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Towards *malum prohibitum*: crime deterrence strategies for reducing illicit antiquities trade

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Abstract

Fight against illegal antiquities trade has predominantly taken a reactive stance. This study operates with novel quantitative and qualitative data obtained through a survey and interviews with 42 law enforcement agents from 21 source and market countries. An empirical insight on illegal antiquities trade is provided, and a comprehensive reference framework of crime deterrence strategies is created. Incidence and efficiency rates of the identified strategies conceal that a law enforcement response at the market side, strengthened through policing, criminal prosecution, reverse of the burden of proof, market control and traceability, is deemed most effective deterrence-wise leveraging certainty of being caught, severity and celerity of punishment, the key mechanisms of Deterrence theory. By contrast, the existing international and EU legislation are considered inconsistent. The findings reveal the need for critically reviewing the current situation and defining a pathway for antiquities markets from *malum non prohibitum* environments to at least *malum prohibitum* climates: shaping proactive policy approaches through updated legislation and targeted crime deterrence and prevention activities to be applied mainly at the market side.

Keywords Illicit antiquities trafficking · Crime deterrence · Malum prohibitum · Cultural heritage protection · Policy

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“Deterrence matters a lot”¹

Introduction

Illicit antiquities trafficking has been for decades treated within heritage protection, archaeology, art history or anthropology disciplines due to the irreparable damage caused to cultural heritage and loss of archaeological context and knowledge (Balcells, 2019). International policy has reportedly taken a reactive ‘return and recovery’ stance, focusing on restitution of illegally-obtained pieces to countries of origin (Brodie, 2015; Yates, 2015), protection of cultural sites at source and disrupting supply chains, doing very little to reduce market demand through strong punitive, deterrent, or dissuasive actions against malfeasant dealers, collectors, restorers, academics and curators (Brodie et al., 2022). On the ground, policing art and heritage crime remains a serious issue. National law enforcement authorities often do not see it as deserving specialist attention and, even when they do avail of dedicated units, they still struggle with capacity problems, limited resources and practical difficulties in enforcing existing laws (Mackenzie et al., 2020; Runhovde, 2021). Criminal prosecution is rare, with money laundering, criminal networks and terrorism financing aspects remaining under-investigated due to privacy surrounding high-net worth transactions in art and antiquities world (FATF, 2023) obscuring the links to other illicit trades and allowing for further under-resourcing (Kramer, 2021). Absence of criminal prosecution and proportionate penalties exercises little deterrent effect on the actors of criminal chain, with all the above exacerbated by the sheer size of the market and extent of looting in destination and source locations, respectively (Brodie et al., 2022; Koush, 2024).

Criminology has largely overlooked the debate (Kerr, 2016; Weirich, 2019), till roughly 20 years ago when the issue entered the realm of criminologists, legal practitioners, NGO’s and international organizations (Chappell & Hufnagel, 2019; Oosterman, 2019; Oosterman & Yates, 2023). The growing body of literature illustrates how the international illicit trade in cultural objects is characterized as a transnational criminal market (Brodie, 2019; Mackenzie et al., 2020; Mackenzie & Davis, 2014), with proven links to other forms of organized crime, such as drugs, arms and wildlife trafficking and terrorism financing (Bogdanos, 2005; Campbell, 2013; Cavigneaux, 2021; FATF, 2023; Howard et al., 2016; Proulx, 2011; UN, 2015a; Westcott, 2020; Yates, 2014) and implications to money laundering, extorsion, tax evasion, fraud and counterfeiting (Hufnagel & King, 2020; Mosna, 2022; Purkey, 2010; Runhovde, 2021). However, despite the increasing criminological recognition, structured academic attention to heritage crime remains limited if compared to the extensive research on other illegal markets (Block, 2016; Oosterman, 2019; Sciandra, 2019). Heritage crime is still considered a ‘dark figure’ of criminality, implying intrinsic difficulties in conducting quantitative research aimed at circumscribing and statistically measuring its true dimensions (Balcells, 2019; Chappell & Hufnagel, 2019; Mackenzie, 2019). We still know little about policing of such crimes (Runhovde, 2021), and do not possess a comprehensive vision of which crime deterrence strategies are

¹ David M. Kennedy, *Deterrence and Crime Prevention. Reconsidering the prospect of sanction*, 2009, Routledge.

employed by law enforcement and how effective they are in contrasting illicit antiquities trade, a knowledge lacuna that this paper attempts to bridge.

To do so, we first apply the criminological dichotomy of *malum in se* and *malum prohibitum* for defining illicit antiquities trade, which clearly emerges as a *malum in se* at the source side, appearing rather as *malum non prohibitum* in market and transit ones, due to negligible effects of criminal law resulting in near-impunity. Therefore, to address the knowledge gap on the existing crime deterrence strategies, this paper uses the conceptual framework of Deterrence theory and tackles the law enforcement perspective, operating with novel qualitative and quantitative empirical datasets acquired through the digitally-delivered survey and semi-structured interviews with 42 specialized law enforcement practitioners from 21 source and market countries. This empirical insight reveals that LE respondents clearly perceive the damaging human rights implications of illicit antiquities trade on source countries, its proven links to terrorism, inconsistency of market stakeholders' justification techniques, and the urgent need for market regulation and reverse of the burden of proof. Finally, basing on the obtained data, the reference framework of crime deterrence strategies for reducing illicit antiquities trade is constructed, including those currently employed and the desired ones. The respective incidence and efficiency rates of the identified strategies conceal that a strong law enforcement response at the market side (policing, criminal prosecution, reverse of the burden of proof, market control, traceability) is seen as the most effective for deterring illicit trade. The existing international and EU legislation are considered totally inconsistent, ringing an imperative alarm bell to legislators and policy-makers. Awareness-raising and education are also reckoned essential for long-term deterrence objectives and cultural seed-planting, confirming the importance of deterrent advertising in reducing crime. Shedding more light on LE practitioners' perspective on illicit antiquities trade, the paper concludes that the implementation of efficient crime deterrence strategies could gradually trigger market and transit locations towards at least *malum prohibitum* climates.

Illicit antiquities trade: *malum in se* or *malum (non) prohibitum*?

Criminology distinguishes between *malum in se* and *malum prohibitum* types of crime (Blackstone, 1941; Dimock, 2016). *Malum in se*, 'evil or wrong in itself' in Latin, is defined as "*an act involving illegality from the very nature of the transaction, upon principles of natural, moral and public law*" (Black, 1968, p. 1112), such as murder, rape, robbery, theft and other crimes, punished by criminal law and condemned by community. *Malum prohibitum* stands for 'a wrong prohibited', or "*an act which is not inherently immoral, but becomes so because its commission is expressly forbidden by positive law*" (Black, 1968, p. 1112), such as illegal possession of weapons, practicing medicine without a license, drug use, speeding, white-collar crimes and others (Davis, 2006). This criminal justice doctrine is useful for understanding the etiology of specific crimes, the laws and institutions that deal with them, and the responses of those who control them (Davis, 2006). More specifically, the conceptualization of an offence as *malum in se* or *malum prohibitum* assigns a level of perceived seriousness to a crime providing a basis for policies on incapacitation and, especially, deterrence (Davis, 2006). This dichotomy is purposefully chosen as a means of better understanding and framing current prevention and

deterrence strategies of reducing illicit antiquities trade, posing a question whether it is perceived as *malum in se* or *malum prohibitum*? Any responses to this illegal trade would then be dependent upon how it is defined, and vice versa the current deterrence responses or lack of them could be better explained by the way it is perceived within this dichotomy.

However, the answer to this query is not straightforward and will vary as we move along the trafficking chain. In source countries, state-vesting legislation nationalizes cultural heritage within state borders, discovered and undiscovered, prohibiting its unauthorized excavation, commercialization and export (Koush, 2011; Mackenzie & Green, 2009). Of note, the term ‘cultural heritage’ is used here in its holistic definition denoting a community’s sense of identity and belonging, involving cultural resources in tangible and intangible forms and reflecting a “rich corpus of human achievement that international law seeks to protect” (ICC, 2021); the terms ‘archaeological artefacts’, ‘cultural objects’ and ‘antiquities’ are used interchangeably here within this holistic definition. Thus, in source countries, antiquities are treated as a national sovereignty issue (Koush, 2024). The respective heritage protection legislation often dates back to centuries ago as in Italy where the first laws were introduced in the 1400s with the first exportation ban, the Edict of Cardinal Sforza, passed as early as 1646 (Emiliani, 2015; Richardson, 2009), while the most recent legislation introduces up to 16 years of imprisonment for offences against cultural heritage (LEGGE n. 22, 2022). Legislation, fight against “*La Grande Razzia*”, or “*The Great Plunder*” of Italian cultural heritage, with numerous restitutions from high-end museums (Isman, 2009; Watson & Todeschini, 2006) and the ongoing everyday effort in curbing it (TPC, 2023) is the eloquent demonstration of the *malum in se* status assigned to the issue. In other source countries, crimes against culture are also included in penal codes. In Iraq penalties include incarceration of up to 15 years, which shall be “*life in prison*” in case a perpetrator operates in cultural field (L.55, 2002, pp. arts. 38–41). On March 2022, a British tourist Jim Fitton was arrested in Baghdad airport for attempting to smuggle 12 archaeological artefacts and was sentenced to 15 years in prison under the 2002 Antiquities Law (Najim, 2022). The Baghdad Court Judge Jaber Abd Jaber found that by picking up the artefacts older than 200 years and intending to transport them out of the country, Fitton had criminal intent to smuggle them and gave no consideration to his lawyer’s claim about his ignorance of Iraqi laws (Aljazeera, 2022). Following a subsequent appeal, the court overturned Fitton’s conviction releasing him in August 2022 (BBC, 2022), yet the Iraqi government sent a clear non-more-impunity message to international community. The list of examples could be continued, but the common denominator would be the law reflecting immorality of crimes against cultural heritage perceived and punished as *mala in se*.

Along the illicit trafficking chain, the situation changes drastically. In transit and market countries, venerated Gods turn into consumer goods. Irreplaceable capsules of history and cultural evolution (belonging to another country by law) turn into collectables praised and prized for their decontextualized aesthetic beauty and investment value. In “highly localized centres of demand” (Brodie, 2015, p. 326), legal frameworks favor good-faith purchasers claiming their property rights and defending their freedom to acquire and possess the culture of others, strengthened by narratives of justification and denial coined by powerful lobbies (Mackenzie, 2014; Mackenzie & Yates, 2016; Yates, 2021) purposefully covering the memory of intrinsic illegality

of objects. Law enforcement have to prove that a buyer knew or believed the artefact to be stolen providing evidence that it is, in fact, stolen, identifying the true owner. Without this proof, there's no case. Even where a specific legislation is in place, like the 2003 Dealing in Cultural Objects (Offences) Act in the UK, proving that a new possessor "knew" about the illegality of the object remains daunting, as "a failure by the accused to carry out adequate checks on the provenance *will not constitute* knowledge or belief" (DCMS, 2004), rendering toothless any desired (?) criminalization effect. Indeed, the first three years of the act saw the reduction in convictions by 30%, and it is hardly used by police (Mackenzie et al., 2020; Mackenzie & Green, 2009). Unlike other illegal trades, antiquities market is considered grey rather than black or white. It is characterized by a fuzziness of boundaries of the source-transit-market structure (Bowman, 2008; Shortland & Winton, 2023), with a mixture of legal and illegal objects sold via a purportedly legitimate network of dealers and auction houses, and illicit origins of objects greyed and overwritten by multiple transactions through various jurisdictions assigning them false provenance stories (Mackenzie & Yates, 2017; Yates & Bērziņa, 2021).

A net contrast is evident. Upon leaving a source country, an object bears a long criminal record of offences such as theft, counterfeiting, illegal export, fraud, corruption, handling proceeds of crime and smuggling (Brodie, 2015; Koush, 2017; Mackenzie et al., 2020; Sotiriou, 2018). That same object, thanks to the interplay of "unevenly enforced international laws and regulatory regimes" (Brodie, 2015, p. 327), enters into the reigns of legal impunity where its illegality is justified, conceptualized and forgotten with no one "knowing" it is tainted. It results in rare convictions and prosecutions, with civil forfeitures preferred due to lower burden of proof (Gerstenblith, 2009), and material evidence of wrongdoing eliminated by returning the objects and precluding further criminal proceedings (Hilaire, 2013).

Thus, neither prohibited by law, nor deemed immoral. Neither *malum in se*, nor *malum prohibitum*. A *malum non prohibitum*.

This categorization is useful for explaining the intrinsic reasons behind the persistent failure of international policy to curb illicit trade in world archaeological heritage. The phenomenon perceived as real *malum* only at the source side, its *malum non prohibitum* status in market countries determines the lack of crime prevention and deterrence. However, the opposite could also be true: the implementation of efficient crime deterrence strategies could gradually trigger the change towards at least *malum prohibitum* climates. Given that, the next chapter focuses on the theoretical premises of deterrence in criminology, followed by presentation of the empirical crime deterrence reference framework of illicit antiquities trade.

Deterring illicit antiquities trade: a theoretical perspective

Various criminological theories and approaches have been applied to conceptualize illicit antiquities trade. Thus, Market Reduction Approach (Sutton et al., 2001) is deemed instrumental for antiquities trafficking suggesting a strategy of risk projection on the market (Brodie, 2015; Mackenzie, 2011; Mackenzie & Green, 2009; Schneider, 2008). Within a wider lens of transnational criminal market, crime script analysis and situational crime prevention were also applied (Mackenzie et al., 2020;

Weirich, 2019), along with the analytical frameworks of white-collar crime and organized crime (Balcells, 2023; Mackenzie, 2019). The Routine Activity Theory lens was adopted to examine the nature, causes, and potentialities of control of antiquities trafficking (Ojedokun, 2012). The framework of creative compliance, or a way of using the law violating its spirit and purpose while still complying with its letter and thus escaping legal control, is likewise deemed pertinent for illicit antiquities trade (Yates & Bērziņa, 2022). A recent study (Koush, 2024) showcased a potentially high crime deterrence efficiency of forensic traceable technology for protecting archaeological heritage (Matthews et al., 2020) by raising certainty of being caught (Deterrence Theory), rendering market environment appreciably riskier (Market Reduction Approach) and providing invisible guardianship to objects (Routine Activity Theory).

Against this background and before passing to the evaluation of empirical data obtained within this research, the analytical framework of Deterrence theory is adopted here to scrutinize the phenomenon of illicit antiquities trade. Primarily, although the concepts of prevention and deterrence are often used interchangeably, they are not synonymous. To 'prevent' is to keep something from happening, while to 'deter' is to discourage someone from doing something by instilling doubt or fear of consequences and, therefore, inhibiting or reducing the likelihood of an event occurring (Coomber et al., 2015; Glynn, 2022; Kennedy, 2009). In other words, deterrence lies at the heart of prevention (Glynn, 2022). A lot of research was done both on theory and practice of deterrence, frequently emphasizing the failure of deterrence regimes to actually deter crime, with each crime and especially the non-rational ones being evidence to this failure (Kennedy, 2009). However, after years on the periphery of crime policy, deterrence has regained a center stage. In his page-turner book, Kennedy illuminates the breadth and power of deterrence as a crime prevention and crime control tool, demonstrating an encyclopedic command of deterrence literature and incorporating a huge amount of new empirical evidence (Kennedy, 2009). Thus, Kennedy argues that, beyond the declared failure, the world is actually soaked in deterrence in its utter ordinariness that oftentimes escapes our attention: "the class of people who persistently put their hands on hot stoves, cross the street without looking, and steal cars in front of police officers is very small" (Kennedy, 2009, p. 9). Indeed, assessment and evidence of policy interventions demonstrate that a wide variety of crimes are considered deterable, no crimes have been demonstrated undeterable, and deterrence can and should be deliberately created (Cook, 1980; Kennedy, 2009).

Thus, the roots of Deterrence Theory go back to the origins of classical criminology and works of Jeremy Bentham and Cesare Beccaria in the late 1700s (Beccaria, 1963). The theory assumes that offenders are rational actors performing a cost-benefit analysis before willfully engaging in a crime, which occurs when the expected rewards outweigh anticipated risks and, hence, increasing risks can deter most crimes in most circumstances (Jacobs, 2010). Illicit antiquities trade clearly corresponds to the above description: the expected rewards by far outweigh any potential risks of real punishment, while the latter is literally inexistant in *malum non prohibitum* market environments. Specifically, three main components of deterrence are distinguished within the Deterrence theory. Namely, *certainty* stands for the likelihood of being caught, *celerity* denotes the speed of the imposed punishment, and *severity* of punishment implies significant penalties for infringement (Johnson, 2019). Accord-

ingly, by increasing certainty, severity and celerity we can raise risk and cost of an action over its benefits deterring crime (Johnson, 2019). None of the above elements are currently present on the transit and market sides of the illicit antiquities chain: no significant penalties, no speed of punishment as investigations may take years and even decades and, especially, low risk of being caught. Indeed, the null level of all the three deterrence leverage mechanisms correlates with the current *malum non prohibitum* status of the antiquities market.

Furthermore, empirical evidence demonstrates that deterrence effect of *certainty of punishment* is far more consistent than that of severity or celerity (Nagin, 2013). This means that a perception of risk of being convicted strongly influences a potential perpetrator, especially for crimes requiring a certain degree of planning, like antiquities trade. Clearly, the component of severity should neither be overlooked serving as a sign unacceptability of a crime (Johnson, 2019). In illicit antiquities trade, the immunization of end clients from any possible risk due to the licit-illicit interplay and the effective use of legislative systems' differences renders the certainty of being caught almost equal to zero. Therefore, any strategy augmenting the risk of a transaction and increasing likelihood of being caught would contribute to enhance deterrence. Moreover, effective deliberate communication of new risk to potential offenders is deemed essential for increasing the apprehension of certainty (Kennedy, 2009) and formation of sanction risk perception (Nagin, 1998). Deterrence threat may be viewed as a form of advertising (Kennedy, 2009; Zimring & Hawkins, 1973), and a purposeful process of communicating information aimed at influencing behavior of a potential offender can have the same impact as concrete actions (Nagin, 2013; Smith et al., 2002). Indeed, effective communication of the use of forensic traceable liquid bears a considerable deterrent impact on reducing burglary, theft and heritage crime (Raphael, 2015; War Memorials Trust, 2022), which was employed for protecting archaeological heritage in Iraq (Koush, 2024; Matthews et al., 2020).

Thus, given the crucial role of deterrence in preventing and reducing crime, leveraging any of its mechanisms, certainty of being caught, celerity or severity of punishment, accompanied by proper communication of potential augmented risk, would work towards changing the mentality of antiquities markets from *malum non prohibitum* environments towards at least *malum prohibitum* ones.

Methodology

The research envisaged a two-step engagement process in a digital format: questionnaire-based survey (delivered via email) and semi-structured active online interviews². Two types of data were collected, analyzed and interpreted: qualitative, obtained from non-numerical entries of questionnaires and interviews, and quantitative, derived from numerical responses to Likert-scale questionnaire items. The survey involved two groups of participants: trade and law enforcement respondents. The

² The overall study design was performed in accordance with the relevant regulations and was approved by the Research Ethics Commission of the School of Archaeology, Geography and Environmental Science of the University of Reading, UK.

trade group was initially envisaged to be the main target group, with law enforcement respondents expected to provide an additional insight. However, unexpectedly yet perhaps predictably we encountered a rather low response, unavailability and reluctance of trade to engage with us, in sharp contrast to the evident interest and willingness to collaborate on behalf of the law enforcement population, which therefore became the main target group. All participants were provided with written instructions describing the study and gave written informed consent to participate in it.

Participants: trade group

In total, we contacted 37 stakeholders in the UK antiquities trade sector, representing 10 specialized art and antiquities associations, 4 auction houses, and 7 galleries, altogether registering a low response rate of 10% with only 2 full participations, 1 questionnaire and 1 interview completed:

- a) ADA Antiquities' Dealers Association filled in the questionnaire without giving numerical values in Likert scale items;
- b) IADAA International Association of Dealers in Ancient Art categorically refused to take part in the survey;
- c) BAMF British Art Market Federation refused to engage in the survey inviting us to make reference to ADA;
- d) No response was received from BNTA British Numismatic Trade Association, LAPADA Association of Art & Antiques Dealers, BADA British Antique Dealers' Association, CADA Cotswolds Antiques Dealers' Association, PAADA Petworth Art and Antique Dealers Association, PADA Portobello Antiques Dealers Association, and KCSADA Kensington Church Street Antiques Dealers Association.

In spite of such a low response on behalf of umbrella organizations, we made a few attempts to approach their single members. We contacted 4 major auction houses, repeating attempts several times and directing emails to different representatives: 1 auction house fully completed the survey, and 1 participated at the interview. A total of 7 galleries were contacted, with only 1 full participation. Art Loss Register was contacted numerous times but no participation followed. This lack of response confirmed the stance of the above associations.

Participants: law enforcement group

Following the low response from trade, the law enforcement (LE) target group became the main focus of our study, with a total of 42 participants (age 50 ± 10 , 6 female) from 21 countries, and an excellent response rate of 68% (Supplementary Table 1). Each participant was free to disclose the name ($n=25$) or choose anonymity ($n=17$). In total, 40 participants completed both the phases (questionnaire and interview), while 2 participants took part only at the interview, and therefore were

excluded from statistical analysis. The LE group included formal agents (currently in charge; $n=24$; age 46 ± 10 , 6 female), and informal ones (retired, or private investigators; $n=16$; age 54 ± 8 , no female) originating from source ($n=18$; age 46 ± 9 , 2 female) and market ($n=22$; age 52 ± 10 , 4 female) countries.

The main difficulty of targeting the LE group was unavailability of contact details of specialized offices in different countries due to obvious operational reasons. INTERPOL does possess lists of countries' hot points for cultural crime but this sensitive data is not public (Respondent 9, Corrado Catesi, Former Co-ordinator, Works of Art Unit, INTERPOL). UNESCO also provides a list of selected Specialized Police Forces on its web-site, but it is incomplete and does not contain significant contact details. Academic literature avails of regional overviews of art crime policing that do not provide contact details (Oosterman, 2019). Kersel underlines that "as a social process, fieldwork necessitates relational events", and fieldwork relationships "do not just happen", but are the outcome of negotiation between the researcher and actors in the field (Kersel, 2006, p. p. 23). These relationship-building and access-gaining dynamics proved to be true for this research, even though performed in the digital format. Thus, to cope with the inaccessibility of contact information, the snowballing 'stream' of relationships was built by accessing the pre-existing first-level contacts of the investigator in law enforcement and heritage fields and asking them to introduce us to specialized agents that they knew. This resulted in gaining access to second-level, third-level and further levels of contacts in different countries up to the eighth one (Fig. 1). Of note, no 'outsider' emails were sent.

Research tools

To perform the survey, the questionnaire "*Towards the safety of the antiquities market: securing the stakeholders from unforeseen risks*" was drafted and accompanied by a Participant Information Sheet, Consent Form and Respondent Data Sheet. The questionnaire contained 25 items, 20 of which were 1-to-10 Likert scale statements and questions, 4 yes/no questions, and one open-ended question (Supplementary Table 2). The items related to: Value of cultural heritage for humanity and human rights implications of illicit antiquities trade (I1, I6, I9, I19, I23, I25); Threats and links to terrorism (I4, I7); Justification techniques (I2, I3, I5); Market regulation (I10, I11, I12); Reverse of the burden of proof (I20); Crime deterrence strategies (I8); Forensic traceable technology for deterring illicit antiquities trade (I13, I14, I15, I16, I17, I18, I21, I22, I24). The items focused on different themes were purposefully mixed up so as not to condition the perception of respondents by concentrating their attention on a certain type of issue. Each item invited to briefly state the reasons for the expressed numerical choice. Of note, the inclusion of the category *Forensic traceable technology for deterring illicit antiquities trade* was aimed at verifying its perceived crime deterrence efficiency if applied to archaeological heritage in source countries (Koush, 2024). The empirical data, obtained in relation to this category of items, constituted the basis of a separate research project (Supplementary Tables 3, 4, 5).

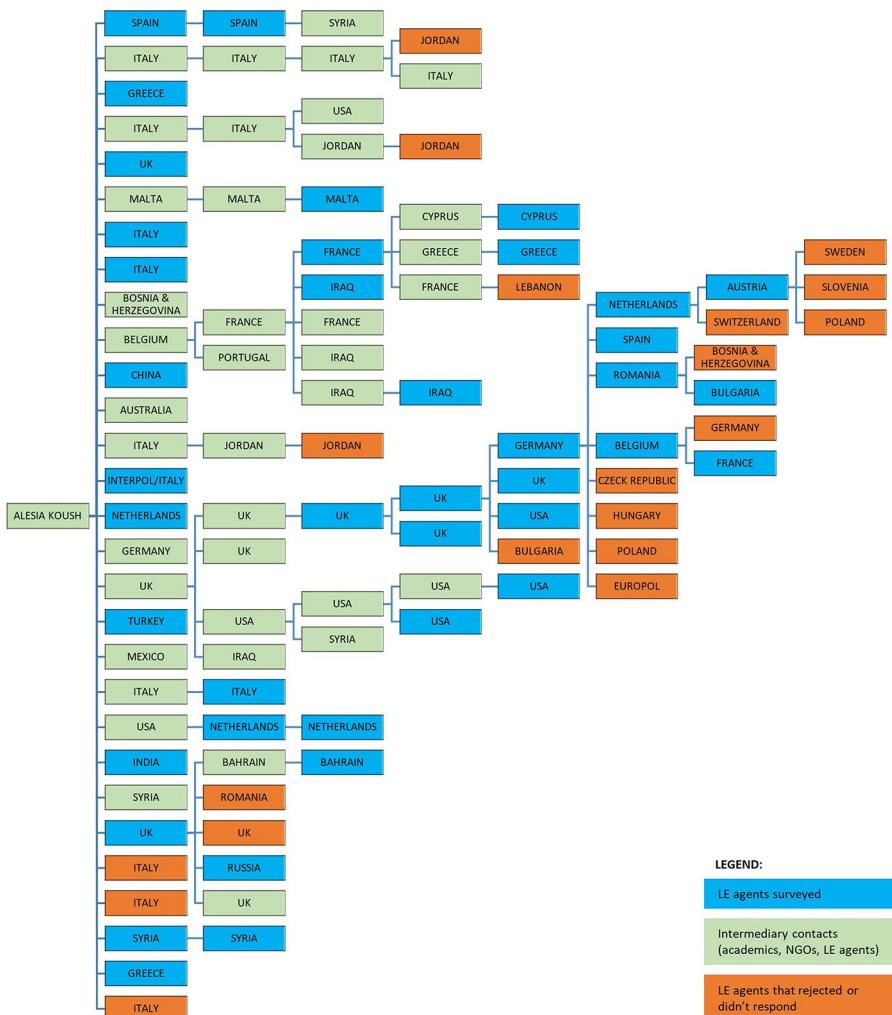


Fig. 1 Relationship-building dynamics of the project

Each questionnaire submission was followed by a request to deepen the raised issues through an online semi-structured interview, with a total of 42 interviews conducted. No uniform interview guide was produced, instead in each single case interview questions were prepared on the basis of the respective questionnaire responses. The respondents themselves influenced the avenue of discussion by opening up on various issues to a larger or lesser extent. The interviews normally lasted from 1 to 2 h, and in some cases up to 3 h, depending on the interviewee's availability. The interviews were conducted online on Microsoft Teams platform, with video and audio recordings transcribed and safely stored according to the data management policy of the University of Reading. In some cases, the interview took place via

phone, WhatsApp or Zoom video call, which was determined by institutional, technical or organizational reasons.

Quantitative and qualitative data analysis

For all Likert scale items ([1...10], where 1 denotes strongly disagree, 10 denotes strongly agree), we aggregated estimates as median [lower and upper quartiles, indicating values that cut off the first 25% and first 75% of data sorted in ascending order, respectively]. To facilitate the interpretation of scores, we converted the Likert [1...10] scale to [-4.5...4.5] scale. For Yes/No items (I13, I14, I16), the aggregated scores were expressed as mean \pm std.

We analyzed whether Likert item scores were significantly different from zero using one-sample two-tailed Wilcoxon rank sum test (a non-parametric alternative to one-sample t-test), and z-statistics to approximate p-values of the non-parametric test. The z-score denotes how far is the observation from the data average in terms of standard deviation given p-value.

We also analyzed the difference between item scores of source ($n=18$) and market ($n=22$) country groups, as well as formal ($n=24$) and informal ($n=16$) LE groups, using two-sample two-tailed Wilcoxon rank sum test (a non-parametric alternative to the unpaired two-sample t-test) and z-statistics. Statistical significance was corrected for multiple comparisons using false-discovery-rate correction (FDR, $q < 0.5$).

For all items, we performed cross-correlation analysis using two-tailed Spearman correlation, a non-parametric approach to measure correlation using rank values. The statistical significance was corrected for multiple comparisons using false-discovery-rate correction (FDR, $q < 0.5$). Analyses were performed in R (R-project.org) and MATLAB (Mathworks Inc., Natick, MA, USA).

Finally, we categorized all the responses to Item 8 (i.e. 119 reported crime deterrence strategies) in 4 major categories, with further sub-categories, for which we calculated the total sum, percentage of citing, and aggregated efficiency estimates as median [lower and upper quartiles].

Written comments provided in the questionnaires and responses to Item 25, as well as the notes and transcriptions of the interviews, constituted the qualitative dataset generated by this study, which was carefully analyzed. The most pertinent citations were used to support statistical data. To reference the citations, only law enforcement related affiliations of participants are indicated (for complete affiliations refer to Supplementary Table 1), with only ID numbers cited for those who preferred anonymity.

Results and discussion

An empirical insight into antiquities trade: a law enforcement perspective

Various source countries share similar looting and trafficking patterns, yet local contexts, geographical position and social conditions determine country-specific characteristics. On regional level, while heritage destruction and looting in the Middle East

received wide international attention, with Iraq and Syria being most eloquent examples (Bajjaly, 2008; Brodie, 2015; Brodie & Sabrine, 2018; Stone, 2015a, b; Taha, 2020), the research on other regions in Asia and Africa is also gradually expanding. Thus, illicit antiquities trade and its facilitating networks were recently explored for Cambodia and Thailand (Davis & Mackenzie, 2014; Mackenzie & Davis, 2014), Vietnam (Huffer et al., 2015), China (Stepnowska, 2017), India (Kothari, 2021), Nepal (Smith, 2022) and other countries. In Africa, heritage experts have risen serious concerns related to the ‘bleeding’ of African cultural heritage ripped off for selling abroad or falling victim of destruction from Egypt and Libya to Tunisia and Nigeria, just to name a few (Abungu, 2016; Abungu et al., 2008; Hanna, 2015; Ojedokun, 2012) with African ‘blood antiquities’ reportedly used for terrorism financing (Puskás, 2022). All Latin American antiquities available on the international market, with few exceptions, are also known to be subject to illegal actions at some point, with evidence of crime obscured or destroyed along with the original cultural contexts (Oosterman & Yates, 2020; Yates, 2021). The list could be continued yet what is clear is that illicit trafficking continues unabated and undeterred in all archaeologically-rich areas of the world to feed the insatiable demand of the high-income market locations. Therefore, within this research we opted to obtain an empirical insight from the law enforcement perspective on a number of issues characterizing illicit antiquities trade (wording of items is in italics) allowing to evaluate the perception of gravity of its damage, as perceived by LE practitioners in source and market countries. Thus, first and foremost, the obtained results demonstrate a high confidence of participants in responding to most of the questionnaire items as indicated by significantly positive scores, significantly disagreeing to I2, I3 and I5, and responding neutrally to I6 (Supplementary Tables 2, 3). Besides, we found a number of significant differences between responses and respective scores from source ($n=18$) and market ($n=22$) country respondents (Supplementary Table 4), while we did not observe any significant difference between the responses of formal ($n=24$) and informal ($n=16$) groups (all p -values >0.5).

Implications of illicit antiquities trafficking for humanity

Recognizing that *illicit antiquities trade* does not always *deal in unique, highly valuable and irreplaceable objects* (I6; Supplementary Table 3), the respondents significantly agree that it *erases cultural history of humanity* (I19). However, tellingly enough, LE agents in source countries are more convinced about this devastating ‘erasure’ effect of illicit trade on cultural history than their market-country counterparts, underlining that it “even manipulates the human history, as the middlemen create new provenance for objects” (Respondent 19 (R19)). Independently of the country of origin, however, all the respondents acknowledge that illegal trade in cultural heritage bears human rights implications for the people where it belongs. In particular, the group agrees that *illicit antiquities trafficking from any country violates cultural rights of its people* (I23), be it *Iraqi* antiquities (I9) or the *UK* (I1) ones, the two specific examples used in the survey. Thus, the responses to these items demonstrate an overall in-depth LE understanding of the damaging implications of

illicit antiquities trafficking, with source-country respondents being undeniably more certain about the erasure of entire layers of human history caused by its practices.

Threats and links of antiquities trade to terrorism

While the links of antiquities trade to terrorism financing have been widely recognized by the United Nations Security Council (UN, 2015b, 2015c, 2017) and other experts, investigative journalists and law enforcement (Brusasco, 2018; Cavigneaux, 2021; FATF, 2023; Howard et al., 2016; Puskás, 2022; Westcott, 2020), the issue is still often presented as misleading and exaggerated false information by the antiquities trade sector (ADA, 2021; Macquisten, 2023). Therefore, the survey purposefully included several items aimed at verifying the LE perspective on the issue, evaluating eventual differences in perception in source and market-country respondents. Importantly, all the respondents show a good knowledge of imminent threats and risks related to the antiquities market agreeing that it is *linked to terrorism, arms trafficking and drug trade* (I4) and supporting the assumption that *ISIS trades in antiquities* (I7). However, market country respondents are more skeptical about the links of antiquities trade to terrorism, and arms and drugs trafficking (I4) supposing that there is not enough proof to substantiate this. By contrast, the obtained data show that source-country respondents are expressly more convinced about the items I4 and I7 providing examples where links to terrorism had been proven creating an important precedent. Among those, the Jaume Bagot case, by Brigata del Patrimonio National and Counter-terrorism Unit of Spanish National Police, when charges for terrorism financing were brought against an art dealer (R22). Similarly, in Iraq several criminals have been recently convicted for up to 10 years of imprisonment for terrorism financing through antiquities trafficking (R26 Ali A. Alysauiy, Criminal investigator and intelligence officer, Head of Special Unit for Cultural Heritage, Anti-Illicit Antiquities Unit, IMOI/AIFI Iraqi Ministry of Interior, Agency of Intelligence and Federal Investigations, Iraqi Police, Iraq). Art-napping cases in 2009 and 2013 in Belgium are also reportedly connected with the 2016 metro bomb terrorist attack in Brussels (R17).

Illegal trade justification techniques used by market stakeholders

The antiquities trade sector is known to be using a range of justification and denial techniques to ‘neutralize’ any potential wrongdoing, including those of denial of responsibility, denial of injury, denial of the victim, condemnation of the condemners and appeal to higher loyalties (Mackenzie & Yates, 2016; Yates & Bērziņa, 2022). Therefore, a number of items of the questionnaire were specifically formulated to verify the LE perception of such ‘rescue’ narratives used by market stakeholders. However, the respondents’ awareness about the threats of illegal antiquities trade (I7, I4) and its human rights implications (I3, I9, I23) led them to refute such rhetorics significantly disagreeing with the statements that *antiquities without provenance are normally licit* (I3), that *trade in Mesopotamian artefacts can help save culture in conflict countries in the Middle East* (I2) and that *Iraqi antiquities arrive from reliable dealers* (I5). This clearly illustrates that law enforcement practitioners are

not inclined to accept justification techniques used by “dodgy dealers to justify their dodgy business” (R8 Martin Finkelnberg, former Head and Founder of Art and Antiques Crime Unit, Netherlands National Police Force, Netherlands). They are well aware that “illicit trade is flourishing under the cover of the lawful trade, and this does nothing to save culture in conflict” (R2) with objects passing not to museums but to “kleptocrats to be hidden behind the screen only for private viewers to see” (R1 Michael McNeir, Former Financial Investigator and Detective, Organized Crime Command - Homicide and Serious Crime Command, Metropolitan Police, UK).

Interestingly, we also detected a significant positive correlation between the items I3 and I2 (Fig. 2, Supplementary Table 5) that showed significant differences in scores between source and market country respondents (Supplementary Table 4).

These differences signify that, along with the disagreement of all respondents with the coupled assumptions *that unprovenanced antiquities are normally licit* (I3) and *trade in conflict artefacts can help save culture of the country of origin* (I2), police officers in source countries expressed a stronger disagreement with both the statements than their market-country counterparts. This indicates that source country respondents have a more realistic picture of the antiquities trade which impoverishes and further destroys but not rescues conflict-distorted cultures, causing a massive increase in illegal excavations. Indeed, extant literature and media coverage have documented the catastrophic damage caused to archaeological areas in numerous source countries by looting and illegal excavation (Bajjaly, 2008; Brodie & Sabrine, 2018; Brusasco, 2018; Davis & Mackenzie, 2014; Emberling & Hanson, 2008; Hanna, 2015; Stone, 2015a, b; Westcott, 2020). Citing Gil J. Stein, Former Director

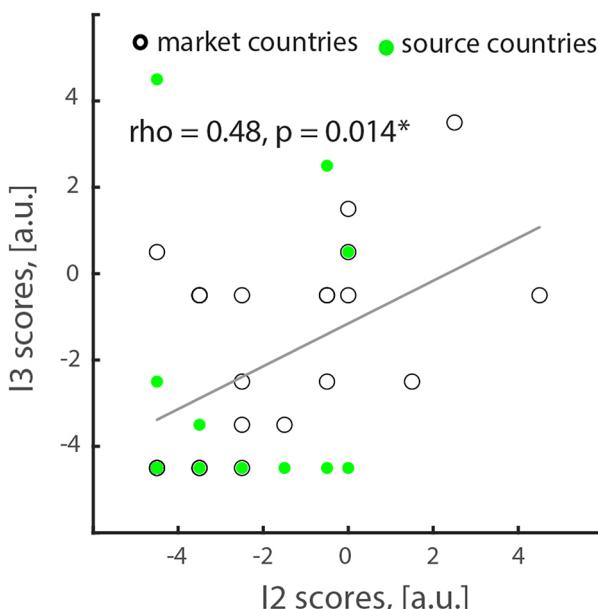


Fig. 2 Cross-correlation for I2 and I3 item pair that showed significant difference between respondents in source ($n=18$) and market ($n=22$) countries. Of note, some responses overlapped

of the Oriental Institute at the University of Chicago, commenting the dimensions of looting in Iraq in post-2003 US/UK-led invasion:

“What is currently taking place in southern Iraq is nothing less than the eradication of the material record of the world’s first urban, literate civilization. “Eradication” is not too strong a word; the mounds that form the remains of the earliest cities of Sumer are undergoing systematic and wholesale destruction by heavily armed gangs of looters who feed into the vast and lucrative illegal antiquities trade. The scale and fevered pace of this looting is astounding. We can only guess how many tens of thousands of artifacts are being looted, but the sites themselves bear mute testimony to how extensive the damage has become” (Stein, 2008).

Accordingly, source-country LE strongly disagree with the statement that *unprovenanced antiquities are normally licit* (I3), as “exactly the opposite has been proven through numerous cases” (R4 Christos Tsirogiannis, Forensic Archaeologist, formerly at the Greek Ministries of Culture, Justice and Public Order; Greek Police Art Squad, Greece) and rather the majority of antiquities without provenance on the market are illegal (R10). Overall, the ‘salvage’ narrative is described as “an Indiana Jones perspective, nobody is saving anything for humanity, they are only concerned about the profit. If there was no interest shown at the market why there would be a flow of illicit antiquities from MENA region to art marketing countries? By creating a market for objects from anywhere in the world in a conflict situation, they are letting armed groups and terrorist organizations to generate income from blood antiquities” (R19). only real protection measures are perceived to be able to save heritage in conflict: “if there is a real concern for the protection of cultural property in conflicting areas, I would fancy these people with this argument to contribute to UNESCO, Red Cross or a NGO in order to help them to be better mobilized in the area for the protection of cultural objects” (R19).

Antiquities market regulation

The antiquities market is considered a grey one, characterized by the mix of legality and illegality along the supply chain (Mackenzie & Yates, 2017; Yates & Bērziņa, 2021) with the ‘don’t ask, don’t tell’ culture allowing to avoid the ‘knowing’ criminal intent (Davis, 2020; Mackenzie, 2011; Mackenzie et al., 2020). The ‘self’ and ‘auto’ regulation, suggesting that the market will regulate and police itself, with well-provenanced objects selling better and buyers avoiding dubious dealers, have largely failed in sanitizing illicit transactions (Mackenzie et al., 2020; Yates & Bērziņa, 2021). On this premise, several items of the questionnaire aimed at revealing the LE perception on the regulation of antiquities market. Thus, our group expressed a significant agreement that antiquities trade needs *a centralised regulatory agency* (I10) in order to be “regulated centrally on a national level, but also on an international level by a governmental body with the power to interfere and investigate when irregularities occur, and also the power to prosecute (civil and criminal) and bring it to court” (R7, Dick Drent, Former Detective Chief Inspector, Netherlands National Police Force,

Netherlands). The group also agreed that *dealers should be subject to a system of transparent licensing* (I11) with *the revocation of license, administrative and penal sanctions in case of breach of regulations* (I12). These results clearly indicate that self-regulation is no longer acceptable for the antiquities market, and “the need of the hour is to have a global regulation with strong penalising provisions to combat the rampant looting and trade in cultural property” (R29, Vijay Kumar, investigator, Co-Founder of India Pride Project, India). Along with the overall endorsement of centralised regulation, potential challenges also emerged in the comments, among which elevated corruption risks (R5 Ilya Shumanov, Director General, Transparency International - Russia), increase in bureaucracy (R35), political and diplomatic infeasibility in terms of interference in domestic affairs and the difficulty of harmonizing diverse legislations in victim and market countries for building a joint strategy (R21, Corinne Chartrelle, Former Deputy Head of Service, OCBC Central Office for the Fight against Trafficking in Cultural Goods, Direction Centrale de la Police Judiciaire, France; R37 Vernon Rapley, Former Head of Art and Antiques Unit, Metropolitan Police, UK). Therefore, the establishment of strong criteria of collaboration between countries should be the first step in achieving centralised regulation (R23, Francisco José Rufián Fdez, Police Officer, Municipal Police, Madrid, Spain), as only “if all the States ascribe to one vigilant network, the criminals would have less gaps to pass through” (R35). Indeed, policing can only be as effective as policy and regulation underlying it (Mackenzie et al., 2020), and the unregulated *malum non prohibitum* market environments need to be properly regulated and deterred to at least endorse the status of *malum prohibitum* climates.

Reverse of the burden of proof

Provenance being fundamental for defining the (il)legality of an archaeological object on sale, the burden of proof remains an unsurpassable obstacle for law enforcement in all countries: illicitly excavated objects are not registered in any public collection, and it remains up to the prosecution to prove that the object belonged to the source state before the illegal excavation, and that it was illegally excavated and exported after the entry into force of a relevant national or international legal instrument, which renders the task a near-to-impossible one. For this reason, even those who trade in antiquities that are the likely product of recent looting often escape the reach of the law (Gerstenblith, 2007). “Despite clear evidence of the illicit nature but without proof, for every successful restitution we have a hundred where we are losing” (R29, Vijay Kumar). Therefore, to increase the direct regulation of the market, experts in the field have advocated for the reverse of traditional burden of proof (Brodie, 2006; Koush, 2011; Tsirogiannis, 2023) obliging the current possessor of an antiquity to carry the burden of proving its legitimate origin in civil forfeiture actions, private replevin claims, and criminal prosecutions (Gerstenblith, 2007). This idea was supported by the United Nations Office on Drugs and Crime recommending to introduce “a rebuttable presumption that objects without provenance documentation (including an export certificate) are illicit” (UNODC, 2009). While some jurisdictions might deem such a measure unconstitutional, like the USA one (Gerstenblith, 2007), international policy does avail of some cases where the reverse of the burden of proof

was successfully implemented. Among those, the 2003 Iraq (UN Sanctions) Order (SI 1519) transposing the UN Security Council Resolution 1483 in the UK. In its Art. 7, the Order states that *any person who deals in any item of illegally removed Iraqi cultural property shall be guilty of an offence under this Order, unless he proves that he did not know and had no reason to suppose that the item in question was illegally removed Iraqi cultural property*. Moreover, the order being retroactive applying to all the property removed from Iraq since August 6, 1990, the effect on the trade was immediate: market statistics evidenced its depressing effect on the London market in Mesopotamian cylinder seals originating from Iraq (Brodie, 2006), publications of Iraqi objects in auction houses fell dramatically, and many of the Iraqi antiquities dealers moved to the neighboring Belgium (Mackenzie & Green, 2009). Further, the enactment of a bilateral cultural property agreement between the USA and Cambodia under the 1970 UNESCO Convention in 2003 put the burden of proof on importers of antiquities to show US customs authorities that they have valid proof of legal export from the country of origin, or that the objects were outside of the country of origin before the date of the agreement (Davis, 2011; Schwartz, 2019). The results were unprecedented: the sales of unprovenanced Cambodian pieces at a major New York auction house plunged by 80%, while art loans between Cambodia and the United States increased, exposing American citizens to Khmer culture and benefiting the Royal Government of Cambodia and its citizens (Davis, 2011; Schwartz, 2019).

Against this background, a specific survey item served to verify the LE perspective on this critical issue. The results clearly demonstrate that all the respondents support the *reverse of the burden of proof* agreeing that *dealers should prove that the objects they trade are licit* (I20, Supplementary Table 3). Examples of tax law (R7, Dick Drent; R23, Francisco José Rufián Fdez) and ivory trade (R8, Martin Finkelberg; R29, Vijay Kumar) were cited as successful cases of reverse of the burden of proof in other challenging areas demonstrating that it could also be applied to antiquities trade.

Interestingly enough, the results also indicate that, in spite of the overall endorsement, market-country respondents are less enthusiastic about the reverse of the burden of proof than their source-country colleagues (I20, Supplementary Table 4). This comparatively lower enthusiasm can be explained also by the previously discussed I3 findings, namely a less suspicious treatment of unprovenanced artefacts on behalf of market-country respondents. The reverse of the burden of proof might also be less appealing to market states LE due to the desire to protect the industry that will have to find an answer to a difficult and equivocal question: “how would they deal with the millions of objects that do not have provenance?” (R37, Vernon Rapley). However, this same question renders much more enthusiastic the source-country respondents. “If they decide to sell only licit objects, licit from the finding till it reaches the market without being laundered at some point, dealers will probably end up not being able to sell archaeological objects and would only be able to deal in art pieces, which would be great” (R19). Again, the position of source country respondents on the reverse of the burden of proof is fully coherent with their more consistent refusal of market justification techniques discussed above. In spite of a difference in the level of endorsement, however, the overall significant support for the reverse of the burden of proof reveals the obvious desire of all the respondents to introduce significant

changes into *malum non prohibitum* environments of market nations and to operate more efficiently both investigation and deterrence wise.

Crime deterrence strategies for reducing illicit trade in archaeological heritage: an empirical reference framework

The growing involvement of organized criminal groups in cultural property trafficking led to the adoption of a series of resolutions by the Economic and Social Council and United Nations General Assembly dedicated to crime prevention and criminal justice responses to this phenomenon (A/RES/66/180, 2012; A/RES/66/186, 2013; ECOSOC, 2010). Following those and with an imminent need to act more proactively, “International Guidelines for Crime Prevention and Criminal Justice Responses with Respect to Trafficking in Cultural Property and Other Related Offences” were adopted calling Member States to strengthen crime prevention policies, legislation and cooperation mechanisms for curbing cultural property trafficking (ECOSOC, 2014). Deterrence lying at the heart of preventive justice, the lack of structural attention to its mechanisms in relation to the illicit antiquities trade constituted the main motivation behind this empirical quest.

Therefore, item I8 of the questionnaire was specifically designed to obtain an empirical insight of LE participants on crime deterrence strategies, techniques and approaches asking them to evaluate their efficiency on the 1-to-10 Likert scale (I8, Table 1). The acquired data, with the total of 119 entries recorded, on average 2–3 examples per respondent, allowed to develop a comprehensive reference framework by mapping the reported crime deterrence strategies. Specifically, three major categories were identified: (1) Law-enforcement strategies, (2) Legislative strategies, and (3) Awareness and education strategies, that were further organized into 14 sub-categories. These sub-categories were sorted by incidence of popularity and assigned median efficiency on Likert scale (Table 1, Fig. 3, responses without specific strategies were separated under Category (4) Other). Note that overlapping but differently worded entries were merged under the same subcategories. Moreover, some of the reported strategies were cited as desirable rather than currently employed, which did not affect the perceived efficiency evaluation. The number of identified strategies could vary across subcategories, confounding the interpretability of the efficiency of least populous categories (e.g., S7, S12, S14), yet providing a sensible framework for evaluations. While each of the below strategies would require additional in-depth evaluation of deterrence implications, the below data represents a primer reference framework imploring further research.

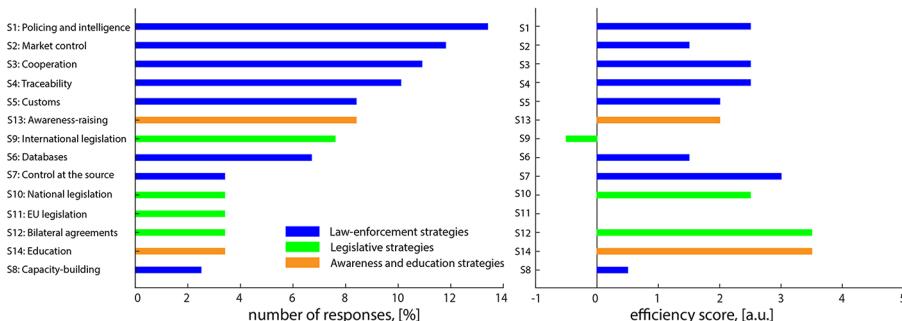
Thus, the empirical data demonstrate that the category of **Law-enforcement** strategies has the highest incidence rate (67.2%), with *S1 Policing and Intelligence* sub-category being the most frequently-cited (13.4%), which indicates that it is perceived as a key strategy in deterring crime. However, this category has a relatively low efficiency score (2.5 [0.5 4.5]), with respondents emphasizing that criminal investigation cases are rare within the illicit antiquities market. Therefore, the highest popularity of this subcategory combined with lower efficiency scores suggests that law enforcement agents clearly assign to policing and intelligence the highest potential in deterring illegal trade, but due to the operational difficulties it remains strongly

Table 1 Crime deterrence strategies grouped in 4 categories and 16 subcategories with the respective sum, percentage and efficiency (median [lower and upper quartiles])

Category	Examples of strategies	Sum	%	Efficiency
Law-enforcement strategies		80	67.2	
S1: Policing and intelligence	Policing, intelligence, criminal investigation, proof as deterrent, work with informants to receive information in advance, etc.	16	13.4	2.5 [0.5 4.5]
S2: Market control	Market monitoring and control, dealers registration, licensing to trade, impact statements, deterrent advertising, legislative control of auctions houses, prohibition of sale with no provenance after 1970; trade bans for dealers buying looted art, reputational fear, etc.	14	11.8	1.5 [0.5 2.5]
S3: Cooperation	Cooperation between international LE agencies, INTERPOL, EUROPOL, international operations and meetings, cooperation between Ministries of Culture and Foreign Affairs, private sector, market and internet community, information exchange, etc.	13	10.9	2.5 [1.5 4.5]
S4: Traceability	Provenance traceability, SmartWater forensic traceable liquids, DNA tagging, money tracing technology for tracing antiquities, artificial intelligence, object recognition, digitization museum collections in conflict zones, etc.	12	10.1	2.5 [0.8 3.5]
S5: Customs	Customs and borders control	10	8.4	2.0 [1.5 3.5]
S6: Databases	National and international databases, police registers, photo archives, ID APP by INTERPOL, etc.	8	6.7	1.5 [0 3.5]
S7: Control at the source	Monitoring and control at source, guardianship at archaeological sites, inspections in the field, monitoring of archaeological excavation work, control over foreign excavation missions, etc.	4	3.4	3.0 [1.0 4.5]
S8: Capacity-building	Capacity-building of the regulator, good practice guidance, experienced workforce, etc.	3	2.5	0.5 [-1 3.5]
Legislative strategies		21	17.6	
S9: International legislation	UNESCO instruments, UN Security Council Resolutions, Council of Europe Convention on Offences relating to Cultural Property, etc.	9	7.6	-0.5 [-1.8 0.5]
S10: National legislation	Stolen property laws, national treaties, provisions on import and export of cultural heritage and archaeological excavations, etc.	4	3.4	2.5 [2.5 3.5]
S11: EU legislation	EU regulations on import certificates for cultural goods, Directive 2014/60/EU on return of cultural objects, Anti-Money Laundering Legislation, etc.	4	3.4	0 [-1.0 1.0]
S12: Bilateral agreements	Bilateral agreements between countries, between countries and institutions, between universities for information exchange on illicit markets, MOUs with market countries restricting imports, etc.	4	3.4	3.5 [1.5 4.5]
Awareness and education strategies		14	11.8	
S13: Awareness-raising	Awareness-raising of potential buyers/collectors, local communities, university students through media, journals, in-flight magazines, presentations, informational brochures, ICOM Red Lists, etc.	10	8.4	2.0 [0 4.5]

Table 1 (continued)

Category	Examples of strategies	Sum	%	Efficiency
S14: Education	Children's education about the impact of illicit trade since age 6/7, university students' education, trainings and courses on heritage protection, risks and threats, transferring know-how, etc.	4	3.4	3.5 [1 4.5]
Other		4	3.4	
S15: No knowledge	Don't know, don't have enough knowledge	2	1.7	NA
S16: No strategies	Crime deterrence techniques do not exist for this type of crime, as the subject is not taken seriously enough, is not anyone's priority	2	1.7	NA

**Fig. 3** On the left: 14 sub-categories of crime deterrence strategies sorted by incidence percentage. On the right: the respective efficiency evaluated on Likert scale expressed in medians

underdeveloped and under implemented. Indeed, criminal investigation, prosecution and punishment seen as most powerful yet missing deterrents of illicit antiquities trade, none of the leverage mechanisms of Deterrence theory are effectively operating. The certainty of being caught is inexistent due to the lack of hard evidence, high burden of proof and “difficulty to prove the *mens rea* of dishonesty” (R2). Severity is also absent with no arrests and eventual civil investigation concluding at most with the restitution of an object, while business as usual continues. Celerity of punishment is not even talked about as within the antiquities market it is well-known that illicit objects may take years and decades to re-surface on the market (R7 Dick Drent). This unavailability of main deterrence mechanisms fully confirms the *malum non prohibitum* status of illicit antiquities trade discussed above. Indeed, in 2022, an Indian court concluded the trial against an art dealer Subhash Kapoor sentenced for 10 years of imprisonment following charges with 86 criminal counts of grand larceny, criminal possession of stolen property and conspiracy to defraud for having led an antiquities trafficking network responsible for channeling over 2,600 trafficked objects from at least 9 countries valued at least \$143 million (Pryor, 2022; Schmidt, 2021). However, no prosecutions were made against acquirers of Kapoor-sourced objects, confirming that market traders and consumers remain largely immune from any threat of criminal prosecution (Brodie, 2019).

Hence, the respondents suggested that the policing response could be strengthened through intelligence work (R13, Roberto Lai, Former Police Officer, Carabinieri TPC

Unit for Cultural Heritage Protection, Italy; R7 Dick Drent; R27, Abdulrahman Alhajjar, Responsible for the Heritage Department, SBAH State Board of Antiquities and Heritage, Mosul, Iraq), criminal asset confiscation and enforcement (R1, Michael McNeir), reverse of the burden of proof (R4 Christos Tsirogiannis) and criminal investigation and prosecution of receivers, middlemen and dealers of illicit antiquities (R2; R31; R33, Michalis Gabrielides, Head of the Office for Combating Illegal Possession and Trafficking of Antiquities, Cyprus Police, Cyprus). These measures are deemed to be able to create a powerful deterrent in antiquities trade “obliging criminals to re-route their networks and avoid countries with significant enforcement action” (R2), as “nothing sends a more powerful message than someone being arrested, prosecuted and held accountable for the committed crime” (R40 Randolph J. Deaton, Supervisory Special Agent, FBI Art Crime Program Manager, FBI Art Crime Team, USA).

The *S2 Market control* subcategory is the second largest in volume (11.8%) but scores even lower in efficiency (1.5 [0.5 2.5]). Indeed, numerous strategies in this subcategory (dealer registration, licensing to trade, legislative control of auctions houses, trade bans for dealers buying looted art, reputational fear, etc.) are not being employed in market countries. The ‘desired’ rather than ‘de facto employed’ nature of these deterrence strategies clearly fits within the current *malum non prohibitum* status of antiquities trade. One of the reasons for this implementation gap is insufficient staff and resources in specialized law enforcement units, as “currently there are far fewer officers engaged in this area of crime than dealers” (R37 Vernon Rapley). Indeed, R9 Corrado Catesi reported that only 20–30% of countries worldwide avail themselves of specialized law enforcement units, and these numbers are highly disproportionate between source and market countries, as Italy for example avails of approximately 300 officers in its Carabinieri TPC Unit for Cultural Heritage Protection, while in Belgium, one of the most important market countries, there is only one dedicated police officer. Consequently, allocation of more staff and budget resources to the existing law enforcement units or creating new ones where they do not exist, would partially mitigate the perceived inefficiency of this category. Moreover, it is important to shift from reactively “chasing after stolen artefacts towards a proactive intelligence-led security stimulating to think not only about what did go wrong, but also about how it could go wrong and how you can prevent it” (R7 Dick Drent). Over and above that, policing can be only as effective as policy and regulation that underlie it, and if policy is poorly constructed, it will be as poorly implemented (Mackenzie et al., 2020). If none of the above-mentioned deterrence techniques are laid out in an official policy regulating the market, the law enforcement alone cannot be expected to be implementing it on the ground.

The *S4 Traceability* subcategory, closely connected to the *S2 Policing* one, also appears to score high in popularity (10.1%) and is similar to *S1* in efficiency. Interestingly, this subcategory unites the most innovative technological advances aimed at guaranteeing provenance traceability and hard evidence in case of looting (forensic traceable technology, DNA tagging, use of money tracing technology, artificial intelligence, object recognition, digitization of objects in museums in conflict zones, etc.), even though their use is still very limited. However, the effective implementation of any of these technological innovations, as exemplified by a recent empirical

study on forensic traceable technology, would significantly enhance traceability of illicitly obtained objects and augment certainty of being caught, the most effective deterrence leverage mechanism within the Deterrence theory (Koush, 2024). Indeed, consistent efficiency rates for the evaluation of traceability techniques not yet widely employed further confirms the readiness of LE agents to implement new technologies for enhancing their policing and market control response (*S1* and *S2*). Thus, the three *S1*, *S2* and *S4* subcategories' overall popularity, the total of 35.3% of reported deterrence strategies, and relatively low efficiency scores emphasize unequivocally the deterrence 'choices' of the respondents, as well as readiness to enforce an array of measures that are not yet dictated by law. The implementation of these desired deterrence strategies would gradually contribute to increasing the perception of risk of punishment within more rapid time frames.

Further, subcategories *S3 Cooperation* and *S6 Databases* are also quite often suggested, with the efficiency scores relatively high for *S3* (2.5 [1.5 4.5]). Indeed, various examples of cooperation between international LE agencies through INTERPOL and EUROPOL have been cited, such as organization of international operations, trainings, action days and meetings, information and data exchange, along with inter-agency and multi stakeholder cooperation. Additionally, national and international databases, police registers and photo archives were highlighted (*S6*).

Finally, in the vast panorama of **Law enforcement strategies** (67.2% of the total), *S7 Control at the source* subcategory occupies a minuscule part of the share, 3.4% from the total, implying that the LE focus is almost entirely concentrated on the market side, where demand is generated and incessantly triggered. Conversely, despite being among the least popular strategies (along with *S12* and *S14*), the *S7* appears to be rated as rather efficient (3.0 [1.0 4.5]). Organizing archaeological excavation work, following up and control of foreign excavation missions are adjudicated with highest scores by R24 Wail Houssin (Former Director of historical buildings and documentation of archaeological sites, DGAM, Syria), raising an important point that stricter control should be exercised over foreign missions operating in source countries where "civilization is under each stone" (R24 Wail Houssin). Most importantly, the microscopic attention dedicated to the source confirms the stance of experts emphasizing that the focus of international policy on capacity-building and training of local staff is largely inefficient in curbing transnational criminal market in illicit antiquities (Brodie, 2015; Brodie et al., 2022).

Tellingly, **Legislation** category was much less cited (17.6%). Out of the four identified subcategories, *S9 International legislation* and *S11 EU legislation* showcase a significant drop in efficiency (-0.5 [-1.8 0.5] and 0 [-1.0 1.0] respectively), being the only two subcategories that reported negative scores. Indeed, this negative evaluation was substantiated by numerous respondents' comments on the inconsistency of international and EU legislation, deemed "meaningless for a law enforcement practitioner" (R41 Colonel Matthew Bogdanos, U.S. Marine and Chief of the Antiquities Trafficking Unit, Manhattan District Attorney's Office, New York, USA) fighting illegal antiquities trafficking as it "gives a lot of windows for legal excuses for not implementing what the conventions themselves are to imply" (R33 Michalis Gabrielides). In these *malum non prohibitum* climates, "the illicit antiquities trade continues essentially undisturbed. Better laws are need" (R4 Christos Tsirogiannis). Thus, the low

de facto efficiency of these two subcategories reveals that, instead of being itself a source of potential crime deterrence techniques, such as criminalization, reverse of the burden of proof, retroactivity, market regulation and others, it is ineffective to the point of not being even considered by those who are supposed to enforce the law on the ground. These findings converge with the data related to the most frequently cited **S1, S2 and S3 Law enforcement** subcategories: the law enforcement hand is ready to enforce but the law is missing.

Furthermore, **S10 National legislation** subcategory was cited very rarely (3.4%), and a sharp contrast between the references to source and market countries legislation was also observed. While source countries are known to have strong heritage protection laws and have been claiming for years their international recognition, law enforcement agents at the market side have to operate with weak or nonexistent legislative instruments. “Besides illicit trafficking of cultural goods not being a priority, our legislation is also very weak, and we have to use criminal offences like buying stolen goods or laundering artefacts, all difficult to prove in the penal code” (R14 Richard Bronswijk, Leader of Amsterdam Art Crime Unit, Netherlands National Police Force, Netherlands). While operational difficulties of law enforcement in market countries are caused by the lack of efficient legislation, “criminals make the most of differences in legislation to their own advantage” (R3 Michael Lewis, Former Special Constable, Antiques and Art Unit, Metropolitan Police, UK).

By contrast, albeit being a not frequently suggested subcategory (3.4%), **S12 Bilateral agreements** was rated high in efficiency (3.5 [1.5 4.5]), as bilateral agreements with market countries or institutions in market countries are deemed to be an important preventive step for mitigating demand and restricting imports (R10; R19). This underused window of opportunity, if wider implemented, might become a source of effective deterrence and prevention, as illustrated by an example of USA-Cambodia bilateral agreement discussed above, where the reverse of the burden of proof was also applied (Davis, 2011; Schwartz, 2019).

Overall, the findings related to **Legislation** category, inherently connected with the **Law enforcement** one, ring a decisive and imperative alarm bell to international legislators and policy-makers calling them to update the existing international and European legislative framework untying the hands of law enforcement in market countries and enabling them to operate efficiently. Indeed, the law enforcement agents *enforce the laws*, and their efficiency determines any potential outcome of enforcement: *malum non prohibitum* climates can be deterred by efficient laws triggering persuasive policing work leveraging the deterrence mechanisms of certainty of being caught, severity and celerity of punishment.

Further, the category of **Awareness and education** is characterized by the lowest popularity and high efficiency scores for its two subcategories **S13 Awareness-raising** (8.4%; 2.0 [0 4.5]) and **S14 Education** (3.4%; 3.5 [1.0 4.5]). Even though awareness-raising and education are indispensable elements of most legislative instruments related to curbing illegal antiquities trafficking³, their low popularity

³ See for example Arts. 10, 17 of UNESCO 1970 Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property; Art. 20 of 2017 Council of Europe Convention on Offences relating to Cultural Property.

among law enforcement agents clearly indicates the peripheral role it occupies in the law enforcement practice in terms of crime deterrence. However, the high level of assigned efficiency is also telling and demonstrates that enhanced policing and legislation measures should go hand in hand with efficient awareness-raising and education campaigns. Thus, media, professional journals, ICOM Red Lists, information brochures were mentioned for raising awareness among buyers, collectors, university students and local communities, while R8 Martin Finkelnberg also suggested publishing information about illegal antiquities trade in in-flight magazines reaching out to extremely diverse and large audiences moving daily around the globe. The former communication strategy suggested as a deterrence tool is fully in line with the role assigned by criminological research to deterrent advertising.

Moreover, as underlined by R8 Martin Finkelnberg, “children’s education is worth a 10+ score, and we need to start educating children from age 6/7 for changing the status quo in a longer term: plant a cultural seed in our kids in primary and secondary school. These kids will be responsible for our (cultural) future. They are future (potential) dealers, buyers, collectors, police(wo)men, lawyers, judges, law makers, prosecutors and yes, criminals too”. Nevertheless, a low popularity of *S14 Education* subcategory reveals also the necessity to educate, through trainings and courses, the specialized LE agents themselves about the importance of education. As stressed by R41 Colonel Matthew Bogdanos, the 10-80-10 rule is valid in antiquities trafficking as well: “it is an undeniable feature of the human condition that 10% of the people will always do the “right” thing—no matter what others may do. And 10% of the people will always do harm or wrong—no matter what strategies you apply. But real success is measured by the 80% in the middle. Those are the ones any strategy needs to influence. The goal is to apply the proper strategy at each stage of the chain of trafficking—because each link in the chain requires a different strategy to educate them in what the “right” thing is and then to convince them to do that “right” thing. It is a truism of law-enforcement as it is in life: an effective carpenter will use every tool in the toolbox—sometimes that is a hammer (represented by prosecution and seizures), but sometimes it is other tools as well (represented by education and mentoring)”. Therefore, the array of deterrence strategies and techniques needs to be amplified for challenging the 80% of *malum non prohibitum* antiquities market population, educating them to the unacceptability of consumption of cultural property illicitly appropriated from other states and peoples.

As regards the category *Other*, two respondents declared not to possess any knowledge on the subject (*S15 No knowledge*), while *S16 No strategies* subcategory contains two essential items, which shed further light on the deterrence of illicit antiquities market. First, R34 Tim Hanley (Former Head of Serious Crime Branch, Police Service of Northern Ireland, UK) stated that currently “none of the existing measures could be deemed effective, as the matter is not being taken seriously and it is not anyone’s priority”, in other words a *malum non prohibitum*. This assertion also realigns with and further confirms negative rates assigned to the International and EU legislation subcategories (*S9, S11*), as the inefficiency of law is a reflection of the low prioritization of the matter. Secondly, R26 Ali A. Alysauay declared that “no crime deterrence strategies exist in source countries, as it is possible to curb trafficking only acting from the market side”. This statement risen by the LE respondent from Iraq,

one of the most heavily looting-affected source countries, incontestably reiterates that any illicit trade is demand-driven and it is the demand which should be tackled to fight it off. The above point also goes fully in line with the data related to the *S7 Control at the source* subcategory occupying a minuscule 3.4% share in the overall panorama and concentrated rather on the control of foreign archaeological missions than on crime deterrence measures as such. This straightforward attention of the LE respondents to crime deterrence in destination countries confirms once again that illicit antiquities trade could be best curbed from the demand side.

Conclusions

Illicit antiquities trafficking has been prevalently treated within reactive return and recovery policies, yet its implications for money laundering, organized crime and terrorism financing prompt to act more proactively. Deterrence lying at the heart of crime prevention, this paper addressed our knowledge gap on the existing crime deterrence strategies of illicit antiquities trafficking. To do so, the study tackled the law enforcement perspective, operating with novel qualitative and quantitative empirical datasets acquired through the digitally-delivered survey and semi-structured interviews with 42 specialized law enforcement practitioners from 21 source and market countries. The empirical insight into the antiquities trade revealed that LE respondents clearly perceive the damaging cultural human rights implications of illegal antiquities trade on source countries, its proven links to terrorism, inconsistency of market stakeholders' justification techniques, and urgent need for market regulation and reverse of the burden of proof. Furthermore, an empirical reference framework of crime deterrence strategies for reducing illicit trade in archaeological heritage was created, showcasing incidence and efficiency rates for the respective categories and subcategories. The data exposed that a strong law enforcement response at the market side (policing, criminal prosecution, reverse of the burden of proof, market control, traceability) is deemed to be most effective for deterring illicit trade, while the existing international and EU legislation are considered completely inconsistent and need to be updated. Strengthening criminal sanctions, introducing reverse of the burden of proof, intensifying market control and employing novel traceability techniques would challenge the *malum non prohibitum* habitats of antiquities markets and work to raise severity of punishment, increase certainty of being caught and celerity of policing process – the key deterrence leverage mechanisms of the Deterrence theory. Awareness-raising and education are also reckoned imperative for long-term deterrence objectives and cultural seed-planting, confirming the key role of deterrent advertising in tackling crime.

The obtained data reiterates that “the virus should be stopped from the market side” (R26 Ali A. Alysauiy), through updated legislation and targeted crime deterrence and prevention activities. The saturation of the unresolved battle against illicit antiquities trade requires law enforcement to act and not re-act for saving archaeological heritage, which legally belongs to the states of origin and needs to be preserved for the sake of humanity as a whole. While the obtained empirical data represents a primer reference framework imploring additional in-depth evaluation of deterrence

implications of each strategy, the study might serve both academic communities and decision-makers for critically reviewing the current situation and defining a pathway for antiquities markets from *malum non prohibitum* environments to at least *malum prohibitum* climates: even if not yet perceived as a socially unacceptable moral wrongdoing but at least forbidden by law restoring justice and providing for real sanctions in case of infringement.

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Declarations

Competing interests The author declares not to have any known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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