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Policing modern slavery

Software that detects human trafficking

And also other unsavoury forms of human bondage

MODERN slavery comes in many forms. The outright sale of human beings as possessions is rare. But forced manual labour and sexual exploitation, often in a foreign country, by means of fraud, coercion or the threat of violence, are not. Such cases are often, however, hard to detect. Victims are understandably reluctant to talk. And the labour market also includes people willingly and legally performing work that is not always clearly different from that of the enslaved.

The murky world of modern slaves is, though, beginning to yield to high-tech policing methods. In South-East Asia, for instance, a particular scourge is fishing boats crewed by forced labour. Crew members are unable to escape because these vessels never dock. Instead, they offload their catches and take on supplies at sea. Dornnapha Sukkree, co-founder of a charity in Bangkok, called MAST, hopes to stop this by developing software that analyses data from transponders fitted to fishing boats. These would track vessels' movements via satellite. Boats that failed to dock from time to time would thus be obvious.

Ten fishing boats are assisting Ms Sukkree in her study. If it is successful, she hopes to persuade Thailand's fishery authorities to require all vessels above a certain size to be fitted with transponders. Many countries do this already, though with the intention of regulating fishing rather than protecting crews. Illegal fishers do sometimes switch their transponders off, of course, in order to "disappear". But that very act raises suspicions.

Much human trafficking, as the transporting of modern slaves is known, relies on trickery known as contract substitution. Recruiters lure people abroad with a lucrative contract that is later reworded, sometimes in a language the individual does not understand. Luis CdeBaca, who once ran the American State Department's anti-human-trafficking operation and is now a fellow at the Open Society Foundations, a pro-democracy organisation, hopes to prevent this bait-and-switching using a type of distributed database called a blockchain. A government might issue work visas only when signed contracts are confirmed by the blockchain to match those originally given to potential migrants.

Software can also identify pimps. Damon McCoy of New York University has developed a program that has helped police unearth five big suspected prostitution rings in California and Texas. His program hunts for signs, such as word choice, punctuation and emoji, that suggest a single hand is behind apparently unrelated online sex ads—and thus that organised crime is at work. And it can link bitcoin payments made for such ads to the ads themselves. His plan is to release the program as a free download later this year. A subsequent version will detect tiny variations in the pixel-quality of pictures, to identify those taken with the same camera.

Joining the dots

Nor is Dr McCoy's program the only software being employed to counter sex-trafficking operations in America. Since June 2017 an unnamed federal agency has used something similar, developed at Carnegie Mellon University in Pittsburgh by a researcher called Eduard Hovy. Like Dr McCoy's, this program looks for connections between the words and images used in different sex ads. But it can, Dr Hovy says, also draw in data from other sources. It might, for example, link a tweet about loud screams at night in a particular building with banter on an online "John board" discussing the sudden unavailability of a foreign woman last seen badly bruised.

Future versions of such software could seek to pull together disparate types of information in other areas of modern slavery—the frequency of visits to health clinics for the poor by strawberry pickers complaining of back pain, for example. But Dr Hovy cautions against deducing from software alone who is a victim of trafficking. He has accompanied police on operations to rescue people his program has flagged up, but who have convincingly argued that they are working voluntarily in conditions which may be tough but are still better than those back home.

In the end, like any other branch of commerce, legal or illegal, modern slavery is about making profits. And those profits have to be deposited somewhere. This gives investigators another way in. Banks in some countries face steep fines if they do not screen transactions for signs of human trafficking. For this purpose, some banks use software originally developed to detect money-laundering. Algorithms flag up dodgy-looking transactions. These are used by human analysts to generate “suspicious-activity reports”. The number of such reports sent by banks to America’s Treasury is growing, says Hector Colón, a trafficking investigator at Homeland Security Investigations, a branch of the country’s Department of Homeland Security.

The fingerprints of possible trafficking activity are many and various. Payments for repeatedly refuelling a vehicle at night might mean forced labour is being transported under the cover of darkness. Enslaved prostitutes are typically fed fast food, not “a \$30 curry”, says Peter Warrack, a Canadian expert on the screening software. Weekly condom purchases add to the suspicion. Charges for exorbitant cocktails may be disguised payments for sex, especially if the bar also buys advertising on escort websites. Roughly one in 20 reports of suspicious transactions sent by banks to Canada’s finance department mention human trafficking, and half of those correctly identify the crime, Mr Warrack says.

Traffickers are aware of what is going on and do their best to outsmart the algorithms; one tell that is easily avoided is the payment into a single account of receipts from many different places. But the authorities are also looking for new things to try. According to Daniel Thelesklaf, the head of Liechtenstein’s Financial Intelligence Unit, government organisations are already considering the screening of communications sent through messaging apps for hints of human trafficking. These can sometimes be intercepted if sent via a Wi-Fi network. Mr Thelesklaf reckons this has “huge potential”.

That step, though, has huge potential for controversy, too. It is one thing to scrutinise sex ads. It is quite another to start trawling on spec through messages sent mostly by innocent parties. That sounds Orwellian. Which is ironic, for the message of “1984” was that in a society where surveillance is ubiquitous, everybody who is not one of the surveyors is, in fact, a slave.

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