Orange Sheriff's new technology helps to predict, prevent crimes

Doornbos, Caitlin.**Orlando Sentinel; Orlando, Fla.** [Orlando, Fla]09 Oct 2016: A.1.

Full text	Details

When it comes to stopping crime, law enforcement officials may wish they could see the future.

A predictive policing program called PredPol, which the Orange County Sheriff's Office started using in 2014, claims to come close.

It uses local crime data to predict where and when a crime is likely to occur based on math.

The Sheriff's Office says the program has shown early signs of success, but some experts question the effectiveness of the program that costs the county about $103,000 a year.

In his 2016 State of the Agency address to county commissioners this summer, OCSO Sheriff Jerry Demings said implementing PredPol has been one of his agency's "major accomplishments."

"We use [PredPol] to try to predict crime before it ever occurs and deploy our resources accordingly into those areas to prevent and detect violation of law," he told commissioners. "That program seems to be going well."

The program has been controversial, with 17 civil rights organizations including the ACLU, the Brennan Center for Justice and the NAACP expressing concerns about the technology in late August, saying that manually entered police data "is profoundly limited and biased" and can be easily manipulated or potentially used for profiling.

Professor Andrew G. Ferguson of the University of the District of Columbia studies predictive policing technologies and their effects on civil liberties.

He said that the program can contribute to racial profiling by letting imperfect data entered by implicitly or explicitly biased officers justify biased policing.

"Where [officers] police, crime is reported. [Crime data] will correlate with where police are, so your data is going to have a race impact," Ferguson said. "We are pretending this [data] solution doesn't involve race, and it does."

Here's how the program works:

Users upload the type of crime, where and when it occurred into the program via the Internet. PredPol then computes the numbers and predicts when and where a future crime is likely to happen.

The predictions are good for a 12-hour period in a 500-square-foot area. A prediction map will include 10 to 20 red squares highlighting the areas where crime is predicted. A deputy can then patrol that area for anything unusual.

"It's really about optimizing that precious 5 minutes they have between calls," PredPol co-founder Jeff Brantingham said. "It's not about replacing community policing; we're just helping them organize quickly."

OCSO Maj. Jeff Stonebreaker said the six-digit annual price tag paid through funds seized or forfeited in felony crimes is worth the streamlining of deputy manpower PredPol provides at a time of limited staffing.

He said the OCSO "can't hire [deputies] fast enough" as it climbs out of an economic downfall and begins to fill its backlog of vacancies created after the great recession.

Ferguson said PredPol would be great if it worked, but its effectiveness in unclear.

There's only been one scientific study of PredPol - and it was conducted by the company itself.

"The irony is PredPol measures success by both arrests and when no crime occurs, so you win either way," Ferguson said. "[Officers say] either we deterred [crime] or we stopped a guy, but it's really hard to figure out whether it is an accurate prediction or not."

In PredPol's scientific study, the program appeared to have better results than using a human crime analyst.

However, Ferguson points out two holes in the analysis: the study was not objective and "we don't actually know if the crime analyst was that good."

The Orlando Police Department uses crime analysts - actual people in a unit who track "crime and trends over several weeks, months and years," said OPD spokeswoman Wan- da Miglio. She said their most effective crime prevention is less high-tech.

"Perhaps our most important tool is our weekly crime meetings, in which command and staff from all areas of the department discuss current and ongoing crime trends and we talk about the tactics to combat any upticks or trends we see," she said.

Between 2014 and 2015, Orlando police saw incidents of violent crime rise from 2,338 to 2,544, while property crimes fell from 16,521 to 16,074, according to preliminary statistics in OPD's annual report published in March.

In the same period - which was also the year after implementing PredPol - Orange County saw violent crimes decrease from 5,551 to 5,475 and property crimes drop from 31,662 to 31,445, according to FBI Uniform Crime Reporting numbers. Stonebreaker said PredPol likely played a role in the small dip.

However, the change should not be solely attributed to PredPol as the Sheriff's Office has seen an annual drop in crime for about eight years straight - well before the department began using the program.

Since 2008, crime in the county has dropped by 22 percent, according to the FBI.

William Moreto, assistant professor of criminal justice at the University of Central Florida, said even though there is a lack of empirical research on PredPol's effectiveness, a push toward data-driven policing "highlights doing things in a more objective manner."

"We need to be cautious of any result that isn't evaluated," he said, "but the fact that [the Sheriff's Office] is willing to to engage in more data-driven policing is the right step."

PredPol works in part under the theory of "recriminalization," Bran- tingham said.

Brantingham, an anthropologist, says studies overwhelmingly suggest chances of being victimized in an area rise dramatically after a first offense is committed.

"If your house is broken into, the chance of it being broken into again is high- er," he said. "Offenders like it easy; if they did it once, they can do it again."

But PredPol does not predict all crimes. Narcotics, domestic violence and traffic violations are not analyzed by the program.

PredPol is best at predicting robberies, Bran- tingham said, because it works best with citizen-reported crimes, rather than deputy-reported.

The program issimply a way to use mathematics and science to optimize resources, according to a study by the nonprofit RAND Corporation's Safety and Justice Program.

"We emphasize that predictive policing tools and methods are very useful, but we also emphasize that they are not crystal balls," the report said. "These algorithms predict the risk of future events, not the events themselves."

Orange County is one of just 60 law-enforcement agencies in the world using the analytics tool. Only four other agencies - including Miami Gardens and Cocoa police departments - in Florida use PredPol. Brantingham said OCSO is among the biggest of PredPol's clients, along with the Los Angeles and Atlanta police departments.

Credit: Staff Writer - - cdoornbos@orlando sentinel.com or 407-650-6931 - ; Caitlin Doornbos, Staff Writer

Word count: **1110**

More like this   ✕

Search ProQuest...   🔍

⤓

❝ Cite   **✉ Email**   **🖫 Save**

☐ Add to Selected items

Related items

POLICING BY NUMBERS: BIG DATA AND THE FOURTH AMENDMENT
Joh, Elizabeth E.
Washington Law Review; Seattle Vol. 89, Iss. 1, (Mar 2014): 35-68.

The application of future-oriented technology analysis (FTA) to law: the cases of legal research, legislative drafting and law enforcement
Norberto Nuno Gomes de Andrade.
Foresight : the Journal of Futures Studies, Strategic Thinking and Policy; Bradford Vol. 14, Iss. 4, (2012): 336-351.

Asymmetric Loss Functions for Forecasting in Criminal Justice Settings
Berk, Richard.
Journal of Quantitative Criminology; New York Vol. 27, Iss. 1, (Mar 2011): 107-123.

MAPPING THE FUTURE WITH BIG DATA
Tucker, Patrick.
The Futurist; Washington Vol. 47, Iss. 4, (Jul/Aug 2013): 14-18.

Testing a geospatial predictive policing strategy: Application of ArcGIS 3D analyst tools for forecasting commission of residential burglaries