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FAST FORWARD

STOPPING SHOPLIFTERS GOES HIGH-TECH

WHY YOU SHOULD CARE

Because the five-finger discount is not a victimless crime.

By Zara Stone
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Scroll through Read Hayes' address book and you'll find a large number of criminals whose infractions range from petty theft to grand larceny. But he deals with these ex-cons strictly on a consultant basis, getting their input about flaws in store security systems and detailing the techniques they'd use to take goods, which include using foil-lined bags and tag removers to thwart alarms.

Hayes, who is a research scientist at the University of Florida and the director of the Loss Prevention Research Council, uses these findings to design theft-prevention systems in a custom-built innovation lab. "It's a relatively new concept in the retail crime and loss area and simulates a store environment, parking lot and corporate environment," he says. Hot trends right now are beacons, face and hand biometrics, smart safes and GPS-tagged items, which help law enforcement pinpoint a thief's movements.

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If this seems invasive, think about this: In 2015, some $45.2 billion was lost to retail theft, with $377 the average loss per incident, according to the National Retail Federation. An estimated $30 billion of the total pilfering was due to organized retail crimes, or ORCs, which affected 97 percent of retailers in 2014, a 9 percent rise from 2013.

Preventing this hit on the bottom line is key for retailers, but they don't want the tab for security to exceed the crimes. A two-person security team patrolling a typical anchor store in a suburban mall costs around $51,000 a year, according to the Department of Labor — about 12.5 percent of total operating costs. Hence the growth of lower-cost, high-tech shoplifting solutions, which include everything from face recognition of bad apples to products like BasketTrack from Carttronics, which equips baskets with radio-frequency sensors that set off alarms and capture video as a shopper tries to exit the premises without paying.

Starting this year, a number of stores across America will display signage that informs customers that management is using **facial-recognition** software, proudly stating they are a "certified safe zone." "Retailers want to do the right thing, to be transparent," says Peter Trepp, CEO of FaceFirst, a facial-recognition system used by retailers worldwide, including many Fortune 500 companies — he can't name names, but FaceFirst has been linked to Walmart and Saks. "[But] shoplifters have become more sophisticated."

Retailers using Trepp's product install plug-and-play cameras and populate them with biometrics of known shoplifters from their databases and police logs. Every visitor's face is automatically tracked and compared at 30 frames per second; when a match is found, an alert is sent to employees' smartphones. Trepp views this as a necessity. "It's amazing how frequently the shoplifters return to the stores, and they're not deterred by the old tech," he says. "We've reduced [shoplifting] by 20 to 30 percent in our stores."

But there's a fine line between asset protection and invading customers' personal space — too little and products vanish; too much and honest customers go elsewhere. Ahmed Beshry, co-founder of QueueHop, believes retail innovation is key to upgrading security. His startup provides stores with security tags that shoppers unlock via mobile payment, which also enables them to bypass bottlenecks at checkouts. While this type of self-service is becoming commonplace in the grocery world, it's still rare in the fashion and tech space, but Beshry says these tags simplify shopping while still sounding alarms if stolen. He says they solve something he calls "cart abandonment," the estimated $22 million a year retailers lose when impatient shoppers discard their intended **purchases**.

There's also a growing area of businesses utilizing biometrics; at a 7-Eleven in South Korea, vein-pattern recognition means customers can pay by scanning their palm, and with their veins on record, they're also less likely to steal. But as technology gets more sophisticated, so do the shoplifters.

Sure, you can find not-so-humble brags on forums such as the shoplifting subreddit, which has doubled in size over the past six months, and Tumblr sites, where regular 'lifters upload haul posts, but they also provide updated advice on how to disable security tags and the prosecution policies of stores. Fun fact: The acronym CRAVED is used as a guidepost for which items are targeted. It stands for Concealable, Removable, Available, Valued, Enjoyed and Disposable.

But back to IRL experiences and how Hayes' research plays out. A good starting point is Rite Aid, where if you loiter overly long in the cosmetic aisle, a motion-activated monitor lights up, reflecting your face right back at you in full HD quality. A nice touch if you're