The Regulatory Review

A Publication of the Penn Program on Regulation

Opinion | Rights | Feb 22, 2017

Reporting Police Force in the Digital Age

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Technology can help address the dearth of data surrounding police use of force.

It is not exactly a secret that the American criminal justice system has room for improvement. The United States incarcerates more people—in total and per capita—than any other country. Sentencing policies are often extremely harsh (and ineffective), rates of recidivism—committing additional crimes following release from prison—remain stubbornly high, and citizens—especially minorities—are increasingly skeptical of police officers' judgment in using physical force. And it is the last one—police use of force—that may be the hardest to solve.

What separates use of force from other problems is its unique lack of measurement. The Bureau of Justice Statistics tracks the size of prison populations and rates of recidivism over time, the Federal Bureau of Investigation (FBI) tracks crime rates through its Uniform Crime Reporting Program, and states like California offer their own publications of statewide data as well. As governments take action and policies are put in place, we can keep an eye on the statistics to have an idea if things are improving.

Not so with police use of force. No government agency publishes, nor successfully collects, consistent data around when and how officers use physical force. Were more citizens shot by police in 2016 than 2015? Has implicit bias training decreased force that is used on persons of color? What fraction of police encounters involved force in the first place? We simply do not have the data to answer these questions.

A few dedicated media outlets—like *The Washington Post* and *The Texas Tribune*—have manually compiled data, specifically on police shootings. By combing sources such as news articles and aggregating statistics, they have told compelling stories about police firearm usage. Illuminating as the work is, it is not enough. These data only cover shootings and may not do the same report the same way each year. Consequently, their work is limited in serving as an index on force that can be tracked over time.

Perhaps more importantly, transparency is the antidote to distrust. When citizen trust in police is at a 22-year low, and high profile shootings seem increasingly common, people rightly demand greater accountability. Even FBI Director James Comey recognized that a lack of data is driving police and citizens further apart. It seems like an issue that should have been addressed ages ago.

In fact, it was. In 2000, Congress passed the Death in Custody Reporting Act (DCRA), which required police departments to track and report to the U.S. Attorney General the number of civilians who died in police custody or during arrest. Garnering bipartisan support, the law was heralded as a major step forward in the measurement and improvement of police use of force.

The result? It took 15 years for the federal government to issue any kind of report on the DCRA's data. When it did, it showed poor data coverage and quality. Fewer than half of "arrest related deaths" were recorded, and there were major quality issues due to "lack of standardized modes for data collection, definitions, scope, participation, and the availability of resources."

In 2015, the same year that the disappointing DCRA quality reports were issued, California passed Assembly Bill No. 71 (AB 71). This legislation requires every law enforcement agency in California, beginning in 2016, to report to the California Department of Justice all police shootings and incidents where a civilian or officer is seriously injured or dies due to force. In passing AB 71, California hoped to be able to release the first complete, statewide dataset on police use of force—in early 2017.

Yet it seems difficult to be optimistic about a program launched in the shadow of the DCRA's shortcomings. What would make AB 71 succeed where the DCRA failed? The answer, in a word, is technology.

Our nonprofit, Bayes Impact, partnered with the California DOJ to build an online tool called URSUS to collect the data required by AB 71 and solve these problems. We knew that in order for use-of-force data to be meaningful, it has to be both complete and consistent. That is, all police departments must report their data, and each report must have the same information recorded in the same way. The DCRA fell short on both counts, and we were determined to overcome these issues in the California initiative.

Luckily, consistency in reporting data is where computers shine. If you have ever filled out an online form—say, to register a new account—the website can alert you when you forget a field or provide an invalid response. When the California DOJ looks at the reports it has received, these reports will already be complete and error-free. No human labor is required to check them or enter them into a database.

Electronic forms can also be dynamic, which saves users enormous amounts of time. The program can use your responses to one question to determine what other questions are unnecessary. Think of TurboTax, which only asks for extensive details about investment income if you answered "Yes" to the question, "Do you have investment income?" If you do your taxes on paper, you have to follow instructions carefully and wade through forms you might not need.

Crucial as it is, this is the least exciting part of what URSUS can do. Electronic data entry is not new nor earth shattering, even though old industries steeped in paper—like governments—have much to gain from them.

What is more new is the cloud. The "cloud" is just a fancy way of saying "someone else's computer." Companies like Amazon and Google offer elaborate computers that other companies can rent to run their own application on—the most common application being a website. Users of a cloud application like URSUS do not need to install anything on their own computers—all that is needed is a web browser like Chrome or Internet Explorer, which talks to the application running elsewhere. As a result, changing a cloud application only requires changing the one place where it is installed—everyone using it will immediately see the new version. With this instant distribution channel, improvements can be rolled out everywhere in days. By contrast, changes to paper forms or "enterprise" software take months or years to distribute.

Next, to get full participation by all police departments, we knew that the best way to encourage compliance is to make reporting as easy as possible. As obvious as this sounds, many of the reporting burdens placed on police departments are strikingly overlooked. For example, beginning last year, officers for the Chicago Police Department were required to fill out a two-page "Investigatory Stop Report" for every person they approached on the street. Each report took about half an hour to complete, which means a day walking the beat could easily translate to another day of paperwork. It would surprise no one if these reports were sometimes omitted or carelessly completed. Police officers' complaints eventually did lead to some limited reductions in this workload.

To avoid this problem, Bayes Impact turned to other modern developments to make URSUS as painless as possible to use. Going by names like "human-centered design" or "user experience research," there is an increasing emphasis on talking to your customers before you finalize a product you are making for them. In brief, the practice involves showing many versions of the product to your users as you are building it, to ensure that when it is complete, it fulfills their needs.

Over the course of eight months, Bayes Impact had dozens of conversations with police departments across California. At each meeting, we showed officers the current URSUS product and had them use it to report mock incidents to the state.

A great many unanticipated confusions arose in these meetings, which were invaluable in shaping URSUS. What if the incident involved multiple police agencies? Is contact with a vehicle considered "force"? And what is this button for?

Each question was discussed with the California DOJ, and the product was immediately modified to address the confusion. After months of chiseling, officers were routinely blown away by the final product's simplicity and intuitive nature.

In October of 2016, we launched our final product to all California police agencies, which was conceived, researched, built, and launched within one year of the AB 71 bill being passed. You can try out a demo of URSUS yourself here. In URSUS, police departments can now see summaries of all their use-of-force incidents for the year by characteristics like racial breakdown of officers and civilians. The California DOJ can track which agencies have reported their information and respond to any questions they may have. And all the data can—and will—be exported to California's Open Justice website this spring for the public to see.

At Bayes Impact, we open-source all of our code, which means we share our code so anyone can copy our tools or build upon them. Our hope is that by creating technological public goods, we can accelerate the rate at which others can build the digital infrastructure the world needs.

It is still too early to declare URSUS a success. Only when the data are publicly released, and researchers and journalists and policymakers have dug into it, will we be able to see if URSUS can truly help the country progress. But by removing much of the time, effort, and cost associated with reporting data, Bayes Impact and California hope to have the first complete and comprehensive dataset on police use of force. With luck, the tension between police and communities will finally have some common ground, and we as a country can begin to move from arguing over anecdotes to collaborating on solutions.

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This essay is part of a fifteen-part series, Regulating Police Use of Force.

Tagged: Big Data, California, FBI, Law Enforcement, Series