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In search of the unstealable bicycle

With 380 bikes reported stolen monthly, the race is on to find ways to thwart thieves

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LESLIE SCRIVENER FEATURE WRITER

On June 26, John Millen learned how difficult it is to keep a bicycle safe from Toronto thieves. That was the day he took his custom bike up the elevator to the fourth floor of his Front Street E. office. Wedged between a camping equipment store and a restaurant, the front door is hardly noticeable from the street. Usually the elevator is locked and a key is needed to get to his floor.



TONY BOCK/TORONTO STAR

The correct way to lock a bike securely is with a cable lock and a U-lock, as the Urbane Cyclist's Michael Tabujara demonstrates with a bike on Queen St.

He left his bike in an open area where the

receptionist works, near a glass-panelled conference room, where he and his colleagues usually meet. But that day, the safeguards failed – no one was in the reception area for about an hour – and his bicycle, which he had built himself with hard-to-get parts and worth about \$3,000, vanished.

About a month later, Millen, a financial adviser, read that Toronto police had cracked a bicycle ring. Alleged mastermind Igor Kenk, who owned a second-hand bike shop, was arrested, charged and nearly 3,000 bikes were retrieved from garages around the city. Millen, 47, went three times to a police warehouse, but failed to find his stolen bike.

In the meantime, he's riding his winter bike, but keeping it well hidden in a back office, a long way from the front lobby.

Just as well. Brazen daylight bike thefts continue in Toronto, where more than 380 thefts are reported on average each month and cyclists are asking whether there's such a thing as an unstealable bike.

The week after the ring was broken in mid-July, there was a dramatic drop in the number of bike thefts in the west-end police division where Kenk had his shop and where there were more bike thefts than any other division in the city, police say. "More recently, it's down a little," says Sgt. Jeff Zammit of 14 Division. Millen's solution to bike thievery is simple: keep the bike out of sight.

That's often impractical, since security guards shoo cyclists out of most downtown buildings and bike thieves are both bold and resourceful.

WHY WE IGNORE BICYCLE THEFT

Bikes are stolen every day on streets busy with passing pedestrians and cars, but it's rare if anyone bothers to stop a thief. Why is that?

Research has shown that the more bystanders at the scene of a crime, the greater the chances are *no one* will help.

If one person is present, there's an 85 per cent chance that person will act to stop a crime or help a victim. But if four people are on the There's the story of the thief who cut down a sapling to free a locked bike. Another sawed the balustrades off a front porch. Another unhinged the door to a backyard shed where bikes were stored.

Is it impossible to leave a bike safely on a city street? Is it possible to design a theft-proof bike?

There have been inventive attempts. In March, the online industrial design magazine Core77.com held a one-hour competition asking for ideas for a theft-proof bicycle. The winning design, out of 50 submissions, featured a retractable cable that emerged from the seat post and could be threaded through the wheels and attached to an anchor, securing the seat and the wheels. Another designer suggested wrapping the bike in a metal mesh bag. Others offered piercing alarms; removing various parts of the bike (including the frame), that would make it difficult for a thief to ride away; or a removable seat post that connects to the handlebars to create a U-lock.

But an ingenious idea, and one that caused a lot of merriment among the bike designers at True North Cycles in Guelph, Ont., was the inky explosion submission, where an unsuspecting thief clips a locking cable filled with ink and is splattered with permanent colour.

The *Star* asked Hugh Black, a graduate in mechanical engineering from Queen's University and owner of True North (which specializes in custom frames), to assess the merits of online theft-proof designs. It was lunchtime and Black and his colleague, also an engineer were choking on their samosas and curry as they looked at the sketches and computer renderings.

The magnet lock – a magnet was permanently attached to the rim of the rear wheel – brought the most derision. "Who wants to carry around a magnet?" he asked. The winning entry he called "bogus."

"You just cut the cable, right? They are so easy, you don't need special equipment.

``Most of the designs added weight to the bike, which is the last thing you'd want to do."

His idea, and one that is popular to deter (but not prevent) bike thefts, is to apply something similar to a barcode to the bike, so that it can be identified after it has been stolen. There are variations on this theme.

scene, the likelihood of anyone offering aid or even calling, "Hey, what are you doing?" drops to 30 per cent.

People have to notice what's going on, says Myriam Mongrain, a psychology professor at York University. If other passersby appear unconcerned about something out of the ordinary - a man lying on the street may be drunk or asleep, not in need of medical help - you are more likely to think there's no problem. Call it bystander apathy.

Even if you do feel something is amiss, since there are lots of people around, you may think someone else will help. It's "diffusion of responsibility" – an attitude of what can I do anyway? This calls for a mechanic or someone who knows first aid or someone physically stronger.

-Leslie Scrivener

Since Kenk's shop was shut down, some 5,400 bike owners have registered bike serial numbers with Toronto police.

Starting in September, the Bicycle Trade Association of Canada and Canadian Crime Stoppers are launching a nationwide bicycle identification program using microdot technology, where a PIN number is encoded on a data dot the size of a grain of sand. The dots are applied in a liquid adhesive on all the moveable parts of a bike and can be read using ultraviolet light and an inexpensive magnifier. The kit will sell in bike stores.

The benefit, says Pat Cowman, president of Datadot Technology Canada, is that it's a national system and can identify bikes stolen in Toronto that might end up for sale in Montreal or Ottawa. The technology is already being used to identify cars and power tools; police forces across Canada are being trained to use the technology in retrieving stolen industrial materials.

In Europe, some bicycles are tagged with radio frequency identification (RFID) security stickers –

the kind used to identify and recover lost pets. You can see them on the classic Dutch upright bikes sold in Toronto. With the wave of a scanner, which is linked to a database, the bike's serial number and vital information can be read. Police or even parking officers could routinely scan parked bikes and be alerted to those reported stolen.

Using GPS on bikes is an appealing notion, but still too expensive for widespread use. It's also ineffective when bikes are disassembled and parts scattered and sold.

The University of Toronto campus community police use global positioning tracking beacons on their "bait bikes" – bikes left in high-theft areas of the campus with the intention of nabbing a thief when a bike is stolen. The program has been in effect since 2006, but campus police say it's not as useful as they had hoped.

David Katz, president of Nero Global, the GPS tracking company based in Vancouver that donated the equipment to the university, says GPS isn't a solution for individual bike owners.

"I have people calling me up all the time to ask about bikes – it's a headache," he says. The beacon has to be recharged every few days and the GPS unit costs about \$700 plus a monthly wireless network fee. "If it cost \$99 and had a \$5 monthly fee, I'd see it as something people would want to buy, but for now, technology prohibits wide consumer appeal ... But we continue to imagine, maybe in a year or two."

There's also the inherent problem of bicycle design. In any bike store there are rows upon rows of bikes with quick-release wheels, which allows them to be removed with the snap of a lever.

"This is a ridiculous contraption for downtown Toronto," says Eric Kamphof, manager of Curbside Cycle in the Annex, pointing to the bikes hanging on a rack. "It's an industry that's out of touch with city cyclists."

So, how to reduce bike theft in Toronto where 4,500 bikes were reported stolen last year, never mind the owners who fail to report?

"The city has said it wants to promote cycling – but they've got to tackle the problem of theft," says Nancy Kendrew, an owner of the bicycle co-op, the Urbane Cyclist, on John St. "The city is adding bike lanes and promoting safety programs. At the end of the day you come out and your bike's not there, what does it matter how much the city is putting into infrastructure?"

She suggests that every cyclist who loses a bike or even part of a bike to theft should email the local councillor. "They'd realize how much theft is happening ..."

Toronto Councillor Adrian Heaps, chair of the city's cycling committee, admits that bike security ranks fourth after bike lanes, storage and cycling education in the city's cycling priorities. But changes are underway. There will be more safe bike storage for 220 bikes at Union Station and 500 at Nathan Phillips Square next month when the city opens new parking lots for bikes. Swipe cards allow access to the system, which will be extended to subway stations, such as Victoria Park and Main that are undergoing renovation. Beyond the world of designers and dreamers, the sad conclusion is that any bike can be stolen. "A bike has to be anchored to something," says Kendrew. And that means a solid lock; actually, two – a sturdy U-lock and a cable to thread between the wheels. Two locks make it harder for thieves and require different kinds of tools – a bolt cutter for one, a crowbar for another.

"The first thing people ask about a lock is, `is it heavy?'" says Paul Parenteau who works at Urbane Cyclist. "To thwart a thief using strong tools, you need a strong lock that's not defeatable."

One of the sturdiest is the New York Fahgettaboudit lock by Kryptonite, which weighs more than two kilograms and costs \$130, though other locks, monstrous chains, weigh 4.5 kilograms. Other locks immobilize the rear wheels, making it more complicated to free a bike. "Desperate people don't have time," says Parenteau.

Another way to deter thieves is to camouflage a bike – strip off brand labels, paint it a matt black, even apply hockey tape to make it look cheap or worn out.

But that's not really helpful if the goal is to encourage cycling as an alternative to the car, says Kendrew. "If you want to promote cycling, I don't know how you're going to get people out of luxury cars and onto a crappy bike. A guy in a suit doesn't want to be seen on a piece of junk."