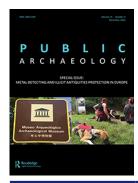
'Black Archaeology' in Eastern Europe: Metal Detecting, Illicit Trafficking of Cultural Objects, and 'Legal Nihilism' in Belarus, Poland, Russia and Ukraine



Samuel Andrew Hardy

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'Black Archaeology' in Eastern Europe: Metal Detecting, Illicit Trafficking of Cultural Objects, and 'Legal Nihilism' in Belarus, Poland, Russia, and Ukraine

SAMUEL ANDREW HARDY Duriversity College London, UK

Across Eastern Europe, professional archaeologists and metal detectorists testify that some archaeological sites have been emptied of metal objects, despite significant efforts to combat illicit trafficking of cultural objects. Yet there is little empirical evidence in relation to the scale of the problem within countries or its comparative scale between countries in the region. This paper presents open-source analysis of membership of online forums and social networks, as well as other empirical indicators, such as sales and ownership of metal detectors. It identifies and contradicts speculation and propaganda from archaeologists and detectorists, then offers empirical evidence in their place. It suggests the activity of at least 14,910 illicit detectorists in Belarus (around 1 in 638 residents), 54,066 illicit detectorists in Poland (around 1 in 702 residents), 26,377 illicit detectorists in Ukraine (around 1 in 1706 residents) and 75,158 illicit detectorists in Russia (around 1 in 1921 residents). It suggests that, in many of the worst-affected communities, above and beyond the technicalities of permissive, restrictive, or prohibitive regulation, the most important factors in the preservation of archaeological knowledge may be the economy and the rule of law.

KEYWORDS cultural property crime, heritage crime, illicit antiquities trade, metal detecting, open-source analysis, property crime, quantitative analysis

Metal detecting for cultural objects in Eastern Europe

In Ukraine, in 2012, 70 per cent of excavations showed evidence of site looting (Ivakin, 2013: 88); some sites 'do not reveal any metal objects' anymore (according to archaeologist Oleg Osaulchuk, cited by Ivanik, 2016). In Russia, metal detectorists themselves have testified, at sites that were 'productive' before, 'now you cannot find

anything at all'; soon, 'there will be nowhere to go' (Roman & Gorodskoi Portal Samari, 2015). In Belarus, some sites have been left, 'literally, empty' (Chernichenko, 2017). And such activities have consequences beyond the destruction of archaeology: missing persons from the world wars cannot be returned to their families, due to the looting of militaria with identifying information (according to the 'Seeker' youth search organization in Tula Oblast in Russia, cited by Iskatel, 2013, and the 'Fate' Communal Enterprise of Lviv Oblast Council in Ukraine, cited by Chyzh, 2017).

In recognition of a lack of basic data on metal detecting for cultural objects around the world (e.g. Huth, 2013: 133; Thomas, 2016: 141), there has been a turn towards intensive quantitative research (e.g. Karl & Möller, 2016) and extensive quantitative research (e.g. Hardy, 2017a) into developed economies in Western Europe and elsewhere. Such data may contribute to consideration of licensing of possession and/or use of metal detectors, which has been advocated by various professional archaeologists, volunteer exhumers of missing persons, and politicians around Eastern Europe (see Levada, 2013; Spasiuk, 2016).

As part of an ongoing global analysis, this paper attempts to estimate the scale of illicit metal-detecting activity in Belarus, Poland, Russia, and Ukraine. Initially grouped together due to their experiences as post-communist transitioning economies in Eastern Europe, research has reaffirmed the significance of metal detecting of twentieth-century conflict archaeology in these countries; documented evidence of a national market in Ukraine that is being opened up to regional players in Russia, Poland, and Belarus; and identified their shared problem of what has been termed 'legal nihilism'.

Developments in metal detecting in Eastern Europe

During the 1990s, in Poland, post-Communist insecurity and the (academic as well as private) market drove 'extensive' and 'intensifying' plunder (Kobyliński & Szpanowski, 2009: 17, 20–21; see also Woźniak, 2000: 456; Zalewska, 2013: 19). In Russia, the Institute of Archaeology republished archaeological maps, which became 'guidebooks for predatory expeditions' (Perevitsky, 2012). In Ukraine, 'economic difficulties and nihilism' drove 'metal hunters' to target monuments, memorials, and graves (Tytova, 2009: 7).

Metal detecting has been 'actively growing' across Russia since 2000 (according to a beachcomber and coast diver, 'professional treasure hunter' Vladimir Poryvaev, cited by Moskovsky Komsomolets, 2013). In Ukraine, this period saw a 'powerful layer of wealthy collectors' begin 'to invest money in illicit excavations' (Basilyuk & Ganych, 2015: 17; see also Kotsur, 2016: 11). There, as in Russia (according to treasure hunter Pavel, cited by Moskovsky Komsomolets, 2012a), antiquities became investment-class assets; banks even began to loan money for the acquisition of ancient cultural capital.

Since then, the flow of cultural objects into illicit collections has increased and the flow of looted coins has 'sharply increase[d]';¹¹ all of this has been assisted by the 'rapid development'¹² of 'amateur internet resources',¹³ which instruct looters in the selection of detectors, targeting of sites, techniques of detecting, and so on (Kotsur, 2016: 11; see also Opalko, 2007: 86).

Only in 'recent years, given the growing demand and the needs of the market', have manufacturers at Russia-based AKA Detectors (2013) given 'more attention to the development of equipment for archeology and treasure hunting'. Detectors were 'poured into the Russian market intensively' from outside around 2007, to create a replacement in Eastern Europe for a section of the market that had been lost through 'a similar tightening of standards in Western Europe' to the ban that was imposed in Russia in 2013; 'about 30 thousand devices were sold in Russia during that time' (according to the Chief Archaeologist of Moscow, Leonid Kondrashev, cited by Georgiev, 2014).

Legal frameworks in Eastern Europe

Although the details of respective country laws vary, there is similar restrictive or prohibitive regulation in place across Belarus, Poland, Russia, and Ukraine. In Belarus, under presidential decree 485, unless in the course of scientific work by archaeological professionals, it is explicitly illegal to use metal detectors and other sensing devices on listed archaeological sites (Spasiuk, 2016). Under the Culture Code that has consolidated and refined a wide variety of existing laws, decrees, and regulations, 'archaeological research [...] including archaeological digging', can only be conducted by licensed professionals (Mikheev, 2016). It appears that, specifically, 'metal detectors, geo-radars and other technical means and tools' can only be used to search for 'archeological objects' with a permit (draft of Code on Culture, cited by Martynovych, 2015). All, even 'accidentally discovered archaeological artefacts', are explicitly identified as 'publicly owned' (Mikheev, 2016).

In Poland, the state owns all antiquities and new finds must be reported to the authorities. Archaeological sites may only be excavated by qualified, state-licensed professionals. Outside archaeological sites, state-licensed non-archaeologists may search for monuments, but they must stop and report if they find anything, while private collecting and antiquities trading are illegal (Kobyliński & Szpanowski, 2009: 13–15; Sabaciński, 2012). It is explicitly illegal to search without a permit; to search with a permit, but outside the limits of that permit; and to export antiquities without a permit.

In Russia, only qualified, state-licensed professionals are allowed to metal detect and excavate (Rossiiskaya Federatsiya, 2013). Equally significantly, only searching for historic artefacts has been criminalized.

In Ukraine, archaeological monuments and finds must be registered with the state (Verhovna Rada, 2004: Art. 8); and scientific research, from survey through excavation to post-excavation analysis, is a licensed activity for archaeological professionals (Verhovna Rada, 2004: Art. 9). Outside of licensed archaeological work, it is illegal to use metal detectors or other sensing devices to hunt movable cultural property (Verhovna Rada, 2004: Art. 10). Export of cultural property is a licensed activity (Verhovna Rada, 1999). Notably, import is permitted when importers observe due diligence and maintain a register of their supplies and their suppliers, in order to prevent the acquisition of stolen property or otherwise illicitly exported goods from other countries.

Law enforcement in Eastern Europe

In Eastern Europe, as elsewhere, it can be difficult to enforce the law, even if illicit detectorists are caught 'in the act'¹⁷ (according to archaeologist Maxim Levada, paraphrased by Ivanik, 2016; see also Basilyuk & Ganych, 2015: 20). Manufacturers have highlighted to the public that there are 'no restrictions' on owning a device, using it to detect modern losses or even undefined 'treasures' (Igor, 2014). Suspects can argue that they were looking for everyday objects such as car keys, wedding rings, and watches or natural objects such as meteorites (according to the president of the 'Fate' Communal Enterprise of Lviv Oblast Council in Ukraine, Svyatoslav Sheremeta, cited by Chyzh, 2017; treasure-hunter Vladimir Poryvaev in Russia, cited by Fochkin, *et al.*, 2016; archaeologist Nikolay Plavinsky in Belarus, cited by Spasiuk, 2016). Even if they are caught with looted cultural objects, suspects can argue that they found them 'accidentally'¹⁸ and 'intended to surrender'¹⁹ those objects to the appropriate authorities, yet were interrupted before they had the opportunity to do so (according to archaeologist Nikolay Plavinsky, paraphrased by Spasiuk, 2016).

Such workarounds are positively advertised by Russian-language media. For instance, after the strengthening of the law, one news outlet published an English-language explanation for metal-detecting tourists of 'how to find hidden treasures in Russia and not get thrown into prison', where it relayed the advice of local treasure hunters: '[i]f you are stopped by the police, never say that you are searching for artifacts'; instead, say that you are looking for 'allowed items: scrap metal, meteorites, modern jewelry and other small objects' (according to Vyacheslav Suskov and others, paraphrased by Zubacheva, 2017).

The problem is worsened by significant participation of law enforcement agents, from police to prosecutors, who exploit their positions to benefit themselves and other illicit detectorists (e.g. in Poland, Zalewska, 2013: 19; in Ukraine, Andriy & Filonenko, 2013; Yatsechko, 2008: 3), as well as exploitation by the political classes (cf. Gershkovich, 2011: 14).

It is exceptionally difficult to prosecute cultural property crime in Ukraine, due to the structure of the trade. Yet the market accounts for the rigour of the system.

If objects can be identified as originating from sites within Ukraine, they are traded on the internal market (Gershkovich, 2005: 93). There are antique shops where 'all of the things are uncleaned [...] from the back case to the showcase'²⁰ (Bandrivskyy & Karpat News, 2011). However, due to the comparatively small internal market, particularly the low-end market in such a low-income economy, it may be 'oversaturated'²¹ (Kurylo, 2007: 138).

If objects can only be identified as originating from transterritorial cultures, they are sold into the international market (Gershkovich, 2005: 93). At one customs checkpoint in one year (Chop in 2003), 1500 cultural objects, with a mean average value of perhaps \$1333, were intercepted (Kurylo, 2007: 138). Later, over thirty months, the State Customs Service intercepted 370 attempts to traffic a total of 4000 antiquities out to the international market (Kozak, 2009). It is estimated that, every year, 'tens of thousands'²² of looted objects are illicitly exported (Opalko, 2007: 86). Even when exporters are caught with illicit antiquities, some have escaped prosecution by claiming ignorance, for example, by stating that they

believed they had bought replica 'souvenirs'²³ from food markets (e.g. aq.Media, 2008).

Open-source analysis of online activity among metal detectorists in Eastern Europe

The following section lays out the methodology for assessing the scale of illicit metal detecting. Using open-ended search terms, in order to allow for variations in vocabulary and grammar, English-language Google Web and Facebook searches included:

- metal detecting plus territory; and
- treasure hunting plus territory.

Using open-ended search terms in various translations and grammatical forms, Google Web and Facebook searches included:

- in Belarusian: black archaeologists, black diggers, metal detecting, metal detector, treasure hunters, and treasure hunting;
- in Polish: detectorists, metal detecting, metal detector, treasure hunters, and treasure hunting;
- in Russian: diggers, metal detector, and treasure hunters; and
- in Ukrainian: black archaeologists, metal detecting, metal detector, metal detectorists, treasure hunters, and treasure hunting.

The total sets of search terms varied somewhat between languages, as practically redundant searches were conducted to compensate for the researcher's ignorance and the search engines' reading of terms. They were expanded and refined in the process of data collection, as some terms were not used frequently in all relevant languages, while some used yet non-standard terms led to the identification of standard local terms.

Inevitably, some online forums and social networks will not have been identified during the research exercise. Nevertheless, local experts singled out some of the 'specialised websites and online forums with indicative names (Belskarb, Belklad)',24 the 'kinds of clubs for fans of metal detecting'25 (Lobach & Rakitski, 2016), that were found by the open-source searches (in this case, in Belarus). So, it is unlikely that very significant, very active online communities were missed. Functionally international forums were excluded, such as Leshiy (2017²⁶), which had around 1731 members, who operated across the former Soviet Union; Serii Kopatel (2017), which had around 5242 members, who were 'grey digger[s]'²⁷ who answered the call, 'treasure hunters of the former USSR, let us unite!'; 28 Metallodetektori v Ukraine Metalloiskateli (2017), which had around 5983 members, yet sold 'metal detectors, with delivery [across] the CIS', 29 the Commonwealth of Independent States that comprises Armenia, Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan, and, until 2008, also encompassed Georgia; and Sobiratel (2017), which had around 14,909 members, who appeared to operate across Eastern Europe (although they appeared to be concentrated in Ukraine, insofar as the symbol for the section on 'meetings, clubs, joint digs — regions'³⁰ was a flag-filled outline of Ukraine).

Due to the volume of results for Russia and Ukraine, further Google Web searches were performed:

- in Russian: for treasure hunters in ok.ru communities;
- in Russian: for treasure hunters in vk.com communities;
- in Russian: for treasure hunters on (other) *.ru sites; and
- in Ukrainian: for treasure hunters on *.ua sites.

Due to the internationalization of the Russian-language keywords for searches for metal detecting (as well as the internationalization of the use of Russia-hosted internet platforms and the historic existence of Russian-speaking communities in Ukraine), all of the Russian-language searches also identified Ukrainian-organized communities.

Using open-ended search terms, local-language Google Scholar searches included:

- buried treasure hunters plus Belarus;
- treasure hunting plus Belarus;
- detectorists plus Poland;
- treasure hunters plus Poland;
- buried treasure hunters plus Russia; and
- black archaeology plus Ukraine.

Quantitative data on the scale of metal detecting for cultural objects in Eastern Europe

Evidence of the number of metal detectorists in Belarus from the ownership of metal detectors

Whether the estimates are supposed to be derived from records of ownership or records of sales, it has been suggested that there are perhaps 'tens of thousands of metal detectors in the hands of the public'³¹ in Belarus (implicitly attributed to Nikolay Plavinsky, cf. Spasiuk, 2016), perhaps 'at least 200 thousand metal detectors in the hands of diggers in our country'³² (explicitly attributed to archaeologist Mikalai Plavinski, cf. Plavinski & Mirtsich, 2015). However, those irreconcilable, unevidenced estimates have been disavowed by the attributed source (archaeologist Mikalai Plavinski, pers. comm., 26 June 2017; his name has been rendered in different spellings in Cyrillic as well as Latin letters). Hence, the only empirical evidence is the membership of online communities.

Evidence of the number of metal detectorists in Belarus from open-source statistics

Compared to Poland, Russia, and Ukraine, there appear to be very few online communities in Belarus; only two appear to be significant in size. However, this may indicate that a regionally disproportionate number of Belarusians participate in ostensibly Russian and explicitly international groups. One online forum had around 12,607 members (Belaruski Skarbashukalnitski Partal, 2017), while another had around 15,960 (Domongol, 2017). Domongol (2017) characterizes itself as a 'forum of ancient culture and art, [and] antiquities gallery';³³ however,

it is listed amongst 'Web-sites of illicit archaeologists and "amateurs of antiquities" by representatives of the Institute of History in the National Academy of Sciences and the Division of Protection of Historical and Cultural Heritage in the Ministry of Culture (Vadzim & Khvir, 2012).

Evidence of the number of metal detectorists in Poland from open-source statistics

For Poland, lower estimates cluster between 10,000 and 30,000 illicit detectorists (Kobyliński & Szpanowski, 2009: 18), while higher estimates range from 35,000 to 100,000 (Trzciński, 2010, cited by Zalewska, 2013: 18), including 60,000 to 80,000 (Pastuszka, 2008). Since the lowest and highest estimates were made within a year of each other, and the methodology of the calculation was not explained for any of the estimates, it is prudent to base the estimate on open-source statistics.

According to state data on detecting licences, there are around 118 licit detectorists (as of 2013; cf. Ministerstwo Kultury i Dziedzictwa Narodowego, 2014: 17, table 1). Yet there are numerous, far larger online forums and social networks. One of the largest online forums has about 24,560 members (Portal Klubowy Poszukiwaczy Skarbów, 2017), while its social network only has about 14,307 fans (Portal Klubowy Poszukiwaczy Skarbów Facebook, 2017). The seemingly largest social network has around 35,550 fans (Poszukiwacze Skarbów, 2017), while its subsidiary social network only has about 6318 members (Oficjalna Grupa Fanpage Poszukiwacze Skarbów, 2017).

Overall, the seemingly largest online community for metal detectorists belongs to a metal-detecting magazine, *Odkrywca* (n.d., the Discoverer). When it had more than 53,000 members, it was noted that the membership constituted a 'minimum estimate'³⁴ (Sabaciński, 2015: 134). Since then, it has grown to at least 58,000 members (Makowska, *et al.*, 2016: 174).

Evidence of the number of metal detectorists in Russia from the rate of consumption of metal detectors

Estimates of detectorists in Russia span 'tens of thousands'³⁵ (according to an unspecified congress of metal detectorists, cited by Brileva, 2014), 'hundreds of thousands, and even millions'³⁶ (Boyko, 2013). They range 'from half [a million] to two million'³⁷ (TV2, 2015), 'from one to two million'³⁸ (Moskovsky Komsomolets, 2013), up to '[o]ver two millions' (Sergei UpstateNY, 2013), even 'several million'³⁹ (according to the Chief Archaeologist of Moscow, Leonid Kondrashev, paraphrased by mir24tv, 2016). Statistics have become instruments in the policy debate.

Vocal supporters and opponents of metal detecting have committed to different claims to the same number: two million. It has been used both by treasure hunters and archaeologists to push back against the possibility of further regulation or deregulation. Despite the dates of the available sources, the 'false data'⁴⁰ was 'first sounded'⁴¹ in 'letters in defence of this stupid "hobby"'⁴² (according to archaeologist Pavel Rusakov, 2013).

First, supporters of treasure hunting claimed that 'about 2 million units [had] been sold in Russia, so it [was] possible to affirm [that there were ...] almost two million "diggers" (according to professional treasure hunter Vladimir Poryvaev, cited by Moskovsky Komsomolets, 2013). To be precise, 'by early 2011, about 2 million units of such equipment were in the hands of Russians'44 (Zhurnal o Kladoiskatelstve i Arkheologii, 2014).

Then, opponents of treasure hunting claimed that '[o]ver the past year',⁴⁵ so in 2011 alone, 'more than 2 million metal detectors [had been] sold in Russia'⁴⁶, where 'citizens [bought] them with the manifest purpose of engaging in illegal excavations'⁴⁷ (according to the Chief Archaeologist of Moscow, Leonid Kondrashev, paraphrased by Moskovsky Komsomolets, 2012b; see also parliamentary deputy Nikolai Levichev, cited by Novaya Politika, 2012; Pichugina, 2013). Specifically, those 'private individuals [had] purchased 2 million metal detectors to search for coins and jewelry'⁴⁸ (according to the Chief Archaeologist of Moscow, Leonid Kondrashev, cited by Boyko, 2012).

Since then, opponents have reverted to using supporters' presentation of the unevidenced statistics. 'According to reports, in Russia, more than two million metal detectors have been sold'⁴⁹ (according to the Chief Archaeologist of Moscow, Leonid Kondrashev, cited by mir24tv, 2016). Since then, too, other equally unevidenced estimates have been published. For example, a pseudonymous treasure hunter (and seeming detector dealer) stated that, singularly or plurally, they had 'sold 500 thousand metal detectors'⁵⁰ in the first eight or nine months of 2015 (Roman & Gorodskoi Portal Samari, 2015).

According to one unsourced report, 'more than a million metal detectors [had] been bought'⁵¹ between 2012 and 2016 and 'at least half of them [were being] used by "black diggers"'⁵² (Fochkin, 2017). According to another unsourced report, by 2017, 'about five million metal detectors [had] been sold'⁵³ (MDRegion, 2017a).

Evidence of the number of metal detectorists in Russia from open-source statistics

As might be expected for the largest territory in the world, there are many disparate online forums and social networks. This may reduce the visible scale of detecting in Russia in relation with other countries, insofar as detectorists may disproportionately restrict themselves to local or regional groups in Russia that serve communities over wider expanses than national groups in other countries. There are at least tens of thousands. One of the largest social networks had around 65,590 members (MDRegion, 2017b), while one of its online forums had around 25,040 (Forum Kladoiskateli, 2017) and another had around 4943 (MDRegion Forum, 2017). The seemingly largest social network had around 72,367 members (Kladoiskatel Metalloiskatel Numizmat, 2017). Yet the seemingly largest online forum had around 80,452 members (ReviewDetector, 2017).

Evidence of the number of metal detectorists in Ukraine from the ownership of metal detectors

Apparently, in Ukraine, there are 'at least 20,000 owners of metal detecting equipment'⁵⁴ (according to political analyst Vitaly Kulik, cited by Segodnya, 2015).

Depending on the source, there are 'hundreds'⁵⁵ (Chyzh, 2017), 'tens of thousands'⁵⁶ (according to the Director of the Institute of Archaeology, Denis Kozak, 2009; and according to the Deputy Director of the Institute of Archaeology, Glib Yuriyovych Ivakin, 2013: 87), 'more than 100,000'⁵⁷ (according to the Chair of the Subcommittee on Protection and Promotion of Cultural Heritage, Oleksandr Briginets, 2013) or 'hundreds of thousands'⁵⁸ of metal detectorists (according to a former director of the Institute of Monuments Protection, Maksim Levada, cited by Ivanik, 2016). Although the higher numbers are more recent and from public officials with direct responsibility for the protection of cultural property, it is prudent to base the estimate on the open-source statistics.

Evidence of the number of metal detectorists in Ukraine from open-source statistics

There are numerous online communities for metal detectorists in Ukraine, whose data can be difficult to use. For example, one vKontakte group, which had around 4876 members (Kladoiskateli Moneti Auktsion, 2017), had previously polled its members specifically about their country of origin — not their ethnic identity, language community, or other potential points of confusion. Indicating the significant potential for regionalization or internationalization of originally national online organization of metal detecting, 49.8 per cent (1150) were from Ukraine, 45.9 per cent (1060) were from Russia and 4.2 per cent (98) were from 'another country' (of 2308 respondents, cf. Kladoiskateli Moneti Auktsion, 2014, since 6 February 2014).

With regard to statistics for the largest online communities, there are even more fundamental problems than the split in nationalities in Kladoiskateli Moneti Auktsion (2014). Between 2016 and 2017, not only are four online communities in Ukraine supposed to have grown by far greater numbers and at far higher rates than comparable communities for Belarus, Poland, and Russia; but two pairs are also supposed to have grown at the *same* rates as each other, even though one pair's communities are administered by different groups, while all of the other communities in Ukraine, Russia, Poland, and Belarus grew (and shrank) at different rates (Hardy, 2017b).

The largest congregation, online marketplace Violity, spans a growing number of locations. It does not publicize the number of users of its online forum (Violity Forum, 2017). Supposedly, the online forum's associated platform, Violity Auktsion (2017), has about 219,184 users; one of its social networks, Violity Facebook (2017), has about 271,286 fans; and another of its social networks, Violity vKontakte (2017) has about 38,854 followers.

These cannot be interpreted as the collectors, connoisseurs, and fans among the community's 'active treasure hunters, collectors, connoisseurs of antiquity and fans of [...] historic artefacts' (Violity vKontakte, 2017), as its dedicated social network for collectors only has about 4241 fans (Violity Kollektsioner, 2017). Regardless of the identity and intention of the producers of the fake accounts, they must be discounted.

Nevertheless, it is possible to infer a reasonable estimate, based on the 'natural' size and growth rate before the artificial surge(s). At the same time, it is necessary

to recognize that such an inference cannot be performed forever, as no online community can grow infinitely. Still, if Violity vKontakte (2017) had continued to grow at its 'pre-surge' rate of 21.75 people per day (Hardy, 2017b), it would have grown by 10,331 people over the 475 days between 16 July 2016 and 3 November 2017, from 17,904 to 28,235, rather than 38,854.

Discussion

Rationalizing the apparent numbers of metal detectorists

It is important to try to account for members of online communities who are not active detectorists. The founder-webmaster of TreasureNet, a United States-based online forum, is currently conducting a poll of its users, 2.54 per cent of whom have never detected, 4.04 per cent of whom have only detected occasionally, which suggests that only 93.42 per cent of its online detectorists are active detectorists (Marc, 2004, as of 31 July 2016). While there may be different detecting 'cultures' in terms of trends for individual versus collective activity, there is no evidence to suggest that online communities for one country include incomparably more inactive members than those for another; and there is no evidence that online detectorists in one country engage in more offline detecting than those in another. More active members may be disproportionately responsive to polls and surveys in comparison with less active members, which may skew the results towards activity rather than inactivity. However, the poll appears to be the largest of its kind by far (cf. Hardy, 2017a: 39, table 25); it has a 95 per cent confidence level within a margin of error of ±3.78; and other factors demonstrate that online community data indicate underestimates of offline community sizes.

First, if online community data indicated overestimates of offline community sizes, then fewer would go detecting in the United Kingdom than buy insurance for detecting through one scheme (cf. Hardy, 2017a: 15–16). Furthermore, not all offline detectorists have internet access; and there are significant disparities in internet access across the societies under analysis. The significance of these disparities is difficult to ascertain, since members of those societies who can afford metal detectors may be able to afford (or may sacrifice other goods in order to be able to afford) landline, mobile, and/or wireless modem internet access, despite low personal income, low personal security, and/or poor community infrastructure. Still, internet is only available to about 76.4 per cent of Russia, 73.3 per cent of Poland, 71.1 per cent of Belarus, and 52.5 per cent of Ukraine (MMG, 2017, as of 30 June 2017).

Moreover, not all offline detectorists with internet access join an online community; and not all online detectorists join the largest online community. Likewise, not all members of an online community's largest congregation join its smaller congregations. There are regularly disparities in size between the largest online forum and the largest social network of a territory, as well as between the online forums and social networks of particular online communities. Those disparities also vary in direction and scale. Furthermore, although there are non-detectorist accounts in detectorist communities, such as friends and family of administrators and archaeologists who monitor activity, they cannot realistically constitute even 1 per cent of the membership of online communities that number in the tens of thousands.

The invisibility of some offline detectorists and undervisibility of other online detectorists affirm that detecting communities' visibility in social media may be far less than their activity in reality. The disparities in the sizes of online communities also affirm that intensive quantitative analysis of online forums (or other congregations) exclusively is inadequate for measuring interest or participation in metal detecting. Thus, they affirm the importance of extensive quantitative analysis of empirical indicators comprehensively.

Hence, drawing anologies with the territories' largest online communities, and discounting 6.58 per cent of online detectorists as inactive members (Marc, 2004), it is possible to infer that there are at least:

- 14,910 illicit detectorists in Belarus amongst 9,507,120 people in Belarus (as of 2016, cf. World Bank, n.d.a), or 1 in 638;
- 54,184 active detectorists (of whom, 118 are licit and 54,066 are illicit), amongst 37,948,016 people in Poland (as of 2016, cf. World Bank, n.d.b), or 1 in 700 (otherwise, 1 licit detectorist in 321,593 people and 1 illicit detectorist in 702 people);
- 75,158 illicit detectorists amongst 144,342,396 people in Russia (as of 2016, cf. World Bank, n.d.c), or 1 in 1921; and
- 26,377 illicit detectorists amongst 45,004,645 people in Ukraine (as of 2016, cf. World Bank, n.d.d), around 1 in 1706.

With regard to Western Europe, offline data suggest perhaps around I detectorist in 2075 people in England and Wales; online statistics suggest at least I in 2200 in Denmark; I in 3108 in Austria; I in 3164 in the Netherlands; I in 3713 in Scotland; I in 4114 in Ireland; I in 5700 in Belgium; and I in 8229 in Northern Ireland (Hardy, 2017a: 23, table 10). As some countries in Western Europe have restrictive or prohibitive regulation, too, these show a significant difference in the scale of activity in Eastern Europe, beyond any differences in regulatory systems.

The visible and invisible markets of businesses that market themselves as hobbies

Any such high estimates may be queried because, despite the massive markets, there are still not *sufficiently* corresponding floods of antiquities onto those markets. It is important to note, first, that there really are massive markets.

Even before Violity's regionalization/internationalization to serve markets in Belarus, Poland, and Russia (and beyond), as well as Ukraine, 'thousands of lots'⁶³ were sold per month (Ivanik, 2016). Over eighteen months of 2013 and 2014, 137,428 lots (so, even more objects) were sold; 'more archeological objects were sold through this auction [site] alone than there are in the depositaries [sic] of the National Museum of Ukrainian History' (archaeologist Maxim Levada, cited by Prokopenko, 2017). Some looted antiquities have been first sold through Violity, then resold in the United Kingdom (Prokopenko, 2017). The overall market for Ukrainian antiquities is estimated to be worth 'hundreds of millions'⁶⁴ of Ukrainian hryvnias — millions of euros — per year (Ivanik, 2016).

Reaffirming the scale of online trafficking, in Poland, over 64 months, the National Heritage Board identified 3000 suspicious internet auctions (Sabaciński,

2012). Of 1800 cultural objects for sale via one website, '90 per cent came from illegal excavations' (Krzemińska, 2010).

However, according to the treasure hunters themselves, the vast majority are self-supplying private collectors. Two polls of a total of 229 treasure hunters in Russia suggest that, improbably but possibly, as few as 6.11 per cent supply the commercial market (see Table 1; cf. Monakh, 2008, who continued to receive responses until at least 2012, and Nikishin, 2015). Then again, in Ukraine, a treasure hunter insisted that metal detecting was a 'hobby', 66 not a 'business', 67 while complaining that 'almost no-one [had been] buy[ing]' 68 any of the 'antiquities' 69 that he had found for several years (Stepan & Popovych, 2013).

Although antiquities from Russia (and elsewhere) continue to be sold through personal networks, flea markets, and antique shops (Moskovsky Komsomolets, 2012a), they are 'mostly'7° traded via the internet (Fochkin, *et al.*, 2016). This may increase their visibility, if they are traded via open, data-minable dealers, auctioneers, and marketplaces that publish their goods; yet this may also obscure their quantity and quality, if they are circulated via online forums, social networks, and other venues for private online trading, such as smartphone apps.

Activity

Suggesting the most common targets of metal detecting, the most used (or, at least, most useful) terms appear to be 'treasure finding'⁷¹ in Belarusian; 'treasure seekers'⁷² in Polish; 'buried treasure seekers'⁷³ in Russian; and 'treasure seekers'⁷⁴ in Ukrainian, although the largest communities in Ukraine originally used the 'regional' language, Russian, and continue to use the Russian-language term for 'buried treasure seekers'. Although many detectorists extract cultural objects from every period (e.g. Dziennik Łódźki, 2011; Łodz Prosecutor's Office, cited by Gałczyńska, 2016), some detectorists specialize in one of two key markets: twentieth-century conflict archaeology (cf. Wojtek, cited by Kolbuszewska, 2006; Zalewska, 2013: 23–24) and 'ancient coins'⁷⁵ (according to local historian Vladimir Frolov in Frolov & Berezina, 2016; see also Kotsur, 2016: 11; Opalko, 2007: 86). There is such an 'unprecedented extraction of coins'⁷⁶ that Roman coins are often sold online 'for a zloty [0.25 euros] per piece'⁷⁷ (Dymowski, 2010: 120, 122).

As suggested by the transnationally deposited targets of the market, a notable amount of looting is transnational. For instance, Ukraine is looted by black

TABLE 1

POLLS OF THE MOTIVATIONS OF TREASURE HUNTERS IN RUSSIA (DERIVED FROM MONAKH, 2008; NIKISHIN, 2015)

Motivation	Monakh (2008)	Nikishin (2015)	Total	Average
Full-time business ('profession' or 'vocation')	5	1	6	2.62
Part-time business ('income')	8	0	8	3.49
Temporary craze	9	0	9	3.93
Hobby	202	4	206	89.96
Total	224	5	229	

archaeologists from Russia and Poland as well as from within its territory, possibly 'most'⁷⁸ of whom hunt for 'burials of German soldiers'⁷⁹ (Basilyuk & Ganych, 2015: 19).

Requiring investments in the forms of the initial financial outlay and subsequent physical activity, it is understood that metal detectors are accessible 'even with an average level of wealth'⁸⁰ (Kotsur, 2016: 11). However, at least within Ukraine, the 'cheapest'⁸¹ detectors may be around 2000 hryvnias or 174 euros, while their users 'can earn'⁸² 100 hryvnias or 9 euros 'per day'⁸³ (Bandrivskyy & Karpat News, 2011). That is still a significant price to a poor looter, yet the cost can potentially be covered by twenty days of looting. Even aspiring looters have been surprised to learn that, online, detectors are 'offer[ed] [...] for any taste and the contents of [any] wallet'⁸⁴ (according to an illicit detectorist, cf. Andriy & Filonenko, 2013).

Shock treatment

A range of challenges exist, to varying degrees, across the region and beyond. These include a dearth of funding for culture, the lack of expert staff and specialized units in police and customs, and a lack of arrangements for international cooperation (Zhadko, 2010: 11). Then, there are the difficulties of policing, when the targets of crime are often in remote areas; the difficulties of making cases, when the suspects can pretend to be looking for modern losses; the difficulties of prosecuting cases, when the perpetrators of crime include members of tight-knit communities, members of organized criminal groups, and beneficiaries of corruption; and the difficulties of establishing the rule of law as a norm, in societies where even the governments have not respected it as a matter of course, where state/elite corruption has prevented the implementation of effective regulation and/or the enforcement of existing regulation.

However, regional analysts have proposed that the 'shock therapy' — induced transformation — of post-communist Eastern Europe, and shock/ transformation-influenced criminality, can only be understood by a 'shock approach' (Šelih, 2012: 12–13, 26–27). This recognizes the effects of institutional instability; state capture by private interests, including organized criminal elements; losses of employment security, income security, living standards, and social security; increases in socioeconomic inequality and exclusion; and changes from collectivist to individualist social value systems. All of these effects and more induced decreased self-control and increased strain in citizens.

This can be seen specifically in relation to illicit trafficking of cultural objects. In Poland, the rules are, 'as a rule, not observed' and law enforcement is 'usually ineffective' (Dymowski, 2010: 143).

In Russia, as the Regional Metal Detecting Forum averred, 'nobody is going to throw an expensive device in the trash'⁸⁷ just because it becomes illegal to use (Forum Pribornogo Poiska Regionov, cited by Petrova, 2013). There were 114 posts on the subject of 'how to get around the federal law' in one conversation in the forum of one local group, the Treasure Hunters' Club of Astrakhan in Russia (cf. Alex, 2013). Indeed, detector manufacturers have reported that, since Russia's prohibition of unlicensed detecting on 23 July 2013, orders for devices have

stayed the same or even increased (according to AKA Detectors' sales representative in Moscow, Igor, 2014).

In Ukraine, improved legislation and increased efforts to combat trafficking have not produced a corresponding decrease in illicit excavation; in fact, it has 'not decrease[d]'⁸⁸ at all (Kotsur, 2016: 11). At least before the revolution in Ukraine, illicit collecting pervaded the elite, including the government (Gershkovich, 2011: 14); suspected illicit antiquities were found in the residences of the president and the prosecutor-general (Hardy, 2014a; 2014b); and at least one minister of culture was advised by a metal-detecting activist (Levada, 2013). In some regions (oblasts), even before the crises of the Ukrainian revolution and the Russian invasion, archaeological protection services had 'almost completely collapsed'⁸⁹ (Kozak, 2009) and there was (notable) involvement of 'corrupt'⁹⁰ police officers, customs agents, and government officials (Opalko, 2007: 86).

Such situations have produced 'legal nihilism'9¹ throughout society (Tytova, 2009: 7; Ivakin, 2013: 88), and particularly 'impunity'9² amongst detectorists (Iskatel, 2013), which is worsened by the high-level criminals who protect the illicit market and enjoyed by the low-level criminals who supply it. There are '[national] tendenc[ies] to circumvent prohibitions'9³ (Krzemińska, 2010). This is manifested by online dealers who, accused of writing 'REPLICA on customs label to deceive customs', publicly confirm that "replica" [was] written in order that the customs would not ask too many questions' (e.g. Popova, 2017).

Neutralizing feelings or accusations of guilt, treasure hunters do 'not accept'94 that conflict archaeology is 'public property'95 (Sabaciński, 2015: 137), or recognize archaeological (rather than financial) definitions of archaeological value, insofar as their finds are typically 'uninteresting because of their ordinariness'96 (Makarova, 2013: 468). Anecdotal evidence indicates that antiquities looters dismiss archaeologists' arguments as 'lie[s] to direct the flow of money into [their] end of the trough'97 (Zabyytsap, 2017). The cultural consequences of such social attitudes would not be ameliorated by legal deregulation in the hope of ethical self-regulation.

Both distinct and much more dangerous

Some 'treasure-hunters' differentiate between themselves as public, collaborative hobbyists and 'black diggers' as secretive, treacherous businessmen (such as treasure-hunter Ruslan, cited by Komsomolskaya Pravda, 2012). Yet most 'hobbyists' are criminals under the law and the illicit nature of their activity facilitates the operation of more serious criminals amongst the petty criminals. When a detectorist reported the discovery of a Roman archaeological site in Bytów, Poland, to heritage protection authorities, members of the publicly visible 'hobbyist' community threatened any other collaborators with 'serious trouble'98 (Dymowski, 2010: 142). When a detectorist found gold coins near Poltava, Ukraine, members of the publicly visible 'hobbyist' community noted that they had located the finder by his home computer's IP address and warned, 'get ready to meet guests'99 (Andriy & Filonenko, 2013).

Some detectorists are defiant about the reality of their activity. One publicly visible Facebook group in Russia, who comprise around five members, identify themselves as Black Diggers (Chernie Kopateli, n.d.) and state:

Our weapons — a sawn-off shotgun, a metal detector and an old jeep [...] Our reward is thousands of 'euros' for old icons, rusty bayonets and insignias, old coins and antique jewelry, half-decayed photographs and documents, skulls and insignias of long-dead soldiers and officers. 100

The pointed reference to a weapon may not be empty talk, either. Archaeologists have been attacked in Ukraine (in the past, cf. Kishkovsky, 2014, and the present, cf. Lizorkina, 2014) and 'expel[led] [...] from sites of excavation under the threat of violence'¹⁰¹ in Russia (according to criminologists A. M. Bandurka and A. F. Zelinskii, cited by Lavrentevich, 2016: 63). It is suspected that Oleksandr Illich Semenov, an archaeologist who 'stubbornly opposed private hunters of antiquities',¹⁰² who 'disappeared'¹⁰³ during a rescue excavation in Russia, 'was killed by [...] purchasers of gold'¹⁰⁴ (Klein, 2009: 101). So, the problem is not only distinct in Eastern Europe, but much more dangerous; and a solution is much more urgent.

What is to be done?

Education is necessary, partly to earn local support for heritage protection, partly to discourage the nationalist fantasies that drive people along the 'road to nationalist collectibles'¹⁰⁵ (Klein, 2009: 102), such as Scythian and Sarmatian antiquities in Russia and Tripyllian antiquities in Ukraine, and the belief that they are conducting 'rescue'¹⁰⁶ (Basilyuk & Ganych, 2015: 19).

In the course of defending illicit sale to cover the cost of illicit excavation and advocating the legalization of metal-detecting 'excavation' to supply public collections and private collections via commercial auctions, a self-identified 'black archaeologist' noted that 'the monthly salary of an inspector-parasite is two or three objects of historical value' (Zabyytsap, 2017). Put another way, two or three objects of historical value are the monthly salary of an archaeological inspector or another civil servant. In some times and places, it has become 'almost the most profitable business' (Kurylo, 2007: 138). As long as this situation persists, the incentive to be a career criminal rather than a public servant (or private worker in the legal economy) will persist. Although it would only be one piece in a mosaic of measures, cultural heritage tourism could contribute to disincentivizing supply of the low-end trade and social toleration of that supply (Tytova, 2009: 9).

Furthermore, as long as this situation persists, it will be impossible for professionals and volunteers to compete with criminals in terms of the rate and extent of their activity. As has been noted by representatives of the 'white diggers' who recover missing persons, the 'black diggers' who loot identifying objects can afford (more or better) metal detectors *because* they sell those identifying objects (according to the head of the 'Memory' Society for the Search for Victims of War, Lyubomyr Gorbach, cited by Chyzh, 2017). Hence, although cultural heritage workers may feel poorly positioned to address these factors, it may be more productive for them to do so, particularly as it would reunite the rancorously opposed sides of the 'culture war' within cultural heritage management and direct all of their efforts towards the preservation of archaeological knowledge.

Notes

- i 'ne viyavlyaye zhodnogo metalevogo predmeta'.
- ² 'to seichas mozhno voobshche nichego ne naiti'.
- 3 'budet nekuda poekhat'.
- 4 'litaralna, pustuyu'.
- ⁵ 'putevoditelyami dlya grabitelskikh ekspeditsii'.
- ⁶ 'ekonomichnoyu skrutoyu y nigilizmom'.
- 5 'shukachiv metaliv'.
- 8 'aktivno narastat'.
- 9 'potuzhnyy prosharok zamozhnykh kolektsioneriv'.
- 'vkladaty koshty v nezakonni rozkopky'.
- ¹¹ 'Rizke zbilshennya'.
- 12 'Strimkogo rozvytky'.
- ¹³ 'amatorsky Internet-resursy'.
- 14 'Na rossiiskii rinok oni intensivno khlinuli'.
- 15 'analogichnogo uzhestocheniya norm Zapadnoi Evrope'.
- 'v Rossii zaeto vremya prodano okolo 30 tis. ustroisty'.
- ¹⁷ 'na garyachomu'.
- 18 'sluchaino'.
- 19 'namerevalsya sdat'.
- 20 'usi rechi buli nepochishchenimi [...] z naplichnika na vitrinu'.
- ²¹ 'perenasychenyy'.
- ²² 'desyatky tysyach'.
- ²³ 'suveniri'.
- 4 'spetsiyalizavaniya saiti i internet-forumi z pakazalnimi nazvami (Belskarb, Belklad)'.
- 25 'svoeasabliviya klyubi dlya amatarau metalaposhuku'.
- Unless otherwise stated, membership statistics for all online communities are correct as of 3 November 2017.
- ²⁷ 'Serii kopatel'.
- ²⁸ 'Kladoiskateli bivshego SSSR, davaite obedinyatsya!'.
- ²⁹ 'Metallodetektori s dostvkoi po SNG'.
- ³⁰ 'Vstrechi, klubi, sovmestnii kop regioni'.
- 31 'na rukakh u naseleniya desyatki tisyach metallodetektorov'.
- 32 'u nashai kraine na rukakh kapalnikau yak minimum 200 tisyach metaladetektarau'.
- 33 'forum drevnei kulturi i iskusstva, galereya drevnostei'.
- 34 'szacunek minimum'.
- 35 'desyatki tisyach'.
- 36 'sotni tisyach, a to i millioni'.
- 37 'ot polytora do dvykh millionov'.
- 38 'ot odnogo do dvykh millionov'.
- 39 'neskolko millionov'.
- 4° 'falshivie dannie'.
- 41 'vpervie prozvuchali'.
- 42 'pisma v zashchytu glupogo "khobby"'.

- 43 'ikh prodano po Rossii uzhe okolo 2 millionov shtuk, Znachit mozhno utverzhdat [...] chit li ne dva milliona "kopatelei".
- 44 'k nachalu 2011 goda na rukakh u rossiyan bilo okolo 2 millionov edinits podobnoi tekhniki'.
- 45 'za proshedshin god'.
- 46 'v Rossii bilo prodano bole 2 millionov metalloiskatelei'.
- 47 'grazhdane pokupayut ikh s yavnoi tselyu zanimatsya nezakonnimi raskopkami'.
- 48 'chastnie litsa priobreli 2 milliona metallodetektorov dlya poiska monet i ukrashenii'.
- 49 'Po imeyushchimsya dannim, v Rossii bilo prodano bole dvykh millionov metallodetektorov'.
- 50 'u nas 500 tisyach metalloiskatelei prodali'.
- 51 'Po slovam ekspertov [...] bilo kupleno bole milliona metallodetektorov'.
- 52 'minimum polovinu iz nikh ispolzuyut "chernie kopateli".
- 53 'na segodnyashnii den [...] prodano okolo 5 millionov metalloiskatelei'.
- 54 'po menshei mere 20 tisyach sobstvennikov metallodetektornoi apparaturi'.
- 55 'sotni'.
- ⁵⁶ 'desyatkyv tysyach'; 'desyatky tysyach'.
- ⁵⁷ 'ponad 100 000'.
- 58 'sotni tysyach'.
- 59 'drugaya strana'.
- 60 'aktyvnikh kladoyskateley, kollektsyonerov, tsenyteley drevnosty y lyubyteley [...] artefaktov ystoryy'.
- Based on 2238 online detectorists who were identified by open-source analysis (Karl & Möller, 2016: 4, table 2), it was previously estimated that there were at least 2091 active detectorists amongst 8,584,926 people (1 in 4106) in Austria (Hardy, 2017a: 23, table 10); based on that forum's 2957-member community at the time of the other estimates (Ferrum Noricum, 2016), it may be estimated that there were at least 2762 active detectorists.
- These data were collected over 11–16 October 2016. They will have changed since then, but significant comparative analysis must await further data collection for numerous other countries, and it would be unhelpful to publish different numbers for all countries with every publication of any region.
- 63 'tisyachi lotiv'.
- 64 'sotnyami milioniv'.
- 65 '90 proc. pochodziły z nielegalnych wykopalisk'.
- 66 'khobi'.
 - ⁷ 'biznes'.
- 68 'mayzhe nikhto nichogo ne kupuye'.

- 69 'starozhytnosti'.
- 7° 'osnovnom'.
- 71 skarbashukalnik.
- 72 poszukiwaczy skarbów.
- ⁷³ kladoiskateli.
- 74 shukachi skarbiv.
- 75 'drevnie moneti'.
- 76 'niespotykane do tej pory tempo wydobywania monet'.
- 77 'po złotówce za sztukę'.
- ⁷⁸ 'naybilshe'.
- 79 'pokhovannya nimetskykh soldativ'.
- 80 'navit iz serednim rivnem statkiv'.
- ⁸¹ 'naydeshevshyy'.
- ⁸² 'mozhna zarobyty'.
- 83 'za den'.
- ⁸⁴ 'proponuyut yikh na bud-yakyy smak ta vmist gamantsya'.
- 85 'z reguły nieprzestrzegane'.
- ⁸⁶ 'zazwyczaj nieskuteczne'.
- Nikto ne vibrosit na pomoiku dorogostoyashchii pribor'.
- ⁸⁸ 'ne zmenshuyetsya'.
- ⁸⁹ 'maizhe povnistyu zgornuto'.
- 9° 'korumpovanymy'.
- ⁹¹ 'pravovyy nigilizm'; 'pravovogo nigilizmy'.
- 92 'beznakazannosti'.

- 93 'polska skłonność do obchodzenia zakazów'.
- ⁹⁴ 'nie akceptuja'.
- 95 'własność publiczna'.
- 66 'neinteresni v silu ikh zauryanosti'.
- '7 'brekhnya dlya napravlennya potoku koshtiv u sviy kut koryta'.
- 98 'poważnych nieprzyjemnośći'.
- 'Gotuysya zystrichaty gostey'.
- 'Nashe oruzhie obrez, metalloiskatel i starii dzhip [...] Nasha nagrada — tisyach "evro" za starinnie ikoni, rzhavie shtiki i ordena, starie moneti i antikvarnie dragotsennosti, poliistlevshie fotografii i dokumenti, cherepa i ordena davno pogibshikh soldat i ofitserov.'
- ioi 'izgnaniya [...] s obektov raskopok pod ugrozoi nasiliya'.
- ¹⁰² 'nepokhytno protydiyav pryvatnym myslyvtsyam za starozhytnostyamy'.
- 103 'propav'.
- 'buv ubytyy [...] skupnykamy zolota'.
- 105 'dorogu natsionalistychnomu kolektsionerstvu'.
- 106 'poryatunok'.
- 107 'rozkopky'.
- 4 'misyachna zarobitna plata inspektoradarmoyida tse dva-try predmety shcho mayut istorychnu tsinnist'.
- 109 'chy ne naybilsh prybutkovym biznesom'.

ORCID

Samuel Andrew Hardy http://orcid.org/0000-0002-4785-1078

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Note on contributor

Dr Sam Hardy is Honorary Research Associate at the Institute of Archaeology, University College London. He researches illicit trafficking and profiteering from illicit trafficking of cultural objects in conflict zones and crisis zones; conducts open-source analysis of cultural property crime; and assists in capacity-building for the fight against illicit trafficking of cultural goods in the Middle East and North Africa (MENA). He blogs research and analysis of the conflict antiquities trade and other aspects of the illicit antiquities trade: https://conflictantiquities.wordpress.com/

Correspondence to: Dr Sam Hardy, Institute of Archaeology, University College London, 31–34 Gordon Square, London WCI H OPY, UK. Email: samarkeolog@gmail.com; twitter: @samarkeolog, @conflictantiq.