evidence, collection of statements, seizures made, and overall quality. The documentation group includes grades for proper citation of legal acts, recording of police actions, victim and witness statements, writing of the charge sheet and case diaries, and overall quality.

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The police survey sheds some light onto the fact that the training had no effect. Of the 313 officers interviewed in the endline survey, 82 had been selected for the investigative training. However, only 27 of them (33%) actually reported having been trained in the past year:

Officer reports being trained in last year:	Assigned to training by project	
	Yes	No
Yes	32.93%	25.11%
No	67.07%	74.89%

In fact, 23% reported that they had never received any refresher training in their entire careers. This phenomenon does not seem to be the result of officers not being trained: Police Academy records show that 88% of officers selected for training reported to the Academy for training. Perhaps the training was so unremarkable that the officers had forgotten that they had ever taken it.

Implementation:

Despite some significant outcomes, in many areas Rajasthan Police project showed no effect and in general the project failed to generate a broad change in either police performance or public support for the police. What was the cause of this lack of results? We may hope to learn something from the data collected on project implementation over the 18 month span of the program.

Community Observer

The most obvious and superficial symbol of the community observer program was the sign board announcing the community observer timings outside the police station. Surveyors found that this element of the program was properly implemented—95% of designated police stations had put out sign boards by the end of the program.

Yet a more important and revealing indicator of success was whether surveyors encountered a community observer while visiting the police stations. Each police station in the program designated a specific time during which the community observer would sit in the police station on each day and surveyors often visited police stations during these periods and should, therefore, have met the observer. However, observers were present only 10.29% of the time during their official hours. Moreover, surveyors met community observers approximately 10% of the time regardless of whether they visited during the official times or not.

A more detailed record of observer visits can be found in logbooks of observer visits and comments maintained by each police station. These reports varied widely: certain districts appeared to maintain the community observer program at full strength throughout the project while others seem to have given up entirely by the last 3 months. However, the veracity of these results is questionable. In response to surveyors’ claims that police stations were falsifying the community observer records, the final round of implementation checks contained instructions to discern whether the logbooks were accurate. They found that 74% of the visitor logbooks were always or often in the same handwriting, and in 40% of the time the comments seemed to have been written by the police themselves.

No Transfer:

The implementation of ban on transfers can be measured primarily through administrative data from personnel records. If the ban on transfers were effective, we should expect to see no transfers occurring in the stations selected for the project, or at least noticeably fewer than in the control group. We matched names of officers from police station level staff lists at the beginning of the program with those from the end of the program, and counted any officers not found as having been transferred. While this approach will underestimate transfers if officers are transferred into and then back out of the station during the course of the project, table [X] shows that transfers during the course of the project were substantial even without including these.

Table [X]			
Rank	Percentage Transferred		
	No Transfer	Control	Difference:
Inspector	49%	64%	15%
Sub. Inspector	48%	68%	20%
Asst. Sub. Insp.	28%	30%	2%
Head Constable	28%	34%	6%
Constable	17%	30%	13%
All Ranks	21%	33%	12%

The ban on transfers, while somewhat effective for certain ranks, was substantially less than a complete freeze. For the more politically sensitive ranks, inspectors and sub-inspectors, the project both made the greatest difference and came the furthest from achieving its goal.

Weekly off:

Implementation, at least on paper, of the weekly off program was much better than the other interventions: 84% of treatment police stations reported executing some type of rotating day off, whereas only 34% of control police stations reported having any scheduled day off. In keeping with program implementation guidelines that allowed a longer rotation period for smaller police stations, the regular day off was not always weekly: 60% of police stations in the project has rotation terms longer than 8 days. In fact, the size of the police station mattered little for the rotation period of the weekly off: police stations with 15 or less staff had an average period of 13.8 days, whereas larger stations had a period of 11.7 days.

In order to verify that the station chief was in fact giving days off to his staff, surveyors randomly selected two constables from the staff and interviewed them separately. Surveyors asked the constables to recall the last time that they had had a day off for any reason, including both the weekly off program and any other days off. The results show that the weekly off program did succeed in shortening the time since the last day off by an average of 4.87 days, going from an overall average of 30.03 days in control stations to 25.16 days in treatment stations. However, this difference seems to decrease over the course of the program:

	Days since last day off:
--	--------------------------

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Station type:	Round 1	Round 2	Round 3	Round 4	Round 5
No weekly off	29	32	28	31	30
Weekly off	21	22	25	26	32
Difference:	8	11	3	5	-2

Since the program was designed to give a day off every 8 days, we can inspect this outcome directly:

	Percentage of staff who had a day off in last 8 days:				
Station type:	Round 1	Round 2	Round 3	Round 4	Round 5
No weekly off	25%	22%	22%	23%	23%
Weekly off	46%	31%	36%	29%	27%
Difference:	21%	9%	14%	6%	4%

Once again, the project seems to have been operating in the original rounds, albeit not at full implementation or as well as the police records would suggest. Over time implementation decreased until, at the end of the program period, there is no statistically detectable difference between treatment and control.

Duty Roster

Since the duty roster was implemented in the same police stations as the weekly off, the results might be expected to be similar. Here too, implementation on paper was close to complete, with 91% of chiefs of treatment police stations able to produce a duty roster when asked. However, only 58% of program stations posted the duty roster on the wall as stipulate by the implementation guidelines, as opposed to 39% of control stations that had independently created duty rosters.

When surveyors asked constables about the duty rotation, these major differences between treatment and control police stations almost disappeared. Table [X] shows the responses over time to questions about the rapidity of changing duties and the amount of knowledge constables have of their future duties:

	Station type:	Round 1	Round 2	Round 3	Round 4	Round 5
Number of days constable has been doing current duty:	No duty rotation	4.05	3.97	6.27	4.17	2.70
	Duty rotation	5.58	4.51	5.33	4.50	2.78
	Difference:	1.53	0.54	-0.94	0.33	0.08
Whether constable knows what his next duty will be:	No duty rotation	77%	68%	40%	39%	37%
	Duty rotation	83%	72%	43%	46%	54%
	Difference:	6%	4%	3%	7%	17%

Most notably, in stations with the duty rotation, constables spent slightly *more* time at each duty, although this difference is not statistically significant. Constables in stations with duty rotation did have a significantly higher probability of reporting that they know what their next duty would be, with an overall average of 58% in treatment police stations and 51% in controls. Unlike in the weekly off, this effect appears to have grown stronger over time, with the greatest treatment/control differences in the final periods. Interestingly, there is also a

strong downward trend in both treatment and control stations, perhaps due to the police becoming more familiar with the surveyors.

These results suggest that the effect of the duty rotation program may have been to transform a system in which duties were in fact rotating fairly rapidly, albeit on an ad-hoc basis, into one in which transition from one job to another was more predictable.

Conclusion and Recommendations:

The central conclusions of the Rajasthan Police project fall into two major categories: First, several of the interventions demonstrate that it is possible to affect the public image of the police in a relatively short period of time, using an affordable and easily implementable set of interventions. Reducing transfers decreased citizens' fear of the police and increases the satisfaction of crime victims. Training police staff in investigation techniques and public relations also increases the satisfaction of crime victims with the efforts of the police. Furthermore, it appears to have a real impact on the actions of the investigating officers, causing them to arrest more suspects and take more actions subsequent to the registration of an FIR (at least according to the victim's perception). These results suggest that the police system is not completely resistant to change, and that public opinion can be affected in the short term—that practical police reform is possible.

Second, the ineffectiveness of the program on many dimensions carries lessons for the design and implementation of future government sector reform projects. At some level the cause of failure cannot be identified—we cannot see whether the programs that showed little impact would have been successful had they been implemented more rigorously or whether they were flawed in conception. What is clear is that incentives for the implementation of reforms must be incorporated into their design. While the senior police leadership consistently supported the reforms and gave orders for their implementation, police station staff gradually ceased to carry out the program elements, perhaps even going so far as to falsify the community observer records. Since the long term, system-wide benefits perceived by the police leadership were not internalized by the police station SHOs, who only experience the short term costs, the reform project gradually ceased to function over 18 months. If incentivizing the lower-level implementing staff appears essential in the discipline-oriented, hierarchical system of the Rajasthan Police, then it may be even more critical in organizations with less rigid command structures.

Perhaps the most striking outcome of the Rajasthan Police project lies not in its effects on police functioning, but in the fact that the program was successfully conceived, implemented, analyzed, and accepted by Indian policymakers and senior police officials. Randomized evaluations of core government programs are rare in developing countries, and even rarer in as politically sensitive areas such as the police. The successful completion of the Rajasthan Police project should both encourage researchers to inquire into the effectiveness of government functioning and governments to experiment with new reforms to their basic services.

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Table 1 - Public Opinion Endline Only

Police Responsiveness to Citizens				
All Interventions	0.005 (.878)	0.028 (.463)	0.023 (.526)	0.017** (.035)
No Transfer	-0.102** (.014)	-0.111** (.016)	-0.109** (.017)	-0.113** (.044)
Weekly Off	0.076 (.089)	0.061 (.19)	0.063 (.174)	0.065** (.046)
Community Observer	0.052 (.257)	0.053 (.25)	0.053 (.253)	0.05 ** (.046)
In Project	0.091** (.037)	0.114** (.011)	0.11 ** (.013)	0.104** (.042)
Percentage staff trained	-0.043 (.241)	-0.038 (.312)	-0.041 (.274)	-0.047** (.038)
Lack of Police Corruption				
All Interventions	0.145** (.03)	0.189* (.005)	0.186* (.006)	0.186 (.07)
No Transfer	0.044 (.367)	0.04 (.38)	0.041 (.366)	0.037** (.046)
Weekly Off	-0.057 (.243)	-0.065 (.17)	-0.063 (.176)	-0.064** (.047)
Community Observer	-0.011 (.812)	-0.015 (.734)	-0.015 (.744)	-0.012** (.049)
In Project	0.039 (.532)	0.09 (.156)	0.086 (.177)	0.091 (.067)
Percentage staff trained	-0.025 (.542)	-0.03 (.462)	-0.033 (.43)	-0.034** (.043)
Lack of Fear of Police				
All Interventions	0.161** (.033)	0.196** (.014)	0.195** (.015)	0.193 (.077)
No Transfer	0.083 (.132)	0.118** (.044)	0.118** (.044)	0.119 (.059)
Weekly Off	-0.151* (.004)	-0.165* (.002)	-0.166* (.002)	-0.161 (.054)
Community Observer	0.008 (.877)	0.006 (.91)	0.005 (.916)	0.001 (.061)
In Project	0.054 (.443)	0.057 (.434)	0.057 (.44)	0.051 (.071)
Percentage staff trained	0.006 (.882)	-0.011 (.821)	-0.011 (.812)	-0.012 (.052)
Increase Police Resources				
All Interventions	0.075 (.283)	0.088 (.163)	0.09 (.163)	0.098 (.064)
No Transfer	-0.062 (.28)	-0.046 (.425)	-0.047 (.413)	-0.043 (.058)
Weekly Off	-0.019 (.712)	-0.015 (.753)	-0.02 (.689)	-0.018 (.052)
Community Observer	-0.064 (.363)	-0.038 (.531)	-0.039 (.519)	-0.041 (.06)
In Project	0.115 (.106)	0.105 (.117)	0.108 (.113)	0.112 (.067)
Percentage staff trained	0.029 (.551)	0.039 (.418)	0.041 (.395)	0.041** (.048)
Controls				
District Fixed Effects	Yes	Yes	Yes	Yes
Urban, Semi-Urban dummies	Yes	Yes	Yes	Yes
HH Characteristics	No	Yes	Yes	Yes
HH has been victim of crime or arrested	No	No	Yes	Yes
Source of HH information about police	No	No	No	Yes

Table 2: Public Opinion - Station Fixed Effects

Police Responsiveness to Citizens				
All Interventions	-0.02 (.78)	-0.026 (.718)	-0.026 (.71)	-0.034 (.622)
No Transfer	-0.038 (.633)	-0.02 (.802)	-0.018 (.82)	-0.025 (.757)
Weekly Off	0.152 (.063)	0.148 (.084)	0.154 (.072)	0.144 (.088)
Community Observer	0.108 (.209)	0.09 (.317)	0.094 (.306)	0.091 (.319)
Percentage staff trained	0.085 (.22)	0.07 (.324)	0.071 (.312)	0.061 (.367)
Lack of Police Corruption				
All Interventions	0.084 (.304)	0.089 (.288)	0.089 (.289)	0.076 (.358)
No Transfer	0.003 (.944)	0.036 (.638)	0.036 (.633)	0.023 (.758)
Weekly Off	-0.026 (.711)	-0.046 (.529)	-0.042 (.563)	-0.051 (.483)
Community Observer	0.045 (.49)	0.037 (.573)	0.04 (.545)	0.046 (.491)
Percentage staff trained	0.000 (.976)	-0.031 (.608)	-0.029 (.628)	-0.034 (.565)
Lack of Fear of Police				
All Interventions	0.195 (.071)	0.215* (.048)	0.215* (.046)	0.216* (.045)
No Transfer	0.183 (.063)	0.233* (.02)	0.233* (.02)	0.231* (.02)
Weekly Off	-0.187* (.015)	-0.205** (.007)	-0.204** (.007)	-0.202** (.006)
Community Observer	0.000 (.977)	-0.021 (.795)	-0.021 (.799)	-0.022 (.793)
Percentage staff trained	-0.059 (.459)	-0.073 (.369)	-0.072 (.368)	-0.073 (.364)
Increase Police Resources				
All Interventions	0.01 (.888)	-0.026 (.662)	-0.028 (.646)	-0.021 (.722)
No Transfer	-0.039 (.612)	-0.045 (.463)	-0.046 (.456)	-0.035 (.565)
Weekly Off	-0.096 (.238)	-0.03 (.563)	-0.035 (.509)	-0.033 (.536)
Community Observer	-0.066 (.479)	-0.024 (.682)	-0.026 (.656)	-0.031 (.585)
Percentage staff trained	0.086 (.255)	0.037 (.479)	0.04 (.45)	0.042 (.422)
Controls				
Police Station Fixed Effects	Yes	Yes	Yes	Yes
HH Characteristics	No	Yes	Yes	Yes
HH has been victim of crime or arrested	No	No	Yes	Yes
Source of HH information about police	No	No	No	Yes

Table 3 - Fear of Police

Respondent does not fear police			
All Interventions	0.05 (0.27)	0.04 (0.51)	-0.01 (0.90)
No Transfer	0.02 (0.66)	0.05 (0.39)	0.04 (0.52)
Weekly Off	-0.08* (0.03)	-0.07 (0.18)	-0.07 (0.26)
Community Observer	-0.03 (0.42)	-0.06 (0.33)	-0.07 (0.26)
Percentage staff trained	0.03 (0.41)	0.06 (0.25)	0.09 (0.08)
In Project	0.03 (0.53)		
Law abiding citizens do not fear police			
All Interventions	0.13* (0.01)	0.19* (0.01)	0.18* (0.02)
No Transfer	0.12*** (0.00)	0.20** (0.00)	0.20* (0.01)
Weekly Off	-0.13*** (0.00)	-0.19** (0.00)	-0.21** (0.00)
Community Observer	0.05 (0.21)	0.00 (0.93)	0.01 (0.87)
Percentage staff trained	0.00 (0.92)	-0.03 (0.62)	-0.05 (0.43)
In Project	-0.01 (0.67)		
Respondent does not volunteer that he/she fears police			
All Interventions	0.04 (0.37)	0.03 (0.49)	0.03 (0.61)
No Transfer	-0.02 (0.51)	0.01 (0.86)	0.01 (0.83)
Weekly Off	-0.01 (0.78)	-0.01 (0.85)	-0.01 (0.83)
Community Observer	-0.00 (0.89)	0.04 (0.46)	0.03 (0.62)
Percentage staff trained	0.04 (0.42)	-0.08* (0.03)	-0.10* (0.02)
In Project	-0.00 (0.87)		
		Controls	
District fixed effects	Yes	-	-
Police station fixed effects	No	Yes	-
Household Fixed effects	No	No	Yes
Controls for gender, age, source of information, and whether a member of respondent household was arrested or crime victim	No	No	Yes

Table 4: Victim Satisfaction

	Endline Only				Police Station Fixed Effects		
All Interventions	0.09 (0.31)	0.05 (0.51)	0.06 (0.43)	0.05 (0.58)	-0.13 (0.45)	-0.09 (0.49)	-0.07 (0.61)
No Transfer	0.11 (0.23)	0.12 (0.16)	0.17 (0.06)	0.11 (0.30)	0.16 (0.32)	0.16 (0.23)	0.17 (0.20)
Weekly Off	-0.00 (0.99)	0.00 (0.99)	-0.04 (0.56)	0.02 (0.85)	-0.11 (0.41)	-0.02 (0.88)	0.02 (0.89)
Community Observer	0.05 (0.75)	0.05 (0.69)	0.03 (0.78)	0.01 (0.94)	-0.27 (0.22)	-0.27 (0.23)	-0.36 (0.10)
Percentage staff trained In Program	0.11 (0.19)	0.07 (0.37)	0.05 (0.54)	0.14 (0.09)	0.38* (0.02)	0.35* (0.01)	0.50** (0.00)
		Controls				Controls	
Type of Crime	No	Yes	Yes	Yes	No	Yes	Yes
District and urban dummies	No	No	Yes	Yes	-	-	-
HH Characteristics	No	No	No	Yes	No	No	Yes
N	348	347	347	343	489	488	463

Table 5 - Decoy FIR Registration

All Interventions	-0.18 (0.38)	-0.16 (0.39)	0.35 (0.17)	0.11 (0.71)
No Transfer	-0.06 (0.32)	-0.04 (0.37)	-0.23* (0.03)	-0.22* (0.03)
Weekly Off	0.04 (0.46)	0.04 (0.42)	0.08 (0.52)	0.11 (0.36)
Community Observer	0.05 (0.42)	0.05 (0.45)	0.09 (0.47)	0.04 (0.77)
In Project	-0.14 (0.48)	-0.13 (0.46)	0.33 (0.20)	0.16 (0.59)
Percentage staff trained	0.00 (0.93)	0.00 (0.98)	-0.08 (0.41)	0.01 (0.95)
Number of previous decoy visits to police station	0.06 (0.11)	0.07 (0.06)	0.09 (0.05)	0.08 (0.06)
Time (in months)	0.02 (0.59)	0.02 (0.54)	0.07 (0.08)	0.04 (0.31)
All Interventions * time			-0.13* (0.02)	-0.06 (0.29)
No Transfer * time			0.05 (0.10)	0.05 (0.08)
Weekly Off * time			-0.01 (0.76)	-0.02 (0.51)
Community Observer * time			-0.01 (0.71)	0.00 (0.92)
In Project * time			-0.11 (0.07)	-0.07 (0.26)
Percentage staff trained * time			0.03 (0.29)	-0.00 (0.97)
			Controls	
Crime story used, whether staff suspected decoy, surveyor name	No	Yes	No	Yes
N	837	834	837	834

Table 6 - Staff Politeness with Decoy

All Interventions	-0.20 (0.06)	-0.15 (0.29)	0.08 (0.45)	0.48 (0.07)
No Transfer	-0.04 (0.36)	-0.01 (0.68)	-0.04 (0.58)	-0.05 (0.50)
Weekly Off	0.03 (0.35)	0.04 (0.20)	0.05 (0.55)	0.08 (0.29)
Community Observer	0.00 (0.92)	-0.01 (0.84)	0.02 (0.84)	-0.03 (0.67)
In Project	-0.15 (0.13)	-0.11 (0.44)	0.12 (0.30)	0.56* (0.04)
Percentage staff trained	0.02 (0.43)	0.02 (0.53)	0.01 (0.92)	0.04 (0.52)
Number of previous decoy visits to police station	0.04 (0.06)	0.03 (0.22)	0.05* (0.02)	0.07** (0.00)
Time (in months)	-0.03* (0.03)	-0.03 (0.14)	0.00 (0.81)	0.06 (0.12)
All Interventions * time			-0.06* (0.04)	-0.12** (0.01)
No Transfer * time			0.00 (0.91)	0.01 (0.62)
Weekly Off * time			-0.01 (0.81)	-0.01 (0.55)
Community Observer * time			-0.00 (0.86)	0.01 (0.67)
In Project * time			-0.05* (0.04)	-0.13** (0.00)
Percentage staff trained * time			0.01 (0.76)	-0.01 (0.71)
			Controls	
Crime story used, whether staff suspected decoy, surveyor name	No	Yes	No	Yes
N	832	829	832	829

Table 7 - Police Satisfaction - Endline Only

All Interventions	0.84** (0.00)	0.83*** (0.00)	0.80*** (0.00)
No Transfer	0.02 (0.94)	0.13 (0.47)	0.09 (0.63)
Weekly Off	0.13 (0.58)	0.18 (0.27)	0.23 (0.16)
Community Observer	-0.16 (0.43)	-0.19 (0.27)	-0.17 (0.34)
In Project	0.59 (0.11)	0.41 (0.08)	0.41 (0.09)
Percentage staff trained	-0.24 (0.35)	-0.05 (0.79)	-0.11 (0.54)
Whether respondent was trained	0.25* (0.04)	0.10 (0.36)	0.14 (0.18)
		Controls	
District fixed effects, surveyor fixed effects, urban/rural dummies	No	Yes	Yes
Respondent Characteristics - rank, years in police and since promotion, and time since meeting senior officers	No	No	Yes
N	1736	1730	1726

Table 8 - Specific Work Complaints

	No day off			Long working hours			Boring work		
All Interventions	-0.21* (0.02)	-0.19*** (0.00)	-0.07 (0.25)	-0.14** (0.00)	-0.04 (0.44)	0.02 (0.78)	-0.06 (0.39)	-0.06 (0.11)	-0.00 (0.97)
No Transfer	-0.02 (0.75)	0.02 (0.62)	-0.03 (0.51)	-0.07 (0.19)	-0.02 (0.51)	-0.10 (0.09)	-0.00 (0.91)	0.03 (0.28)	0.04 (0.23)
Weekly Off/Duty Rotation	0.02 (0.73)	0.05 (0.25)	0.08 (0.28)	-0.03 (0.56)	-0.04 (0.36)	0.03 (0.62)	-0.01 (0.89)	-0.00 (0.98)	0.01 (0.73)
Community Observer	-0.02 (0.70)	-0.00 (0.94)	-0.02 (0.72)	0.04 (0.38)	0.01 (0.82)	-0.00 (0.97)	-0.03 (0.39)	-0.03 (0.12)	-0.04 (0.13)
In Project	-0.12 (0.15)	-0.14** (0.01)		-0.12* (0.03)	-0.05 (0.39)		-0.04 (0.56)	-0.07 (0.08)	
Percentage staff trained	0.13* (0.03)	0.05 (0.27)	0.10 (0.06)	0.14** (0.00)	0.13*** (0.00)	0.12* (0.03)	0.02 (0.58)	0.01 (0.85)	0.03 (0.30)
Whether respondent was trained	-0.02 (0.54)	-0.00 (0.96)	0.00 (1.00)	-0.04 (0.12)	-0.06 (0.06)	-0.05 (0.10)	-0.03 (0.18)	-0.01 (0.60)	-0.01 (0.48)
N	1743	1726	3273	1743	1726	3273	1743	1743	1743
	Poor treatment/ disrespect from public			Unsteady/ unpredictable postings					
All Interventions	0.00 (0.97)	-0.01 (0.73)	-0.05 (0.19)	-0.02 (0.88)	-0.10 (0.18)	-0.08 (0.29)			
No Transfer	-0.10 (0.06)	-0.07* (0.04)	-0.08 (0.05)	-0.17* (0.03)	-0.13* (0.01)	-0.09 (0.16)			
Weekly Off/Duty Rotation	-0.03 (0.41)	-0.03 (0.29)	0.00 (0.93)	0.04 (0.55)	-0.00 (0.93)	-0.00 (0.97)			
Community Observer	0.02 (0.53)	0.03 (0.36)	0.03 (0.42)	-0.00 (0.95)	0.01 (0.73)	-0.05 (0.33)			
In Project	0.07 (0.32)	0.03 (0.53)		0.01 (0.94)	-0.00 (0.98)				
Percentage staff trained	-0.00 (0.94)	-0.02 (0.54)	-0.02 (0.54)	0.01 (0.84)	0.05 (0.29)	0.03 (0.60)			
Whether respondent was trained	-0.00 (0.89)	0.00 (0.84)	0.00 (0.96)	-0.03 (0.30)	-0.01 (0.64)	-0.02 (0.50)			
N	1743	1726	3273	1743	1726	3273			
		Controls			Controls			Controls	
Includes baseline data and station fixed effects	No	No	Yes	No	No	Yes	No	No	Yes
District fixed effects, surveyor fixed effects, urban/rural dummies	No	Yes	Surveyor FE	No	Yes	Surveyor FE	No	Yes	Surveyor FE
Respondent Characteristics - rank, years in police and since promotion, and time since meeting senior officers	No	No	Yes	No	No	Yes	No	No	Yes

Table 9: Police Opinion

	Whether the public supports the police			
All Interventions	0.03 (.77)	0.037 (.73)	-0.012 (.88)	-0.015 (.85)
No Transfer	-0.045 (.50)	-0.056 (.39)	-0.106 (.21)	-0.116 (.16)
Weekly Off	-0.034 (.65)	-0.033 (.65)	-0.103 (.25)	-0.106 (.22)
Community Observer	0.14 * (.02)	0.137* (.02)	0.069 (.43)	0.076 (.38)
In Program	-0.01 (.90)	0.007 (.93)		
Percentage staff trained	0.054 (.40)	0.053 (.39)	0.066 (.43)	0.068 (.42)
Respondent Trained	0.045 (.31)	0.04 (.34)	0.016 (.70)	0.014 (.73)

	Whether the police system is fair			
All Interventions	0.028 (.78)	0.057 (.58)	0.177 (.11)	0.165 (.14)
No Transfer	0.185** (.01)	0.184* (.01)	0.203 (.05)	0.188 (.07)
Weekly Off	-0.12 (.14)	-0.134 (.10)	-0.129 (.33)	-0.142 (.28)
Community Observer	0.058 (.41)	0.054 (.45)	0.017 (.85)	0.008 (.92)
In Program	-0.159 (.12)	-0.126 (.23)		
Percentage staff trained	0.001 (.97)	-0.013 (.83)	0.017 (.86)	0.006 (.94)
Respondent Trained	-0.083 (.05)	-0.07 (.12)	-0.091 (.05)	-0.078 (.10)

	Opposition to police brutality			
All Interventions	0.08 (.30)	0.086 (.24)	0.215* (.04)	0.184 (.07)
No Transfer	0.069 (.19)	0.052 (.28)	0.113 (.25)	0.084 (.37)
Weekly Off	0.071 (.33)	0.067 (.31)	0.028 (.71)	0.009 (.89)
Community Observer	-0.002 (.95)	-0.005 (.91)	-0.026 (.75)	-0.033 (.69)
In Program	-0.054 (.50)	-0.024 (.74)		
Percentage staff trained	0.075 (.18)	0.046 (.40)	-0.014 (.85)	-0.026 (.75)
Respondent Trained	-0.124** (.01)	-0.099* (.02)	-0.12 * (.02)	-0.102* (.03)

	The respondent does not blame the public for police misbehavior			
All Interventions	-0.051 (.49)	-0.057 (.45)	-0.047 (.54)	-0.043 (.58)
No Transfer	0.047 (.23)	0.051 (.19)	0.037 (.63)	0.04 (.61)
Weekly Off	0.018 (.64)	0.023 (.55)	0.052 (.44)	0.059 (.39)
Community Observer	-0.072 (.13)	-0.067 (.16)	-0.017 (.82)	-0.012 (.87)
In Program	-0.023 (.72)	-0.033 (.62)		
Percentage staff trained	0.005 (.89)	-0.001 (.96)	-0.048 (.50)	-0.055 (.44)
Respondent Trained	0.055 (.11)	0.06 (.09)	0.041 (.15)	0.045 (.11)

	Controls			
Surveyor Fixed Effects	Yes	Yes	Yes	Yes
Police Station size, urban/ rural dummies, district FE	Yes	Yes	-	-
Respondent Characteristics - rank, years in police and since promotion, and time since meeting senior officers	No	Yes	No	Yes
Police Station Fixed Effects	No	No	Yes	Yes

Table 10 - Case Review and Scientific Investigation

	Meta Outcomes						Whether scientific techniques used			Quality of scientific investigation, if used	
	Field Investigation			Documentation							
Investigating officer trained	-0.234 (.23)	-0.09 (.48)	0.017 (.88)	-0.258 (.15)	-0.144 (.31)	-0.129 (.41)	0.01 (0.93)	0.02 (0.73)	0.03 (0.60)	-0.20 (0.89)	-0.21 (0.87)
Percentage of officers trained	0.233 (.38)	0.18 (.33)	-0.302 (.13)	0.299 (.19)	0.122 (.49)	0.114 (.55)	0.09 (0.28)	0.04 (0.63)	0.01 (0.93)	0.52 (0.77)	1.22 (0.39)
Time Trend	0.095 (.40)	0.228 (.06)	0.513* (.00)	0.096 (.34)	0.146 (.20)	0.081 (.48)	-0.08 (0.07)	-0.06 (0.21)	-0.04 (0.42)	-0.27 (0.65)	0.69 (0.54)
N	Varies	Varies	Varies	Varies	Varies	Varies	981	918	918	186	169
		Controls			Controls			Controls		Controls	
Section of law of case	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Date of FIR, IO rank, whether instructions rec'd from senior officer, complainant caste, reviewer FE	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes
Police Station FE	No	No	Yes	No	No	Yes	No	No	Yes	No	No