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Organized retail crime (ORC) is on the rise. According to the National Retail Federation, in 2021 retailers saw an average 26.5% increase in ORC incidents in over the previous year. Overall, ORC contributes to a $94.5 billion inventory shrinkage issue for the retail industry, and retailers are struggling to stop it. But a technology known as behavior anomaly detection can help.

How Organized Retail Crime Differs from Random Shoplifting

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Four Types of Organized Retail Crime

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News headlines characterize ORC as hordes of thieves descending on stores, smashing counters, and grabbing as much as merchandise as they can before fleeing in a blink of an eye. But smash-and-grab theft is only one kind of ORC. Organized thieves steal from stores in many other ways that overlap with how standalone shoplifters operate:

- **Colluding with dishonest employees**. For instance, employees might issue pre-paid store credit cards without paying for them. (Accomplices bring the pre-paid credit cards to crooked cashiers at registers, where they load them up with hundreds of dollars of merchandise.) Or a

cashier at the checkout lane might void large transactions but still place merchandise in shopping bags, or ring up only portions of an order to let accomplices walk away with stolen merchandise. In some cases, ORC consists solely of rings of employees colluding with their supervisors to make off with merchandise.

- **Return fraud**. Examples include price switching (replacing original labels with higher-priced labels and returning merchandise for a profit), returning stolen merchandise (shoplifting an item and returning it for profit), and receipt fraud (utilizing stolen receipts to return merchandise for profit).

- **Self-checkout lane theft**. Examples include barcode swapping (scanning a barcode from a different item), mis-scanning (deliberately mis-scanning an item), non-scanning (not scanning a product), and walkaways (simply walks through the lane without scanning anything).

- **Concealing merchandise** as shoplifters do or brazenly walking out of a store without paying.

Two Ways Organized Retail Crime Differs from Shoplifting

Organized thieves differ from individual shoplifters in a few important ways:

- **They operate in groups to give themselves an advantage**. For example, one accomplice might distract an employee while another pilfers merchandise.

- **They target products that they can resell**. These categories include baby formula, designer handbags, electronics, jewelry, footwear, and cosmetics.

Stores are struggling to stop ORC for many reasons, including the hard reality that retailers are outnumbered. They continue to experience a shortage of store associates available to service customers and keep stores secure. In addition, criminals have developed more techniques to ply their illegal trade.

The Problems with Using Cameras, Hiring More Security Guards, and Locking Merchandise Behind Counters

Nevertheless, retailers are taking action. Retailers are:

- Increasingly locking merchandise behind shatter-proof plexiglass, including products such as electronics and even laundry detergent.

- Hiring more security guards.

- Installing more cameras to monitor stores.

But there are some problems with the above approaches, such as:

- The customer experience suffers when consumers encounter friction as they try to buy products locked and stored away.

- Store associates endure more stress as they respond to the uptick of shoppers needing assistance retrieving products.

- Having too many security guards present, combined with products being locked behind glass, makes the store feel more like a fortress and less like a pleasant place to shop.

- No store can hire enough guards and store associates to fight the subtle ways that organized criminals operate, including colluding with cashiers.

- More cameras in and of themselves will not stop crime. Cameras typically record crime and other disruptive behavior and report their findings long after the fact. Even smart cameras equipped with computer vision -- a form of artificial intelligence (AI) that makes it possible for computers to record visual data such as pictures and video – require human judgment to analyze the data recorded.

How Behavior Anomaly Detection Can Help

A technology known as behavior anomaly detection can play an important role in fighting ORC. Behavior anomaly detection consists of the use of computer vision and pattern recognition to keep stores safe, fight theft, and improve customer service. The key components:

- Computer vision gives store managers real-time insight into everything that is going on in a store to a level of detail that typical security cameras miss. It's a smart technology that can observe and report more than even an ordinary security camera can, such as when a product has been removed from a shelf and what quantity.

- Pattern recognition consistently detects behavioral anomalies, such as people in stores who are acting suspiciously (say, someone trying to steal versus someone who is simply picking up a product to examine it more closely).

The Difference between Computer Vision and Behavior Anomaly Detection

Behavior anomaly detection builds off computer vision, but it's not the same thing. Computer vision alone is limited because it:

- Computer vision only describes what is happening without meaningful interpretation of an event.

- Computer vision alone cannot capture the subtle ways people behave. People with bad intentions are constantly finding new ways to commit crimes, and computer vision alone does not evolve to keep pace with them.

- Computer vision alone is not scalable for retailers that have traditionally used only point solutions for very specific applications.

Computer vision needs the second element of behavior anomaly detection -- pattern recognition -- to consistently detect behavioral anomalies, such as people in stores who are acting suspiciously.

Computer vision describes what is happening; pattern recognition interprets what's happening. Computer vision and pattern recognition together deliver true behavior anomaly detection.

How Behavior Anomaly Detection Fights Organized Retail Crime

In context of ORC, behavior anomaly detection works by observing and reporting in near-real time suspicious behaviors as:

- Shoppers moving too quickly through the check-out lane with a large shopping cart full of merchandise. This could signal someone colluding with a cashier to "purchase" products that are not actually being scanned.
- Teams of people working in tandem, including the scenario of an accomplice spending an inordinate amount of time distracting a store associate while a thief steals merchandise.
- Groups of people spending too much time in sections of the store that are especially vulnerable to ORC, such as electronics and clothing, as noted above. (A store targeting ORC might install additional cameras in those vulnerable areas.)
- Someone attempting to take large amounts of merchandise into a bathroom or unattended dressing room, where criminals often attempt to switch price tags.

Behavior Anomaly Detection Also Improves the Customer Experience

Behavior anomaly detection can also improve the customer experience. For example, behavior anomaly detection can alert a store associate about a customer who might need assistance, such as someone attempting to lift a large box of merchandise. Or perhaps too many store associates are clustered in one area of the store, missing opportunities to provide more complete throughout the entire space. With behavior anomaly detection, a store manager can ensure that store associates focus more of their time assisting customers and helping when someone might need special assistance.

The Key to Making Behavior Anomaly Detection Succeed

At the same time, behavior anomaly detection won't work effectively without proper training. The AI that powers behavior anomaly detection needs to be trained with data to know what to look for. Moreover, the technology needs to be used in a way that protects consumer privacy and does not unfairly profile anyone. But with the right training by a diverse team of humans, behavior anomaly detection can be a powerful ally to retailers.

How Centific Can Help

Behavior anomaly detection can help retailers fight a growing problem and ease the burden on stores associates to fight bad behavior themselves. Centific helps retailers do that with our Scout platform. Scout provides personalized and prescriptive analytics in real-time, intuitively alerting a store's team to events before they escalate.

Scout's human-in-the-loop foundation mitigates bias through comprehensive AI training data sets, and leverages Centific's global team of risk mitigation experts for real-time situational analysis,

decreasing false positives. Whether it’s understanding a particular customer's behavior, detecting fraud at self-checkouts, or identifying on-premises hazards, Scout empowers retailers to act with confidence in real-time.

To learn more, Contact Centific.

For More Information

- “Safeguard Stores and Improve the Customer Experience with Behavior Anomaly Detection”
- “Why Retailers Need Behavior Anomaly Detection to Fight Crime
- “How to Fight Crime at the Self-Checkout Lane”
- “A Solution for Drug Store Chains to Fight Crime”