

# The Past Polluted: A Pigovian Approach to the Black Market in Antiquities

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**Abstract:** In the global struggle to protect not-yet-excavated archaeological sites from looting, despite legal strictures, the playing field remains badly tilted against the site guards, customs officials, antiquities police, and prosecutors who lack the financial resources to enforce existing laws. To supplement and give teeth to the strict, but ineffectual, legal regime now in place, economic theory points to a policy solution: a “pollution tax” on antiquities purchased by residents of “market” countries, designed to internalize the social costs of looting so that the industry either takes measures to clean itself up or pays the government to prevent or mitigate the harm the industry causes. Tailored to fall more heavily on antiquities with weaker provenance or extremely high prices, and channeled into an antiquities-protection “superfund” (as was done to clean up toxic chemical sites) or via existing governmental agencies, a Pigovian tax on antiquities could provide a sustainable funding stream for more robust monitoring and enforcement efforts against the illicit market as well as for better site security. Archaeologists and dealers may find the idea of this kind of tax repugnant, but such feelings may be overcome through sustained discussion and negotiation explaining the benefits to both sides of a more licit regulated market.

**Keywords:** antiquities, looting, Pigovian tax, antiquities market, heritage policy, pollution tax, 1970 UNESCO Convention, provenance, enforcement cost

Archaeological site looting is a long-standing public policy problem that has been addressed using a command-and-control, interdictionist, and prohibitionist approach. This is most evident in emergency measures invoked in response to armed conflict: global bans on international trade in looted materials from certain territories, buttressed by domestic legislation clamping down on the antiquities market. But the emergency measures adopted by the United Nations are only an

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extension of a more general, “normal” approach to the general problem of protecting heritage. A more general approach is reflected in long-standing national ownership laws as well as in the most important international instrument so far put in place to deal with the market-driven loss of heritage in peacetime—the 1970 United Nations Educational, Scientific and Cultural Organization’s Convention on the Means of Prohibiting and Preventing the Illicit Import, Export, and Transfer of Ownership of Cultural Property (1970 UNESCO Convention).<sup>1</sup>

Despite its strictness, this regulatory regime has not succeeded in reducing the ongoing looting of archaeological sites to a level acceptable to advocates for heritage preservation. This is not to say that cracking down on smuggling and trafficking has had no impact whatsoever on stemming looting; monumental sculptures from Mayan sites, for instance, are far less likely now to be looted since the 1970 UNESCO Convention went into effect. But, in general, since 1970, archaeological site looting has accelerated. Global statistics do not exist on rates of looting, but numerous studies of individual countries show increased looting since 1970, including, for example, Mali.<sup>2</sup> There is also copious indirect evidence of looting in the form of police statistics.<sup>3</sup>

To point this out is not to argue that laws against looting, smuggling, and trafficking should be done away with. It is to suggest, however, that there is a big difference between enacting a law and enforcing it. While a clear and simple message—just say no—has some advantages, laws need to do more than express values; they need to deter potential criminals. And, for deterrence to be effective, laws need to be enforced. This basic point is too often overlooked by heritage protection advocates, whether archaeologists or legal experts, who devote themselves to pushing for emergency bans and the ratification of conventions. Very seldom do they ask how such bans and conventions are to be enforced. It is simply assumed that governments will meet their responsibilities. In this regard, heritage protection advocates strangely mirror their cultural internationalist opponents, who argue that governments of countries of origin should simply enforce their own laws, yet they never explain how these governments are supposed to be able to afford to do so.

This is not a trivial concern. Enforcing laws against looting requires paying for site guards and antiquities police to put the fear of God into looters; enforcing laws against illicit export requires paying for customs inspectors to put the fear of God into smugglers; enforcing laws against trafficking stolen property requires paying for undercover agents and prosecutors to put the fear of God into middlemen, dealers, and collectors. Ignoring enforcement costs is especially problematic for antiquities crime because it can be very expensive to police this particular kind of offense. It took more than 1,000 Chinese police to arrest a gang of 175 looters

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<sup>1</sup>Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property, 14 November 1970, 823 UNTS 231.

<sup>2</sup>Bedaux and Rowlands 2001, 872.

<sup>3</sup>Brodie and Renfrew 2005, 347.

in 2015, for instance, and the two-and-a-half-year sting operation that led to the arrest of 21 people in Four Corners, Utah, ran up a bill of nearly half a million dollars.<sup>4</sup>

Yet the policy regime now in place does not take enforcement costs into account, even where it acknowledges that specific enforcement measures ought to be taken. When the United States signs a memorandum of understanding (MOU) with another country, for example, “the nature and extent of this concerted action is not, however, pointed out,” as Patty Gerstenblith has noted, and funding benchmarks are very seldom stipulated, and when MOUs come up for renewal, countries are not required to report the level of funding actually allocated to enforce their laws.<sup>5</sup>

One reason for such politeness is that—even leaving aside states in political crisis such as Iraq, Syria, or Egypt—most poorer countries simply cannot afford to cover the full costs of protecting their sites against armed gangs of looters or to secure their borders from smugglers. In India, for instance, it has been reported that the Idol Wing of the Tamil Nadu police, which was supposed to be staffed with 100 police officers, has only seven listed on its website.<sup>6</sup> But even wealthy countries are underfunding the enforcement of laws against looting and antiquities smuggling. In 2016, the Belgian federal police eliminated its art and antiquities crime unit, for instance, and, as of this writing, the Department of Justice has no dedicated prosecutor to develop criminal cases against antiquities traffickers.<sup>7</sup> The marked predilection for seizure and restitution instead of arrests and criminal prosecution is a direct consequence of this lack of resources, as Leila Amineddoleh, a legal consultant to the Hobby Lobby prosecutors, frankly admits: “If the government were to pursue criminal prosecution, it would likely lead to protracted litigation, depriving authorities of the financial and human resources to pursue other important matters during the investigation and trial.”<sup>8</sup>

What can be done to compensate for this lack of resources to enforce existing laws? One strategy is to focus policy efforts on ways to reduce the cost of securing sites and clamping down on the smugglers and traffickers of looted antiquities.

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<sup>4</sup>Sherburne 2014; “175 ‘Tomb Raiders’ Caught Pillaging Stone Age Archaeological Site in China,” *South China Morning Post*, 27 May 2015, <http://www.scmp.com/print/news/china/society/article/1810048/tomb-raiders-caught-pillaging-chinese-stone-age-archaeological> (accessed 1 August 2019).

<sup>5</sup>Gerstenblith 2017, 76.

<sup>6</sup>Vinita Govindarajan, “A Tiny Police Wing Is Trying to Bring Back the Thousands of Idols Stolen from Tamil Nadu,” *Scroll.in*, 1 November 2017, [scroll.in/magazine/844289/a-tiny-police-wing-is-trying-to-bring-back-the-thousands-of-idols-stolen-from-tamil-nadu](http://scroll.in/magazine/844289/a-tiny-police-wing-is-trying-to-bring-back-the-thousands-of-idols-stolen-from-tamil-nadu) (accessed 1 August 2019).

<sup>7</sup>Natalie Eggs, “La Police Belge Va Supprimer Son Unité Spéciale de Lutte Contre Le Trafic Illégal de Biens Culturels,” *Le Journal Des Arts*, 14 April 2016, [http://www.lejournaldesarts.fr/site/archives/docs\\_article/135937/la-police-belge-va-supprimer-son-unite-speciale-de-lutte-contre-le-traffic-illegal-de-biens-culturels.php](http://www.lejournaldesarts.fr/site/archives/docs_article/135937/la-police-belge-va-supprimer-son-unite-speciale-de-lutte-contre-le-traffic-illegal-de-biens-culturels.php) (accessed 1 August 2019).

<sup>8</sup>Leila Amineddoleh, “The Feds Were Smart Not to Throw the Book at Hobby Lobby for Buying Iraqi Loot,” *Artnet News*, 12 July 2017, [news.artnet.com/art-world/why-hobby-lobby-verdict-1021247](http://news.artnet.com/art-world/why-hobby-lobby-verdict-1021247) (accessed 1 August 2019).

Several steps have been suggested that could and should be taken in this regard: creating a separate customs declarations category for antiquities; establishing reporting requirements for the sale of artifacts; setting a minimum standard for what antiquities market researcher Neil Brodie calls “verifiable provenance”;<sup>9</sup> training dogs to sniff out contraband antiquities; and deploying remote sensing technology, whether high-tech satellites or low-tech cellphones, to monitor sites in real time.

All of these would make it easier to monitor the market. But even if all these steps are adopted, they will not bring the costs of enforcing current law down steeply enough to make a major dent in the black market. Nor is the market likely to be reduced much by the policy often urged by archaeologists and preservationists: educating the public about the evils associated with purchasing looted antiquities, in the same way that the public has been educated about the evils of purchasing blood diamonds or fur. The latter are luxury items and private goods selfishly enjoyed. In contrast, antiquities need not be beautiful to be desirable (think for instance of the demand for crudely drawn, but biblically significant, Aramaic incantation bowls that drove much looting in Iraq in the 1990s), and we value them as public goods so highly that we offer tax deductions to collectors who donate them to museums.<sup>10</sup> This, and the fact that the public in need of educating is now global, means educational campaigns will have a hard time gaining much traction. In short, there is no avoiding the problem of enforcement costs. The question is the one that the great cultural policy scholar J. Mark Schuster describes as the fundamental one in the cultural and heritage sector: “who should pay?”<sup>11</sup>

### REFRAMING THE ISSUE: FROM SIN TO EXTERNALITY

To answer that question, we need to free ourselves from the grip of legal and ethical presuppositions about the actions of those involved in looting, smuggling, trafficking, and collecting illicit antiquities. The governing assumption in law and ethics is that individuals bear individual responsibility for the consequences of their actions; these actions are crimes and sins. But there is a less morally freighted way to think about those actions: in economic terms.

From an economic point of view, what looters, smugglers, traffickers, and collectors are doing is participating in a market activity of a particular kind—one in which, in the course of an industry’s production, distribution, or consumption of a good, innocent bystanders who are not directly involved in the exchanges are affected, either positively or negatively. Negative externalities are a basic economic concept often illustrated in elementary textbooks by pointing to the coal mining industry. Like coal, which produces energy that heats homes and generates electricity, antiquities do good for those who buy them. If that were not the case, there

<sup>9</sup>Brodie 2014, 432.

<sup>10</sup>Brodie 2016.

<sup>11</sup>Schuster 1996, 115.

would be no market for either good. But, like coal, which in being extracted and burned in the wrong ways also causes environmental harm, so the extractive strip mining of antiquities also causes cultural harm by obliterating the historical record constituted by the stratigraphic context in which the buried artifact was embedded.

For some kinds of externalities, the parties causing the harm and those harmed can identify each other, and as Ronald Coase has argued, they can solve the problem by haggling directly with each other.<sup>12</sup> For coal and looted antiquities, however, the harm is diffuse, even transnational, and assigning responsibility to individuals for specific harms done to other individuals is difficult. The comparison of antiquities to coal is more than an analogy, however; it has provided a logical basis for policy, albeit a perverse one. The Islamic State of Iraq and Syria's (ISIS) short-lived "government" has recognized antiquities as a resource to be extracted. Industrialized looting of archaeological sites was therefore licensed, and sales of looted artifacts were taxed under the auspices of a "Department of Precious Resources" (known as the *Diwan al Rikaz*), which is the agency that also regulates mines and mineral extraction.

For ISIS, what we define as harm—the destruction of the archaeological record—is a positive externality, a bonus. But assuming we do not share that perverse value orientation, the economic question faced by policymakers regarding the mining of antiquities is the same as that regarding polluting industries more generally: how can we deal most efficiently with the social costs incurred? The solution, first elaborated by Arthur Pigou in 1932, is to internalize those social costs: to make those benefiting directly from the activity also cover the costs the activity generates, costs that otherwise would be borne privately by those harmed by that activity or by taxpayers.

Thus, under the "polluter pays" principle, the government imposes a tax on polluting industries—ideally, a tax set at a level that matches the social costs of the industry's ongoing operations. The carbon tax, which has been in effect in Finland and Denmark since the early 1990s and more recently imposed in British Columbia, Chile, and Mexico, is perhaps the best known example. Although this kind of levy is sometimes referred to as a "sin tax," that is a misnomer. Unlike criminal law and moral strictures, Pigovian taxes do not seek to punish those who have already committed a sin or to deter individuals who would sin from doing so by holding out the threat of consequent punishment if found guilty. Instead, Pigovian taxes seek only to mitigate harm in the present and to reduce harm in the future. So, in analyzing the problem of archaeological looting, a Pigovian approach does not involve an ethico-legal judgment—"dealers and collectors are the real looters and should go to jail"—but an economic one: "Destruction of archaeological sites by looters occurs as a byproduct of the activities of the antiquities market, so such destruction can be reduced by making the antiquities market itself pay what it costs to secure sites, fight international traffickers, and clean up the trade."

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<sup>12</sup>Coase 1960, 4.

## DESIGNING A PIGOVIAN TAX ON ANTIQUITIES

The antiquities trade is already subject to taxation in various jurisdictions: in the United Kingdom, for instance, a value-added tax (VAT) is assessed; in New York, a sales tax is added. But these are general taxes, intended to raise general revenue, not Pigovian taxes targeted at one industry to compensate for the social harm it does. (The United Kingdom's (UK) VAT on antiquities, which is set lower than the standard VAT, seems in fact to have been designed to reward, rather than punish, the industry, presumably for the social good it does in bringing artifacts to Britain.) The difference between general and Pigovian tax is a crucial one for two reasons.

First, because a Pigovian tax is pegged to a named harm, it makes good policy sense (though it is not logically required) that revenues generated by such a targeted tax should not disappear into the government treasury but should instead be shunted toward efforts to mitigate the harm being done. So, for example, taxes on cigarettes go toward governmental anti-smoking programs and taxes on the petroleum and chemical industries go into a superfund created to clean up toxic waste sites.<sup>13</sup> Similarly, one could imagine revenues from a dedicated tax on antiquities sales flowing into something like an archaeological site superfund, aimed at sustainably covering the ongoing costs of policing the antiquities trade and securing archaeological sites—costs that, as I have suggested above, are not being met now, even with regard to the extreme case of looting that supports ISIS. Second, and far more importantly, unlike a sales tax, a Pigovian tax can be—and ideally will be—calibrated to the degree of harm being done by the business activity in question. The greater the amount of harm, the higher the tax. Or, to put it another way, the lower the amount of harm, the lower the tax.

This is a key difference. By tying the tax to the degree of harm, the Pigovian approach gives polluting firms, customers, and industries an economic incentive to take steps themselves to reduce whatever harm they are doing. They can save money on their tax bills going forward by reducing the pollution they produce. So, in the case of the coal industry, firms now install scrubbers in coal plants and are able to reduce their tax bill accordingly. Likewise, automakers were prodded to improve fuel efficiency by a graduated gas-guzzler tax.<sup>14</sup> Under a Pigovian régime, antiquities dealers and auction houses could similarly reduce their taxes based on steps they take to clean up their act.

One concern about such a system that antiquities dealers are sure to raise is that many artifacts that were not in fact looted will be treated as if they could have been, simply because they lack paperwork. And it is true that absence of verifiable provenance does not prove an artifact is “dirty.” Antiquities have emerged innocently in

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<sup>13</sup>US Government Accountability Office, “Trends in Federal Funding and Cleanup of EPA’s Nonfederal National Priorities List Sites,” 2015, <http://www.gao.gov/assets/680/673051.pdf> (accessed 1 August 2019).

<sup>14</sup>Stavins 2003, 384.

chance finds or from a grandparent's attic (though such finds accounted for only between 1.23 percent, in 2014, and 9 percent, in 2004, of finds reported under the UK's Portable Antiquities Scheme). But, if such "recycled" materials or surface finds cannot be definitively distinguished from freshly looted "dirty" artifacts, then there is some risk of inadvertently doing harm whenever any inadequately provenanced antiquity is sold. And risk, in which either the source or the victim of a harm may not be absolutely specifiable on a case-by-case basis but is associated with the industry's general activity, is what a Pigovian tax is designed to price as a social cost.

Risk is also a concern of those worried about seizures of artifacts, so much so that proponents of stronger due diligence procedures have recently been solicited by art insurers to identify the kinds of missing documentation that might raise red flags. Collectors are warned by insurers that they should avoid antiquities lacking dated provenance documents from more or less trustworthy sources such as historically datable photos, customs declarations, export permits, insurance paperwork, or catalogue entries.<sup>15</sup> For our purposes, these categories of documentation could provide the basis for a gradation checklist to determine the tax bracket for a given artifact. The better provenanced an artifact, the lower the tax on its sale would be.<sup>16</sup>

Dealers might also be encouraged by Pigovian tax incentives to take steps that would make it much easier to police the market. Complying voluntarily with "know-your-customer" procedures to identify and share information about traffickers who proffer questionable pieces to a dealer, or simply agreeing to report to law enforcement the names of sellers and buyers of antiquities, could thereby earn the dealer a tax reduction. Such information would make it much easier for authorities to monitor the trade and develop cases of tax evasion, including cases brought in other countries against foreign dealers selling to the US market. A good example of this is the indictment of Israeli dealers who allegedly sold \$22 million worth of antiquities to Hobby Lobby, but never paid Israeli taxes on those sales.<sup>17</sup>

## HOW MUCH COULD A PIGOVIAN TAX RAISE?

Pegging tax levels to the degree of likely harm done or prevented reflects the basic objective of Pigovian taxation. That objective is not to raise revenue; rather, it is to reduce social harm going forward, by incentivizing sellers and buyers of a good to save money by changing their behavior in ways that help reduce the harm done. So, for instance, while a five-cent tax on plastic carryout bags in Washington, DC, does

<sup>15</sup>Clyde and Company. "Fine Arts Insurers Can Combat Terrorists' Plundering for Profit," *Lexicology.com*, 4 August 2017, <http://www.lexology.com/library/detail.aspx?g=4b3deff0-719a-446a-8c74-8520f2b9837a> (accessed 1 August 2019).

<sup>16</sup>I am indebted to Glenn Weyl for this suggestion.

<sup>17</sup>Amanda Borschel-Dan, "Arrest of Jerusalem Antiquities Dealers Opens a Smuggling Pandora's Box," *Times of Israel*, 21 August 2017 (accessed 1 August 2019).

raise revenue, and that revenue goes into a river cleanup protection fund, the bigger impact has been on plastic bag consumption, which has gone down by at least 80 percent as shoppers opt to save their nickels.<sup>18</sup> Similarly, traffic congestion dropped by a quarter following the introduction of a tax on driving in central London.<sup>19</sup>

That said, Pigovian taxes can and do raise substantial revenues. How much depends on several considerations. The first and most obvious factor is the size of the market. According to James Ede, head of the London-based International Association of Dealers in Ancient Art (IADAA), “by analysing the publicly quoted figures of the auction houses and dealers worldwide and rounding the figures up quite dramatically we have arrived at a figure of €150–200 million per annum, ie around £150m” (\$160–215 million) for the worldwide legitimate antiquities market in 2013.<sup>20</sup> Since the IADAA has not released the study or even described the methodology it used to arrive at this estimate, it is difficult to assess its accuracy. Nor do we know what the breakdown country by country is. But, taking it as a starting point, and assuming the US market is a quarter of the world trade, even a straightforward 10 percent across-the-board non-Pigovian US sales tax would raise a steady stream of \$4–5 million per year.

This analysis assumes, of course, that collectors would simply pay the higher prices for antiquities rather than shift to less-expensive substitute luxury goods—antiques rather than antiquities or replicas of antiquities—that might do just as well for their purposes. The substitutability of goods is a second factor that any Pigovian tax design needs to take into account. It is also a worry of dealers for obvious reasons. And their concern is not completely unfounded, especially for indiscriminating shoppers who are looking for lower-quality artifacts, for whom one knick-knack may be as good as another. However, empirical studies of luxury goods have shown that the demand for high-quality products is inelastic; changes in the price of high-end sports cars, for instance, do not affect demand very much compared to changes of price for intermediate-size cars.<sup>21</sup> This is especially true where there are fewer of such products available, and most true of all where the goods are non-comparable, one-of-a-kind items.

To get a general sense of how much revenue might be raised, in other words, we need to know not just the size of the market and the substitutability of goods for the market being taxed, but also where goods are not identical commodities, the price composition of the market. This third factor is more complicated to assess.

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<sup>18</sup>Alice Ferguson Foundation. “Study of U.S Capital’s Plastic Bag Fee Indicates Behavioral Change and Positive Support,” 23 February 2011, [https://fergusonfoundation.org/wp-content/uploads/2012/05/AFF\\_DC\\_-ResearchMemo021511.pdf](https://fergusonfoundation.org/wp-content/uploads/2012/05/AFF_DC_-ResearchMemo021511.pdf) (accessed 1 August 2019).

<sup>19</sup>Leape 2006, 165; Transport for London, “Impacts Monitoring Programme: Third Annual Report,” 2005.

<sup>20</sup>James Ede, “Dealers: Trade, Traffic, and the Consequences of Demonisation,” *International Association of Dealers in Ancient Arts*, 2010, [iadaa.org/preface/articles-of-iadaa-members/](http://iadaa.org/preface/articles-of-iadaa-members/) (accessed 1 August 2019).

<sup>21</sup>Goldberg 1995, 934.



Granular price data for the licit market in antiquities is notoriously difficult to obtain. But from what is known, two things seem clear. First, there is a lot of money moving through the market at the low and middle ranges. Neil Brodie's study of the Internet market in pre-Columbian artifacts finds over \$3.6 million in annual sales, for instance.<sup>22</sup> And Fiona Greenland and colleague's research on 41,587 artifacts sold from two excavation sites finds that 95 percent of them brought prices below \$32,000, with only 0.05 percent appraised at prices above \$1 million.<sup>23</sup> Second, as that \$1 million lower bound implies, for the major auction houses, the top end of the market accounts for a high—and, as Brodie has shown, within the past decade, increasing—percentage of total sales revenue.<sup>24</sup> Christie's London, for instance, reported sales of £34.5 million in 2010 and only £17.5 million in 2013—yet, in 2014, just two sculptures—one from ancient Egypt and the other from ancient Rome—sold for £15.8 million pounds and £9.4 million respectively.<sup>25</sup> A 2011 Indianapolis auction of Native American artifacts grossed \$1.2 million, including a quartz banner stone that garnered \$245,000. The highest price ever paid for a single sculpture—\$57 million—was spent on the Guennol Lioness, a figurine known since 1931, which is said to have been found near Baghdad, and sold by Sotheby's in 2007.

These sorts of sales are unlikely to be impacted much by a Pigovian tax. The other worry dealers have about any domestically instituted tax is that buyers seeking to avoid the tax would turn to foreign antiquities markets, something made easier than ever as auction houses, dealers, and illicit traffickers increasingly do business on the Internet. But this loophole is easily addressed by requiring non-commercial importers of antiquities purchased abroad to pay sales tax on out-of-country antiquities purchases entering the country. The reputable trade is thus likely to survive. Indeed, insofar as the tax is used to better police the trade and protect archaeological sites, the reputable trade's reputation should improve and prosper.

But the Guennol Lioness, the Egyptian sculpture, and the quartz butterfly banner stone all came to market with ironclad provenances establishing they were excavated before 1970. This raises the question of whether even completely "clean" goods should be subject to a Pigovian tax. One might think the answer would be no. After all, if no social harm is done, no tax should be imposed. But even clean goods can cause social harm, simply by sending a price signal. The strength of the price signal sent by the sale of a good is thus a fourth factor determining the tax to be assessed. If the good in question is an artifact with a quality high enough to fetch eye-popping prices that garner widespread publicity, the signal its sale sends can be

<sup>22</sup>Brodie 2015, 12.

<sup>23</sup>Greenland et al 2019.

<sup>24</sup>Neil Brodie, "Antiquities at Auction (1)," *Market of Mass Destruction*, 2 February 2016, <http://www.marketmassdestruction.com/antiquities-auction-1/> (accessed 1 August 2019).

<sup>25</sup>Scott Reyburn, "The Lure of Antiquities," *New York Times*, 18 August 2018, [http://www.nytimes.com/2014/08/18/arts/international/the-lure-of-antiquities.html?\\_r=0](http://www.nytimes.com/2014/08/18/arts/international/the-lure-of-antiquities.html?_r=0) (accessed 1 August 2019).

extremely powerful, alerting potential looters, whether half a world or half a continent away, that unimaginable riches may with luck be theirs. So, to take one notorious example, the sale of the Erlenmeyer collection in the early 1990s announced to the market that there was in the West a new and extremely intense demand for top-end Mesopotamian artifacts (which, by 2001, would bring a price of \$424,000 for a single cylinder seal). Dealers in Baghdad responded by encouraging looting of Iraqi archaeological sites rich in those seals, with devastating results for the archaeological record.

Most antiquities in the high- and mid-range market, however, are not coming from museum deaccessioning or from the liquidation of well-established private troves like the Erlenmeyer collection. Many of the best of the roughly 40,000 pieces purchased since 2009 by the Green family for their new Bible Museum, for example, have never surfaced before. Such items certainly deserve to be taxed. A fifth factor determining how much revenue will be ultimately generated by any tax is the administrative cost of collecting it. Were a Pigovian tax imposed on the buying and selling of antiquities, the Internal Revenue Service would need to collect it and audit compliance. And if the system included transparency requirements, or a voluntary set of procedures to document and report the provenance information on individual artifacts, the cost might not be negligible. But monitoring financial transactions is surely relatively inexpensive compared to ferreting out artifacts hidden in cargo or paying the annual salaries of site guards. The advent of eBay antiquities trading simplifies the taxation of that market. And the new focus on antiquities as a source of terrorist financing means that governments are much more likely than they have been previously to be willing to put some resources toward this task.

### HOW MUCH SHOULD A PIGOVIAN TAX ON ANTIQUITIES RAISE?

The size of the market, the substitutability of goods, the market's price composition, the strength of the price signal sent by sales, and enforcement costs—each of these five factors will affect how much tax revenue ultimately can be raised. But how much should be raised? How much harm is being done by the destruction of the archaeological record, and how can we put a dollar sign on it? Even posing such a question is repugnant to many archaeologists and heritage advocates. But, in public sectors other than heritage, such repugnance has been overcome, and methods for pricing the priceless have been developed to put a dollar sign on everything from the survival of obscure species of slugs to human life.

How might we do something similar for the preservation of the archaeological record? One approach is to employ a contingent valuation methodology to survey the public's willingness to pay. Such surveys have their own pitfalls, of course, with much riding on how questions are worded. Another way to estimate how much tax ought to be collected would be to take recent rates of looting as a proxy for future looting and ask how much it would have cost to have archaeologically excavated those sites and harvested the information about the past that has been lost. A third

approach would ask instead how much it would have cost to have provided site security for those sites. To answer any of these questions, however, we would have to develop relatively reliable means of observing and quantifying the extent of active looting. Recent satellite mapping innovations like archaeologist Sarah Parcak's GlobalXplorer project hold out hope that such means can be developed.<sup>26</sup>

It is not beyond the realm of possibility that under a Pigovian tax regime, projects like Parcak's (or others more pointedly aimed at reducing site looting) might actually be funded directly by dealers and collectors of antiquities from a particular region. They would be betting that the project they are supporting will yield a dramatic reduction in the rate of looting of archaeological sites—a reduction that would in turn reduce the tax burden imposed on dealers and collectors of antiquities from that region. Assuming, however, that most dealers and collectors will merely pay the tax, there is no doubt that much good could be done with the tax revenues generated by the trade. A 10 percent tax on the 2007 sale of the Guennol Lioness alone, for instance, could have raised \$5.7 million, money that would have been particularly useful if it had been made available in Iraq, the country from whence the Lioness originated, at a time when Iraq's antiquities police were disbanded and sites were left almost totally undefended against looters.<sup>27</sup> Egyptian site guards killed by looters in February 2016 might be alive today, had they been supplied with adequate weaponry and back up that tax revenues from the above-mentioned sale of the Egyptian sculpture might have funded.<sup>28</sup> Taxing the Native American butterfly banner stone might have enabled the Bureau of Land Management to up the minuscule \$2,500 reward it now offers for information leading to the conviction of looters of Native American archaeological sites in Utah. And it might not have taken five years for prosecutors to bring charges against Hobby Lobby if their investigation had been supported by taxes on the \$30 million or so the Green family spent amassing this collection of dubious artifacts.

### IS A PIGOVIAN TAX ON ANTIQUITIES POLITICALLY POSSIBLE?

Whether it would be feasible to use taxes levied in one country to support archaeological site protection in another, and, if so, what the optimal allocatory system should be (a superfund, already existing agency taskforces or interagency groups, or a global fund like the Alliance for the Protection of Heritage in Conflict Areas), are complicated questions beyond the scope of this article. But leaving aside the question of how taxes raised by a Pigovian tax on antiquities would be spent, is such a tax itself politically achievable? In the short run, in the United States under President Donald Trump, it would seem clearly not. But, even in the long term, for

<sup>26</sup>Parcak 2015.

<sup>27</sup>Rothfield 2009, 122.

<sup>28</sup>Nevine El-Aref, "Compensation for Employees Killed, Injured at 2 Egyptian Archaeological Sites," *Ahramonline*, 21 February 2016, [english.ahram.org.eg/News/188172.aspx](http://english.ahram.org.eg/News/188172.aspx) (accessed 1 August 2019).

a Pigovian tax on antiquities to be put into effect, whether in law or by executive action (legal scholars Eric Posner and Jonathan Masur argue that Pigovian taxes do not require legislation), it would have to overcome powerful resistance for reasons both of ideology and self-interest. Ideologically, Pigovian taxes in general are opposed by both the right and the left. As Masur and Posner note,

[f]or the right, they are unattractive because they are “taxes,” and people on the right oppose taxes. For the left, they are unattractive because they seem to “price” intrinsically valuable goods like human life and the environment and because they seem to permit a firm to commit ongoing harm so long as it is willing to pay a fee.<sup>29</sup>

The right’s antipathy toward taxes means that the only way a tax will be enacted is if the industry itself supports being taxed. So dealers, auction houses, museums, and collectors would have to be brought on board. For that to happen, they would need a quid pro quo. One such quid pro quo might be the establishment of an antiquities registry system, something several dealers have called for.<sup>30</sup> Such a registry might hold out the possibility of quieting title for well-provenanced artifacts that have received the highest grading, if and only if countries of origin agree to the arrangement. Alternatively, dealers might be induced to support a Pigovian tax in lieu of other more onerous legal measures now being instituted in other countries (for instance, Germany’s proposed new law stipulating that artifacts may be bought and sold only with clear documentation on proof of origin and export licensing from the country in which the objects were housed).

Whether such a system could be designed in a way that satisfied both market stakeholders and the archaeological community is not clear, however, especially since, for many preservationists and, more generally, for those on the left, moral repugnance at the very idea of buying and selling antiquities makes any compromise difficult to stomach and thereby acts as a constraint on markets, as economist Alvin Roth has shown for repugnance more generally.<sup>31</sup> But research shows that repugnance can be lessened or even overcome with sustained discussion that makes clear that a carefully regulated market with some inevitable abuses would be an improvement over the current conditions.<sup>32</sup>

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<sup>29</sup>Masur and Posner 2015, 93.

<sup>30</sup>Pearlstein 2013.

<sup>31</sup>Roth 2007.

<sup>32</sup>Baron and Leshner 2000.

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