

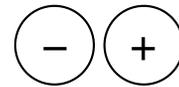
The Atlantic

What Is It About an Elephant's Tusks That Make Them So Valuable?

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Chinese demand for ivory is driving conflict in the Democratic Republic of Congo.



Reuters

In Garamba National Park in the northeastern corner of Congo, thousands of elephants are being killed each year for their tusks, their carcasses discarded like hair clippings on a barbershop's floor.

In a [beautiful and brutal report](#), *New York Times* reporter Jeffrey Gettleman describes the carnage, both animal and human, in harrowing detail. Last year, he writes, "broke the record for the amount of illegal ivory seized worldwide, at 38.8 tons (equaling the tusks from more than 4,000 dead elephants). Law enforcement officials say the sharp increase in large seizures is a clear sign that organized crime has slipped into the ivory underworld, because only a well-oiled criminal machine -- with the help of corrupt officials -- could move hundreds of pounds of tusks thousands of miles across the globe, often using specially made shipping containers with secret compartments." (Although there are many sources of ivory such as walruses, rhinoceros, and narwhals, elephant ivory has always been the most highly sought because of its particular texture, softness, and its lack of a tough outer coating of enamel.)

What in the world could fuel such demand for animal teeth? An ascendant Chinese middle class, whose millions can now afford the prized material. According to Gettleman, as much of 70 percent of the illegal ivory heads to China, where a pound can fetch as much as \$1,000. "The demand for ivory has surged to the point that the tusks of a single adult elephant can be worth more than 10 times the average annual income in many African countries," Gettleman writes.

This explains the mechanics. Demand rises, price goes up, and the costs poachers and smugglers are willing to endure increase in sync. But what underlies the demand? Why do so many Chinese people want these elongated cones of dentin?

The comparison to diamonds is commonly made: Diamonds, like ivory, are a natural substance with little inherent value but prized social significance. Desire in richer lands tumbles poorer societies into resource wars and labor abuse. And certainly the modern dynamics are the same. But demand for ivory is something demand for diamonds is not: ancient. And its history as a technology, a material with few peers for centuries, propels this demand even today.

Diamonds, as a cultural symbol, [are an invention of the 20th century](#), the result of a collaboration between Mad Men and De Beers. Ivory, in contrast, has been used and valued for millennia. In China, according to *Ivory's Ghosts* by John Frederick Walker, artistic ivory carvings exist from as far back as the sixth millennium BCE, excavated in Zhejiang Province. "By the Shang Dynasty (ca. 1600-ca. 1046 BCE) a highly developed carving tradition had taken hold," he writes. Specimens from this period are today in museums around the world.

But ivory wasn't solely prized for its aesthetic value. Ivory's properties -- durability, the ease with which it can be carved, and its absence of splintering -- uniquely suited it for a variety of uses. Archaeologists and historians have recovered many practical tools made out of ivory: buttons, hairpins, chopsticks, spear tips, bow tips, needles, combs, buckles, handles, billiard balls, and so on. In more modern times we are all familiar with ivory's continued use as piano keys until very recently; Steinway only discontinued its ivory keys in 1982.

What do many of these things have in common? Today we make them out of plastic, but for thousands of years, ivory was among the best, if not the very best, option -- the plastic of the pre-20th-century world. For some of these items (piano keys being the most prominent example) we didn't have a comparable alternative until very recently. Walker writes:

Synthetic polymers had been in widespread use on keyboards since the 1950s but found few fans among serious pianists. In the 1980s Yamaha developed Ivorite, made from casein (milk protein) and an inorganic hardening compound, which was trumpeted as having both the moisture-absorbing quality of ivory and greater durability. Unfortunately some of the first keyboards cracked and yellowed, requiring refitting with a reformulated veneer. Clearly there was room for improvement. Steinway helped fund a \$232,000 study at Rensselaer Polytechnic Institute in Troy, New York, in the late 1980s to develop a superior synthetic for keyboard covers. In 1993 the project's team created (and patented) an unusual polymer -- RPIvory -- that more closely duplicated the microscopically random peaks and valleys on the surface of ivory that allow pianists' fingers to stick or slip at will.

That usefulness, combined with its warm luster and its receptivity to engravings, meant that it gained stature as a luxury good from the get-go. China's demand for ivory today shows the staying power of a luxury symbol, even if a substance's inherent qualities have been superseded by new materials.

Where does that leave the elephants of Garamba National Park, their poachers, the smugglers, and a rising China? Is there a way to remarry ivory's cultural significance to its material one, to instill the idea that ivory is nothing more than an animal's tooth?

The power of the idea of ivory is immense, and shows no signs of waning. For the elephants that bare them, perhaps the only hope is that the price will go up and up, through greater regulation and greater monitoring, putting ivory

once again out of reach for even the middle class. The irony of this is that the side effect of the best way to staunch the flow of ivory and the slaughter of elephants may be the reinforcement of the cultural myth: Make ivory even rarer, even more reserved for only the very few, and esteem for it will only rise.

ABOUT THE AUTHOR



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