

Philip Meyer Journalism Contest Entry Questionnaire

1. Title of story(ies) or series and names of people, including and identifying freelancers, who worked on this story.

Gilded Badges: How New Jersey Cops Profit From Police Unions and Avoid Accountability

Andrew Ford, Asbury Park Press, and Agnes Chang, Jeff Kao and Agnel Philip, ProPublica

a. For a partnership or collaboration, please name each entity that took part in the investigation.

ProPublica and the Asbury Park Press

2. Date(s) published, aired, or posted.

February 8 - March 29, 2021

3. Topic and synopsis of story or series, including major findings.

As the nation turned its attention to police accountability in the wake of the killing of George Floyd, Asbury Park Press reporter Andrew Ford worked with ProPublica to produce an unprecedented analysis of police union contracts, revealing pricey perks and protections guaranteed to New Jersey cops.

Ford joined Agnes Chang, Jeff Kao and Agnel Philip to [develop a machine-learning workflow](#) that spotted similar clauses across hundreds of police union contracts, [including provisions that allowed officers to subvert state law, costing taxpayers more than \\$400,000 in illegal payouts.](#)

Ford brought the paperwork story alive with classic shoe leather reporting, pressing local officials for explanations and prompting a state lawmaker to take action. Stonewalled by the state's police unions, Ford still worked for fairness, making sure to include a prominent union attorney's defense of the police contracts he crafted in scores of towns.

Ford also secured a crucial interview with a town manager in an ironic position that illustrated New Jersey's unique problems. Vincent Caruso now struggles to control the cost of his police department's union contract after he personally banked a \$342,000 payout including unused sick and vacation time upon his retirement as police chief.

Thanks to a sourcing effort that involved emailing more than 30,000 police officers, Ford was tipped off to a police chief in a 10-officer department whose contract guaranteed him a \$200,000 salary without working a full 40-hour week.

By reviewing hundreds of pages of documents, Ford identified an officer who more than doubled his base salary by working extra-duty jobs — which are bonus assignments for officers like monitoring traffic at a road construction site. The officer Ford spotted appeared to have violated his department's policy by working 27 hours in a two-day period. When Ford asked the department about the officer's hours, they launched an internal affairs investigation.

The story also brought to light an unusual retirement gift for a police chief: a solid gold badge worth more than \$7,000.

4. How the story got started (tip, assignment, etc.)?

For his project pitch to ProPublica's Local Reporting Network, Ford produced a nearly complete scrape of a state database of New Jersey police union contracts and suggested examining phrases used repeatedly across contracts. Thanks to the expert help from colleagues Chang, Kao and Philip, as well as ProPublica research reporter Alex Mierjeski, that dream became a reality.

5. Was your work in any way based on another news organization's previously published or aired report? If yes, please provide the name and publication or air date.

No.

6. Results/impact (if any).

Lakewood Police Department started an internal affairs investigation, and some towns tightened their practices related to paying for unused sick days.

7. The following questions deal with the social science research method(s) you used; answer any that apply to your work:

a. Describe in detail the social science research method(s) used.

The Asbury Park Press and ProPublica used natural language processing to identify provisions of interest in hundreds of police union contracts. Our text analysis pipeline involved a number of steps: data collection, text digitization and cleaning; sentence segmentation and encoding; collecting representative contract provisions; and evaluating contracts.

We then reviewed more than 500 budget documents to calculate future payments for one category of perk covered by these provisions: unused time off. We found nearly \$500 million in accrued liabilities to municipal law enforcement officers across the state.

Data Collection

We collected the contracts for our analysis from the website of the New Jersey Public Employment Relations Commission, also known as PERC. Public employers are required to file with PERC the contracts they negotiate with public employee representatives. There are 565 municipalities in the state, and some that contract with police unions are as small as 1 square mile. The site contains an extensive database of public contracts, including police union contracts, for nearly all the state's municipalities, going back decades.

We downloaded all 6,366 of the contracts on the site and removed any public sector contracts which were not for rank-and-file police officers. The remaining contracts formed our starting body of 2,957 New Jersey police union contracts.

Text Digitization and Cleaning

Using Google Cloud Vision, we converted the digital image PDF contracts into machine readable text. We then trained a type of machine learning model called a conditional random field to weed out extraneous text, such as cover and signature pages or the table of contents, leaving only the contract text we were interested in.

Sentence Segmentation and Encoding

We used a sentence as the basic unit of analysis. We segmented the body text for each contract into individual sentences and converted them from a textual to a numerical representation using Google's Universal Sentence Encoder. These numerical representations allow us to computationally compare the similarity in meaning between sentences without having to compare their text. This is especially useful where the words used in two sentences are completely different, but the meaning remains similar.

Collecting Representative Contract Provisions

We then identified representative provisions from across our database for contract clauses in several categories:

- Past practice clauses, which require employers to continue previously established benefits to officers, even if the benefits weren't written into the contracts, unless the benefits are explicitly ended by a new contract.
- Sick day sell-back provisions, which allow officers to convert unused sick days to cash or paid time off. In some cases the provisions could subvert a 2010 state

law that limited sick day payouts at retirement to \$15,000 for employees hired after that date.

- End-of-career payments, which call for a town to pay an officer months of salary upon retirement after 20 or 25 years of service, as a parting benefit.
- Extra duty provisions, which govern side work that towns direct to their officers, and have become a routine source of cash.
- Rules about sharing the identity of complainants, which require that the identity of a person who complains about an officer to be provided to the officer under investigation.

We used two strategies to find various versions of these clauses. We first developed a contract clause lookup tool to find most-similar sentences from the database given a search sentence. Starting with provisions identified in our reporting we found alternative wording or different terminology in otherwise semantically similar provisions in our data. We also used clustering algorithms to automatically group sentences in the database with similar meaning, to see if known provisions were connected with other sentences. For each clause, we repeated this exploration until we could add no alternative wordings to our collection of representative provisions. We ultimately identified dozens of representative provisions.

Evaluating Contracts

We evaluated the 245 recent and current contracts in our collection against these representative provisions. Any contract with at least one sentence with a high similarity to a representative provision was considered likely to fall in the corresponding category and became a candidate for further review.

Calculating Future Payments for Unused Time Off

Using more than 500 budget documents obtained primarily from the New Jersey Department of Community Affairs website, our analysis found that New Jersey towns were liable for \$938.6 million of unused time off in 2019, the total owed to all municipal employees.

We then manually reviewed the organizations named in these documents to identify how much of this liability was attributed specifically to law enforcement employees. Our review found \$492.9 million was due to law enforcement officers in towns throughout the state. However, this understates the true burden attributed to police because some towns didn't specify how the total was divided among their employees.

b. How did you verify the results of the method(s) used?

We verified the results of the contract clause analysis pipeline manually.

To eliminate false positives, we verified the language and context in which the candidate sentence appears. To ensure consistency, we defined a standard for each category. Two reporters independently reviewed the provisions picked out by the algorithm for each category, and discussed and reconciled any discrepancies.

We estimated our false negative rate using random sampling. Our false negative rate for each category was low: 15% for past practice clauses, 15% for extra duty provisions, and 3% for clauses that required sharing the identity of a complainant. We also decided to manually review all contracts for sick day sell-backs because of the provision's complexity. We added back any false negative provisions that the pipeline had missed into our final reporting totals.

c. How did the results of those methods inform your reporting and writing?

The cutting-edge data analysis by Chang, Kao and Philip was the backbone of the reporting for this story, an essential skeleton Ford brought to life with interviews and colorful detail.

d. Did you seek significant help from social scientists outside your newsroom? Describe their involvement.

At the start of our project, we sought out the advice of Dr. Stephen Rushin, law professor at Loyola University Chicago who previously published a paper that determined police union contracts' contribution to reduced police accountability. We also got advice from our data science advisor Dr. Heather Lynch, professor of ecology at Stony Brook University, who reviewed the machine learning and text analysis portions of our methodology.

8. Have you run a correction or clarification on the report? Has your reporting received any pushback? Or has anyone come forward to challenge its accuracy or fairness, even if a correction or clarification was not published or aired? If so, please explain the challenge and how it was resolved.

No.

9. Difficulty, uniqueness of effort, or other special circumstances related to this subject.

This project was the first comprehensive look at perks in a state's police union contracts by any major U.S. news organization. Simply tracking down and assembling the contracts for 500 municipalities was a major accomplishment, reflected by the fact that many researchers have asked us for the collection of documents since our story was published.

The identification of clauses in contracts required a unique blend of document processing, machine learning and manual review. A good deal of iteration was needed to ensure we were capturing everything of interest and not flagging clauses outside the scope we had defined.

Similarly, assembling and analyzing over 500 budget documents required extensive use of Python scripts to scrape the documents from a state website and compile them in a standardized database. Then our team manually reviewed the data to identify missing reports and errors and reached out to dozens of towns to confirm and complete the data. Finally, we also manually identified police agencies within the dataset because law enforcement liabilities weren't tracked in a specific and standardized way.

Finally, finding municipal officials and law enforcement officers willing to go on the record was a challenge. As highlighted in our reporting, police unions wield great power over the local officials they strongarm into contract agreements with very favorable terms for the cops.

10. Length of time taken to report, write and edit the story.

Ford's pitch to examine police union contracts was crafted in 2019, with work beginning in earnest in January 2020. The story was published in February 2021.