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The True Cost of Black Friday

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ElevenLabs

If you're one of the millions of Americans aiming to score a new cell phone, cordless drill, or other gadget this Black Friday or Cyber Monday, you might want to consider the real costs of that sale-priced gizmo. That's because the metals contained in the consumer electronics we all use are spawning massive environmental damage, enriching warlords, and even killing people.

Different gadgets are made of different materials, of course, including plastic and glass. But from iPhones to handheld vacuums to electric toothbrushes, today's cordless consumer electronics typically include three crucial metallic components: a battery, a charging cable, and a magnet. The raw materials for these components are often sourced in troubling ways.

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The lithium-ion batteries that power most electronics are made with lithium (of course), nickel, and cobalt. One of the world's biggest sources of lithium is Chile's Atacama desert, where the mines are sucking up so much underground water that many scientists and Indigenous people fear they are drying out the delicate ecosystem. Lagoons that are home to rare flamingos; vegetation that feeds goats, sheep, and guanacos; and a way of life followed by Indigenous Atacameño communities for thousands of years may all be in danger. ✨

On the other side of the world, Indonesia has in recent years become the top supplier of raw nickel. To clear land for new mines and related infrastructure, more than 20,000 acres of rainforest have been wiped out in just one of the archipelago nation's many islands. Mine waste including hexavalent chromium—the same cancer-causing toxin that Erin Brockovich famously campaigned against—has polluted streams and waterways. Once dug up, the nickel ore is processed in huge industrial facilities, which belch out air pollution and devour energy, most of which comes from carbon-spewing coal-fired plants.

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More than two-thirds of all the world's cobalt comes from the Democratic Republic of Congo, a nation beset by recurring civil wars, endemic corruption, and crushing poverty. The worst of the DRC's mines are straight out of a nightmare. Men wearing nothing but shorts, T-shirts, and flip-flops, with flashlights strapped to their heads, spend their days in cramped underground tunnels, chipping out cobalt with hand tools. Not infrequently, the tunnels collapse, burying men alive. Perhaps most disturbingly, the DRC's cobalt workers include thousands of children. "Children are required to routinely carry sacks of ore that weigh more than they do," wrote a team of European researchers who visited dozens of mines. The children are also often beaten and whipped by security guards. Some are as young as seven years old.

Then there are the charging cables that feed electricity into our devices' lithium-ion batteries. Those cables almost all contain copper, as do other common electronics components, such as printed circuit boards and internal wiring. Copper is mined in many parts of the world, and it's rarely a pretty process. From the western U.S. to South America to Central Africa, copper mining has left colossal pits full of toxic waste and fouled enormous swathes of land and waterways. The red metal often sparks violence, too. In Peru, police in recent years have killed protestors in clashes over copper mines. In Pakistan's Balochistan province, struggles over copper resources are fueling an armed separatist movement. In South Africa, armed gangs steal copper in bulk to sell to recyclers, occasionally killing those who interfere.

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We rarely see the third metallic components: Neodymium-based "permanent magnets" that make cordless drills spin and cell phones vibrate, and produce sound in headphones and laptop speakers. China overwhelmingly dominates the production of rare earths, a category of metals that includes neodymium. They have such a lock that when Beijing briefly cut off supplies to Japan in 2010 over a territorial dispute, it sent shockwaves through the global economy. The main rare earth mining area in China is one of the most polluted places on Earth. China also imports ever-growing quantities of rare earths from Myanmar, where brutal militias extract it from jungled mountainsides with boatloads of toxic chemicals. ✨

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All of that is on top of the colossal carbon emissions generated by metal mining of all sorts. Mines require fleets of drill rigs, trucks, diggers, and other heavy machinery, energy hogs that account for as much as seven percent of the world's annual greenhouse gases.

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The consequences of our electronics addiction are bad enough without Black Friday. The annual shopping bonanza continues to see sales growth, as consumers drop hundreds or even thousands of dollars. And research suggests most of these purchases end up in landfills or the incinerator. In the U.S., fewer than one in five dead cell phones are recycled each year.

What can we do to cut these ugly costs? Consider buying used or refurbished electronics, to help reduce demand for virgin metals. And help pressure manufacturers to use more recycled materials. They're starting to pay attention: this year's phones from both Apple and Samsung use record amounts of recycled cobalt and neodymium.

But the most impactful thing we can do as consumers is simple: Resist the siren song of sales, and don't buy so many gadgets. That may be the best deal of all.

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