This Story is Trash

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The metal guts were spread everywhere in the horrid crime scene. Smudged patches of black ink had dried on the plastic and metal components where they had been smashed open. A seasoned investigator bent down over the printer ink cartridge's remains. The investigator was a middle aged woman, her hair tied in a rough bun and her clothes a standard low grade T-shirt and jeans. She wore no mask or gloves, though they would be mandatory tools in other countries. She has a name, but her individuality is inconsequential. Her gaze sweeps over the ink cartridge, adeptly surveying it for valuable components. She did not attempt to determine why the cartridge had ended up lying in a crumpled heap thousands of miles from its home. It didn't matter that the ink cartridge only enjoyed middle-class suburban comforts for a year, or that it was originally manufactured in the same country that would become its final resting place. It didn't matter that the cartridge's brother was admitted into a prestigious electronic recycling facility just down the road. It didn't matter that the investigator looking down at the printer ink cartridge was unknowingly exposing herself to hazardous chemicals.

For the lonely printer ink cartridge, nothing really mattered anymore. *People only cared about acquiring it, using it, and quickly and quietly disposing of it when the ink ran low.* Nobody knew of its insignificant lifecycle, where it had come from and where it ended up.

Well, almost nobody.

There are a few detectives who heard of this printer ink cartridge's fate, and they recognized it as just another case in a series of similar incidents. The cases are mounting, and the victims are not just printer ink cartridges. The headquarters for these detectives is the MIT SENSEable City Lab, a group that conducts operations in Seattle through a project called Trash Track.

The Trash Track team does exactly what the name suggests: they track trash. The MIT team partnered with Qualcomm to breed a new generation of trash: smart trash. This smart trash was to be the team's undercover agents. These agents didn't know where they would go, but that was part of their mission. Remain alive, remain hidden, and remain in communication for as long as possible. There were thousands of agents, and the team knew not all of them would be able to complete their mission. But it was worth it no matter what. They had to find out the truth. They had to discover where their trash actually went.

After months of setup and distributing the smart trash out to residential, public, and school garbage and recycle cans, the results began leaking in. All of the smart trash had originated in Seattle. When the team looked at the data, though, they realized it was worse than they expected. Sneakers had apparently run 337 miles to a landfill in Oregon. Cell phones had wistfully relocated themselves to

Florida, Ohio, and Texas. A lithium battery hitch-hiked 2,000 miles to Minnesota, and it probably didn't even get to enjoy the view from the back of the truck. Several printer ink cartridges experienced first class flights to Memphis, Tennessee, followed by 230 miles of luxurious car rides to La Vergne. Other printer ink cartridges went on sabbatical and spent thousands of miles being trucked all over the US, sometimes even backtracking, popping over to Chicago from Seattle, then deciding that Southern California was worth looking at.

And … there was evidence about a certain printer ink cartridge that made it to a port, was boarded onto a colossal steel fish, and was never seen again on American shores. Some speculated it never left the belly of the ship, or maybe that it ran away with a beautiful mermaid, but no one thought about where it went *after* that Pacific trek.

The agents the MIT team had sent out uncovered a dangerous secret: the waste removal and recycling process was much less efficient than advertised. Contrary to popular perception, recycling facilities produce waste, it just is usually significantly less than the waste caused by mining virgin materials and manufacturing a brand new product. But, some of the recyclable items were flown or trucked (or both!) hundreds to thousands of miles to an appropriate recycling facility. The carbon footprint of that transportation alone outweighs any benefit gained from recycling the poor creature. E-waste in particular is notorious for putting on the freshman 50 in terms of a carbon footprint. Outdated TV's contain cathode-ray tubes, but there are only 13 facilities on all of Earth that recycles these guys. And all of these facilities are in China. It's kind of a long walk from the US to China right now. So the carbon footprint increases for anybody willing to put in the effort to recycle cathode-ray tubes. Most people don't recycle them anyway. What's one more item to be buried in the ground for thousands of years? (And people are worried about nuclear waste).

Let's go back to our printer ink cartridge at the crime scene. While it's not the most hazardous object that middle-aged lady will discover that day, it does carry its share of harmful impacts on humans and the environment. The ink can leak and be absorbed into the skin of humans and the planet, damaging blood and water. The plastic containing the ink might live longer than Tolkien's Elves. The metals could be salvaged and sold, which is exactly what that lady intends to do. Selling valuable parts makes a meager living, but it's still a living when you've got no other options. Her friend favors mining sensitive information from hard drives, like credit card information, financial asset descriptions, and even data from institutions like Homeland Security, the US Defense Intelligence Agency, and the Transportation Security Administration.

Next to the printer ink cartridge lies 57 million tons of other members of the e-waste community. Using average African elephants as the standard unit of weight, this means that the e-waste city weighs nearly 10 million average African elephants. It weighs almost as much as the asteroid Bennu, but give it another year and the e-waste will catch up.

Look at the battery to the right of the printer ink cartridge. Yeah, that one. It contains ~~heavy~~ metals like lead acid, mercury, nickel-metal hydride, and nickel cadmium. It could also explode if you aren't careful. Now take a look to the left of the printer ink cartridge. That's just a harmless lamp, right? Actually, that

lamp probably contains mercury or lead. Depending on the type of lamp, it also contains high pressure sodium or metal halide. Now look up. There are hills of this stuff, dotted with men, women, children picking through the hills with no protective equipment. There's a river nearby that feeds into a major waterway. The river started turning murky once industrial sewage moved in upstream, but it used to have the most beautiful foliage on the banks and bright fish that briskly swam by any onlooker. Now the banks of the river have been replaced with TV's, computer monitors, hard drives, cell phones, speakers, Christmas lights, shattered light bulbs, and, yes, printer ink cartridges. I don't see any fish anymore.

A printer ink cartridge isn't sexy or stylish. It isn't covered in magazines or news shows. It is a relatively underwhelming and easily forgotten piece of technology that makes the whole world function smoothly from behind the curtains. It is the ultimate stagehand. Which is maybe why we don't strike an outrage against its untimely death, or wonder "who dunnit" and why?