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BAR is looking for articles for a new series of Special Reports on everything from specific battles, defence engagement, Information Manoeuvre to Mission Command and much more, and the lessons to be drawn from them, in particular how they relate to the British Army of the 21st Century. If anyone is interested please contact BAR at armyreview@armymail.mod.uk

Cover Photo: Foreign and Commonwealth Office: Open Government License No 1
Professor Andrew Shortland of Cranfield University provides the foreword to this special edition of Culture in Conflict.

This Special Edition of BAR presents papers that were given at the *Realising the Cultural and Human Dimension Symposium* over the 12-14th June 2018, and two related papers that were submitted later. This symposium represented a new departure, combining the Eleventh Spatial Socio-cultural Knowledge Workshop and the Culture in Conflict Symposia. The Conference was organized by Cranfield University’s Symposia at Shrivenham, with the Defence Geographic Centre, Joint Forces Command and Specialist Group Military Intelligence (SGMI) playing lead roles.

The aim of the conference was to bring together a range of policymakers, producers and practitioners from academia, Non-Governmental Organisations (NGOs), private companies and, especially, the military to discuss and share ideas and strategies in the pursuit of understanding people, populations and their environment, particularly in areas of stress or conflict. The first day of the symposium was devoted to Cultural Property Protection (CPP), with talks from the military, both British (SGMI) and American (1st Special Forces Command (Airborne)), plus NGOs, academia and various agencies and companies. The second day covered the Human Dimension again with British (Defence Cultural Support Unit (DCSU) and SGMI) and American (Marine Corps) involvement and others.

This volume was drawn together mostly from the talks presented and edited by SGMI. SGMI is a Reserve unit of the British Army within No 1 Intelligence, Surveillance and Reconnaissance Brigade (1ISR Bde) based at Hermitage. Its function is to expand Army capabilities by bringing in specialist capabilities from outside Land Forces and the Defence community. It consists of a vibrant and very diverse mix of normal and Specialist Reserve Officers, many who hold positions of significant influence and seniority in their civilian jobs. Their diverse cultural backgrounds and expertise at a national and international level both expands and maintains excellence within the Reserve and the Army as a whole. Wearing the uniform gives them a deeper understanding of the military and experience of how to best present their knowledge to a military audience. Their seniority in their civilian roles allows them to connect to a network of useful contacts; their demonstrated expertise allows them to challenge accepted military concepts and to critically appraise policy and procedures. They have the deep knowledge and experience to draw on historical comparanda, as well as the time to be forward-looking and predictive in their assessments - what might the longer-term consequences of Plan X be? How might it impact on other areas? What might make X more efficient/less disruptive?

The articles presented here show only a small part of the capabilities present within SGMI - those related to the subject of the symposium: cultural property
protection (CPP) and the human dimension. SGMI has major capabilities in many areas of hard and soft science, and others such as technical and financial intelligence, as well as regional and thematic specialists. The area of the destruction of cultural property has been an interest for a number of years in SGMI. Its use in the propagating and financing of extremist and terrorist ideologies is widely known and has received extensive reporting and much government concern. The articles in this report show specialists in SGMI, other Army units and academia presenting aspects of this subject. For example, Professor Stone’s article is a good summary of the risks to cultural property in time of conflict, and the basis of the problem. Other articles draw on knowledge of the successes and failures in the protection of cultural property during the Second World War and earlier to inform current policy in that area. Another piece shows how senior officers have sought to impress the importance of CPP into the minds of their commanders and the balance they have placed of human life versus destruction of historical buildings.

Moving away from these historical examples, a third article demonstrates how modern state actors can use cultural property as a weapon in the suppression of ethnic groups or other minorities. Two articles reflect the importance of the Hague Convention, recently ratified by the UK government, which has resulted in the legal necessity for the British Army to have a dedicated unit in this area. SGMI has a number of specialists who have worked alongside DCSU to give expert advice in setting up and defining the role of this new Cultural Property Protection Unit, which will form part of 77 Brigade. One of the pieces published herein specifically considers the protection of underwater cultural heritage, an area often ignored or sidelined.

Also, the Human Dimension theme examines ‘big trends in humanity’, such as changes in population, identity and society. The article looks at the impact of technology in those changes and the way the human component of fighting power might be affected when it has to deal with its effects - instability and conflict. Within this edition there is an analysis of the effects of conflict specifically environmental damage. Considering attacks on oil fields, it shows that remotely identifying environmental degradation can be extremely useful in identifying hazards that may be present before entering an area. It can also help in formulating a plan for dealing with recovery and reconstruction and to support those affected. Finally, a very current problem is highlighted in this special edition. There is an analysis of Russian information warfare from its historically defensive position to an upgraded offensive form, tested in multiple operations, arguing that Russian military thinking requires it to be offensive and this results in it acquiring a ‘…perpetual character…’.

It is hoped that further BAR Special Editions might highlight other areas of the activities of SGMI, DCSU and other units that are of interest to the military as well as disseminating the capabilities they offer to other units.
Two Letters from Ike: Military Necessity and Cultural Property Protection

David Brown, Phd Student at Cranfield University and Lieutenant Colonel Andrew Shortland, SGMI, looks at the issue of damage to cultural property during conflict.
Damage to historic buildings and objects has been an omnipresent aspect of conflict from the earliest periods. This damage can take many forms and may be carried out deliberately or accidentally. It would include, at one extreme, the deliberate targeting and destruction of important historic or cultural sites, but perhaps more often might consist of accidental damage, petty vandalism, looting or simply neglect.

The reasons for such damage are equally diverse. It could be caused because of ignorance of the site’s importance or even existence, so would not have been carried out if the identity had been known. It could be that a particular weapons system goes awry, and munitions intended for one area accidentally damages an adjacent historic building. Careless manoeuvring of armoured vehicles and the like in narrow streets can also, of course, cause accidental damage.

Where sites are destroyed deliberately, often a mixture of motives, reasons and/or excuses might be used. Destroying one of an enemy’s iconic buildings (or cities, if we think of the Blitz\(^1\) and raids such as Dresden\(^2\)) could be thought of as a way of lowering an enemy’s morale and make them less willing to fight. It might be seen in retaliation for previous losses or ‘atrocities’ (again, Dresden). However, it could also be carried out in an attempt to deliberately destroy a state, culture, ethnographic group or race - a part of ‘ethnic cleansing’, where not just the people, but their whole culture is obliterated. Recently, the world has witnessed what might be termed a new form of cultural property destruction - the ‘spectacular’, carried out by ISIS and other related terrorist groups. Here, significant historical buildings and sites have been destroyed for the television cameras with the aim (some might say almost sole aim) of getting publicity for the terrorist group and their agenda. Further examples of destruction and motives are given in another paper in this volume.\(^3\)

However, there is another reason for the deliberate destruction of a historic building. A significant number of such buildings occupy key positions in cities or in the landscape. As such, if these historic buildings are defended and fortified by enemy troops, they represent a significant military problem. If stoutly defended, it will be necessary to dislodge the defenders by force, and the building itself, giving them cover and concealment, will be, literally, in the firing line. Hence sometimes there will be a military necessity to destroy significant, even iconic, historic sites.

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1. German bombing offensive in 1940 and 1941, badly damaging civilian areas of London and many other British cities.
3. Winton and Shortland, this volume.
and buildings. Consider the advice given by General Dwight D. ‘Ike’ Eisenhower, to his commanders about his view on military necessity. It is relevant now because the same discussion is ongoing, especially with the recent ratification by the UK of the 1954 Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict.

The Order Letters
There are two order letters sent by Eisenhower in December 1943 and May 1944 that will be analysed here. They both had wide circulation and are preserved in more than one copy. The copies are viewable online on the excellent US national Archive website and feature in one of their blogs. It is perhaps unlikely that Eisenhower wrote the letters himself, they were most likely drafted for him (as discussed below), but it is reasonable to expect that they reflect his view on the matter, as well as that of command policy in general.

Order Letter, 29 December 1943

CONFIDENTIAL

ALLIED FORCE HEADQUARTERS
Office of the Commander in Chief

AG 000.4-1
29 December 1943

SUBJECT: Historical Monuments

TO: All Commanders

Today we are fighting in a country which has contributed a great deal to our cultural inheritance, a country rich in monuments which by their creation helped and now in their old age illustrate the growth of the civilisation which is ours. We are bound to respect those monuments so far as war allows.

4 Supreme Commander of the Allied Expeditionary Force (SHAEF), 1944-45.
6 Letter, Gen Dwight D Eisenhower, December 29, 1943, File: CAD 000.4 (3-25-43) (1), Sec. 2, Security Classified General Correspondence, 1943-July 1949, General Records, Civil Affairs Division, Records of the War Department General and Special Staffs, RG 165.
If we have to choose between destroying a famous building and sacrificing our own men, then our men’s lives count infinitely more and the buildings must go. But the choice is not always so clear-cut as that. In many cases the monuments can be spared without any detriment to operational needs. Nothing can stand against the argument of military necessity. But the phrase ‘military necessity’ is sometimes used where it would be more truthful to speak of military convenience or even of personal convenience. I do not want it to cloak slackness or indifference.

It is the responsibility of higher commanders to determine through A.M.G. Officers the locations of historical monuments whether they be immediately ahead of our front lines or in areas occupied by us. This information passed to lower echelons through the normal channels places the responsibility on all Commanders of complying with the spirit of this letter.

**DWIGHT D. EISENHOWER**

*General, U. S. Army,*

*Commander-in-Chief*

The first letter from Eisenhower is dated 29 December 1943. Operation HUSKY, the allied invasion of Sicily, started on 10 July and the invasion of the Italian mainland at Taranto (SLAPSTICK) and Salerno (AVALANCHE) began on 9 September. SHINGLE, the landings at Anzio, would begin just a few weeks later on 22 January 1944. The Allies, with Eisenhower as C-in-C (appointed only the week before), were fighting their way through Southern Italy. Eisenhower was in Tunis on Christmas Day and back in Italy soon after that. Interestingly, on the same day he wrote this letter he responded to other correspondence, one of which was related to the high-profile incidents in which General George S. Patton had slapped and abused two private soldiers who were hospitalised with ‘battle fatigue’.7

The Historical Monuments letter had a very wide distribution - *All Commanders* - and the first paragraph sets the context of fighting in Italy and a brief illustration of the importance of the monuments there. He is clear, ‘...we are bound to respect…’ but immediately qualifies it ‘...so far as war allows...’. This is an interesting choice of phrase – not ‘...as far as possible...’, or even ‘...feasible...’ or ‘practica’. The first line of the second paragraph conveys very clearly his intention, in slightly colloquial language. It is the essence of the letter and the line that any

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reader will take away in their memory - if the choice is between a famous building and allied soldiers' lives, ‘...the buildings must go...’. It is interesting that this is said first - the most important part of his message - lives come first. The rest of the paragraph ensures no commander might think he had carte blanche for destruction, it very clearly states that military necessity is paramount, but distinguishes this from 'convenience'. The final paragraph tells the commanders how they will know when important sites are in, or close to, their area, with A.M.G. officers (Allied Military Government for Occupied Territories, sometimes also abbreviated to AMGOT) forwarding information ‘...through the normal channels...’.

The letter is very brief and very direct and clear. No-one could doubt the intention of the C-in-C in this matter. It has been suggested that Sir Leonard Woolley, the archaeologist actually drafted this letter.8 Sir Leonard, known for the excavations at Ur of which T.E. Lawrence also played a part, later saw both men working together within the Intelligence Branch during the Great War. Re-commissioned in the same role at the beginning of the Second World

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War, he was subsequently appointed archaeology advisor to the British War Office in November 1943 and was active within the Monuments Fine Arts and Archives (MFAA) unit. He may have drafted this, but the language of the letter is interesting with the English not being perfect - note that the main text contains not a single comma, although in places (especially the third paragraph) it really needs it. Perhaps something was lost in translation.

Order Letter, 26 May 1944

SECRET

AG(SHAEF/G-5/751)
26TH May 1944

SUBJECT: Preservation of Historical Monuments

TO: G.O.C. in Chief 21 Army Group
    Commanding General, 1st U.S. Army Group
    Allied Naval Commander, Expeditionary Force,
    Air C-in-C, Allied Expeditionary Force

1. Shortly we will be fighting our way across the Continent of Europe in battles designed to preserve our civilization. Inevitably, in the path of our advance will be found historical monuments and cultural centers which symbolise to the world all that we are fighting for.

2. It is the responsibility of every commander to protect and respect these symbols whenever possible.

3. In some circumstance the successes of military operation may be prejudiced in our reluctance to destroy these revered objects. Then, as at Cassino, where the enemy relied on our emotional attachments to shield his defence, the lives of our men are paramount. So, where military necessity dictates, commanders may order the required action even though it involves destruction of some honoured site.

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9 Monuments, Fine Arts and Archives programme, which was part of AMGOT’s responsibilities, better known as ‘The Monument Men’.

4. But there are many circumstances in which damage and destruction are not necessary and cannot be justified. In such cases, through the exercise of restraint and discipline, commanders will preserve centers and objects of historical and cultural significance. Civil Affairs Staffs at higher echelons will advise commanders of the locations of historical monuments of this type, both in advance of the front lines and in occupied areas. This information, together with the necessary instructions, will be passed down through command channels to all echelons.

DWIGHT D. EISENHOWER
General, U. S. Army
The second letter is similar in many ways to the first. The classification is increased, from CONFIDENTIAL to SECRET, reflecting the fact that it concerns the upcoming invasion of Europe - OVERLORD - which would begin less than two weeks later. The circulation is more restricted and at the top level, sent to the military heads of air, sea and land, and copied to their civilian counterparts.

The first paragraph very much recalls the contents of the 1943 letter equivalent - monuments symbolising ‘...what we are fighting for...’. Again, the first line of the second paragraph contains that very clear message - every commander must protect these ‘symbols’. However, it is paragraph 3 that is the most interesting. Here, ‘Cassino’ is referred to. This was the severe fighting on the Gustav Line, south of Rome, especially around the medieval Benedictine Abbey of Monte Cassino. This culminated on the morning of the 15 February 1944 with the bombing and destruction of the Abbey. This was a controversial attack, and remains so to this day, especially as to whether this was militarily ‘necessary’.

By this point in the war it had become a symbol of cultural property destruction and Eisenhower used it as such in this letter, describing it as a definition of military necessity it shielded the defence, and his soldier’s lives were ‘paramount’. Perhaps significantly, the destruction of Monte Cassino was filmed. It was a bright clear day and being high on a crest the film of the bombing is stunning, even now. The film was released by Pathe News on 28 February 1944 and widely seen. At least part of the fame of this bombing attack and the vilification it later received is down to the highly visual destruction. To this extent it is similar to recent ISIS attacks, infamous again because they are so easily and widely watched - the power of the visual, and especially moving, image.

The final paragraph of the 1944 letter echoes the second half of the 1943 message. After the very explicit instruction of paragraph 3 that ‘honoured’ sites may be destroyed ‘where military necessity dictates’ (defined as where allied soldiers’ lives would otherwise be lost), there is warning for ‘restraint.

11 The military addresses are interesting. In addition to air and naval commanders, two army groups are mentioned. 21 Army Group was commanded by Montgomery and was the land forces that would be deployed in OVERLORD. 1st US Army Group (sometimes also called FUSAG) was composed of a real Army and elements of a fictitious unit, designed as part of the deception plan to convince the Germans that the invasion would be in Pas de Calais, not Normandy. Gen Omar Bradley was the commander of the real FUSAG, but to keep the allusion of the notional one in play, it was nominally commanded by Patton, who was temporarily unemployed as a punishment for the slapping incident described earlier.

12 It can be viewed on www.britishpathe.com, and is highly recommended, including the justification of the attack by the Benedictine abbot - which is hardly a ringing endorsement.
Comparing And Learning
The two letters are similar and have the same purpose, however, there are some subtle differences. The first is much more informal - ‘buildings must go’, ‘cloak slackness’, it is more lively and engaging, despite the casual punctuation. The second is more formal, ‘restraint and discipline’ not ‘slackness’, and sites are ‘honoured’. This might reflect the audience intended - the first to ‘All Commanders’ is perhaps more appropriate for a military audience, whereas the second, copied as it is to senior politicians, perhaps has that audience more in mind. What is striking about both letters is the clarity with which they express themselves. Eisenhower needs to get the point across that monuments are to be protected and respected, but there is a clear limit. The limit is forcefully spelled out in the 1943 letter - allied lives come first, and not just first, they are worth ‘infinitely more’. However, Eisenhower is saying, do not use this as an excuse for careless destruction. ‘The lives of our men are paramount…’, but ‘…damage and destruction [that is] not necessary […] cannot be justified’.

The 1954 Convention Today
On 23rd February 2017, the Cultural Property (Armed Conflicts) Act passed through parliament and received Royal Assent (See the paper by Stone in this volume for further details). The 1954 Hague Convention was ratified and passed into force in December of the same year. The Hague convention places limits, constraints and obligations on armed forces engaging in warfare. It requires those armed forces to protect, safeguard and have respect for the cultural property of the area in which conflict is occurring, and during subsequent occupation. Parties must:

‘…[refrain] from any use of the property […] for its protection […] and [refrain] from any act of hostility, directed against such property…’ (Article 4.1).

See https://ukblueshield.org.uk and the paper by Peter Stone in this volume for more detail.

The full details of the Convention can be found on the UNESCO website. Note the words used especially ‘protect’ and ‘respect’ are exactly those used by Eisenhower in his 1944 letter.
In other words, historic buildings and other sites cannot be used defensively or attacked in any way that is likely to damage them. There is only one exception to this, protection can be ‘…waived only in cases where military necessity imperatively requires such a waiver…’ (Article 4.2). This is further outlined in Article 11.2, which is worth quoting:

2. Apart from the case provided for in paragraph 1 of the present Article [where a building loses its protection under the Convention because it is used defensively], immunity shall be withdrawn from cultural property under special protection only in exceptional cases of unavoidable military necessity, and only for such time as that necessity continues. Such necessity can be established only by the officer commanding a force the equivalent of a division in size or larger. Whenever circumstances permit, the opposing Party shall be notified, a reasonable time in advance, of the decision to withdraw immunity.

Once again, the phrase ‘military necessity’ is used - in this case ‘…exceptional cases of unavoidable military necessity...’ - the adjectives used are significant and suggest the proposed rarity of such exceptions. The language of the whole Convention is reminiscent of that used by Eisenhower; and now that it has passed into UK law, the Armed Forces will once more have to consider what ‘military necessity’ is, just as Eisenhower did. This is a debate that will go on. As an operational Army commander commented to the authors, how many lives is he expected to risk, to guard ‘…a pile of stones?’ This is not a casual statement; it is a very real problem that the Armed Forces must face. The ratification of the Hague Convention by the UK will result in the military being put into harm’s way to protect sites. Operational decisions will be changed based on new factors. However, the key to this is whether the commander on the ground knows clearly what their commanders interpret as ‘military necessity’. Eisenhower made this quite clear, with his brevity and clarity: ‘our men’s lives count infinitely more’. It remains to be seen how the Hague Convention will be put into action on the ground, and how the concept of military necessity is interpreted in modern conflicts.

**Lieutenant Colonel Andrew Shortland**, **SGMI**, is a Professor at Cranfield Defence and Security, a School of Cranfield University based at the Defence Academy of the United Kingdom at Shrivenham. Andrew is Head of Cranfield Forensic Institute and Director of Research for the School specialising in applying a wide range of analytical techniques to archaeological, historical and other problems.
David Brown is an archaeologist and historian and a research student at Cranfield University. He has a wide ranging interest in military history and is currently re-examining the Battle of Bullecourt 11th April 1917.
The Russian Weaponization of Cultural Heritage

Captain Mark Dunkley GSC SGMI, assesses to what extent is the Russian Federation using cultural heritage to achieve military and political objectives.

Who controls the past controls the future. Who controls the present controls the past.

Orwell, 1984
The core of Russia’s soft power is the promotion of conservatism, traditionalism and family values centred on the Orthodox Church. As Russia becomes increasingly weak economically (largely as a result of international economic sanctions which contributed to the collapse of the Russian rouble in 2014-2015), the authorities have adopted an assertively nationalist course and appealed to memories of Soviet-era power to strengthen domestic support.

Coupled with this, the Kremlin has adopted a new culture policy focussed on the distinctive heritage and traditional cultural values of Russia. It will be observed that this policy echoes a Soviet legacy in the form of a new State ideology. The projection of this ideological influence and cultural soft power has increasingly formed part of a hybrid war waged initially in Crimea, then in Eastern Ukraine, and latterly in Syria.

**Defining Cultural Heritage**

The United Nations Educational, Scientific and Cultural Organization (UNESCO) defines *cultural heritage* as being the legacy of physical artefacts and intangible attributes of a group or society that are inherited from past generations, maintained in the present and bestowed for the benefit of future generations.

Physical tangible heritage includes buildings and historic places, monuments, artefacts, archaeological sites, museum collections and so on. An example of physical/tangible cultural heritage comprises the Historical Centre of the City of Yaroslavl situated at the confluence of the Volga and Kotorosl Rivers some 250 km north-east of Moscow (Figure 1).

Intangible heritage attributes comprise inherited traditions like language, music, craft skills, etc. An example is the cultural space and oral culture of the Semeiskie communities - a group of so-called ‘Old Believers’; a confessional community originating from the time of the Instigation of the Russian Orthodox Church in the seventeenth century. Their history is marked by repression and exile, but their preserved ancient rituals, various handicrafts and traditional songs and dances allowed UNESCO to inscribe the Semeiskie communities on the representative List of the Intangible Cultural Heritage of Humanity in 2008.

**Russia’s Support for Cultural Heritage Protection**

In 1954, following the devastation caused during the Second World War across the European and Pacific theatres, the fledgling United Nations supported and implemented the Hague Convention on the Protection of Cultural Property in the Event of Armed Conflict (commonly known as the ‘Hague Convention’) (Figure 2). This Convention broadly requires that States/Parties adopt protection measures during peacetime for the safeguarding of tangible cultural property (defined as
movable or immovable property of great importance to the cultural heritage of every people). At the time of writing, 133 nations (States/Parties) had ratified or acceded to the Convention; and it is worth noting that Russia ratified in January 1957 with the UK following sixty years later in September 2017 (a separate Convention for the Safeguarding of the Intangible Cultural Heritage (2003) has yet to be ratified by either the Russian Federation or the United Kingdom).

Russia has a tradition of supporting the protection of cultural property; in 1907 Frédéric de Martens, legal adviser to the Russian Foreign Ministry, is credited with the devising the concept of distinction, now one of the four principles of the Law of Armed Conflict. Here, belligerents must distinguish between combatants and civilians as well as between military objectives and civilian objects (inclusive of cultural property and historic monuments). Later, the Russian lawyer, painter and writer Nicholas Roerich, who witnessed the

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1 UNESCO: Armed Conflict and Heritage.
2 Yale Law School: Laws and Customs of War on Land (Hague IV); 18 October 1907.
destruction of cultural heritage in Russia during the First World War and the October Revolution, initiated the development of an independent treaty at the beginning of the 1930s to protect cultural assets during armed conflicts (though this treaty remained without significant practical relevance).³

Cultural heritage has always been used as a weapon and a means of influence. In AD70, for example, the future Emperor Titus conquered Jerusalem from Judean rebel factions and famously carried the golden Menorah from the Temple. More recently, the Iron Age temple of Ain Dara in north-west Syria was severely damaged by Turkish airstrikes in January 2018 during the deliberate targeting of Kurdish separatists.⁴ However, the early interventions by de Martens and Roerich has allowed the protection of cultural heritage to be developed through the laws and customs of war in four principle ways:

- Prohibition of attacks against cultural property;
- Prohibition of the use of cultural property for military purposes;
- Prevention of illicit export of cultural property from occupied territories; and
- Fostering respect for cultural property.

(Figure 2) A street after a German artillery attack during the Leningrad blockade, January 1942. Such destruction influenced the fledgling United Nations to support measures to protect ‘cultural property’ during future armed conflict (licensed under the Creative Commons Attribution-Share Alike 3.0 Unported license. RIA Novosti archive, image #95845 / Vsevolod Tarasevich / CC-BY-SA 3.0).

The challenge, of course, is protecting cultural heritage from non-state actors. Chiefly in direct response to the destruction of ‘world heritage’ by al-Qaeda and Daesh (who sought to shock by destroying heritage reflecting so-called pre-Islamic barbarism across previously contested areas in the Middle East), Member States of the UN Security Council (including the Russian Federation) unanimously supported Resolution 2347 in March 2017. This Resolution, the first ever resolution adopted by the Security Council to focus on cultural heritage, condemned the destruction and smuggling of cultural heritage by terrorist groups, and welcomed the actions undertaken by UNESCO to safeguard and preserve cultural heritage in peril, as well as actions for the protection of culture and the promotion of cultural pluralism in the event of armed conflict (Figure 3).^5^ Further commitment to Hague Convention by the Russian Federation was subsequently affirmed in a memorandum between the Hermitage Museum and UNESCO, in October 2017, which provided for co-operation to protect items of cultural value in armed conflict zones, particularly in the Middle East.^6^ The Russkiy Mir foundation subsequently reported that the memorandum is another great contribution of [Russia] into protection of culture in...conflict zones.

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6 unesco.org: UNESCO and the State Hermitage Museum join forces to protect heritage in conflict areas.
Russian Cultural Policy Objectives

The Russian peoples can claim ancestry from the Indo-Persian Eurasian Nomads which dominated the entire Steppe Zone from the ninth to the first Century BC. This Central Asian Nomadic Empire was later assimilated and absorbed by Proto-Slavic populations into an Eurasian civilization which has emerged in various incarnations as the Scythians, Huns, Turks and Mongols. There is, therefore, a mystical unity which has possessed the inner continent since deep antiquity.

The Russian Empire and its successor, the Soviet Union, is the most recent expression of this timeless unity with the past. Russia sees itself not as a nation, but as a civilization - an idea that permutated post-Soviet mainstream culture.

The preservation of Russian cultural identity as a civilization has manifested itself through the Federation’s Concept of the Long-term Social and Economic Development of the Russian Federation (2008-2020) or Strategy 2020 which seeks to: a) safeguard and promote the cultural heritage of Russia’s peoples and b) preserve and promote the cultural heritage of the peoples of Russia. There is also a Federal Target Programme entitled the Culture of Russia (2012-2018).

In December 2014, President Putin signed a decree approving Russia’s state cultural policy which was followed by a Ministry of Culture document centred on the maxim ‘Russia is not Europe’. Putin’s condemnation of European multiculturalism as being ‘neutered and barren’ developed into the State Cultural Policy founded upon the importance of Russia’s ‘traditional values’, and a rejection of the principles of tolerance and multiculturalism. Policy documents subsequently cautioned against art and culture which diverges from those values as being threats to national security.

The Federation’s National Security Strategy to 2020 therefore addresses culture in two ways: as internal and external to its interests. Internally, there is recognition that social cohesion is improved by fostering spiritual unity of Federation’s multiethnic peoples, while at the same time resisting spiritual needs of ‘marginal strata’ (which is viewed as a threat to national security in the cultural space). Externally, there is a will to use Russia’s cultural potential in support of multilateral international co-operation.

The Kremlin’s culture policy, which has all the trappings of a new state ideology, focuses on its distinctive civilization and perceived ‘traditional values’ built upon nationalism (which appeals to mainly younger generations), Soviet

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9 NATO Defence College, Russia’s National Security Strategy to 2020.
nostalgia (predominantly supported by the older generations who have lost the most since the collapse of the Soviet Union) and international respect. Such an ideology is already having an economic effect for in Moscow the market for contemporary, Western art has been failing because the new demand, driven by the new ideology, is for the patriotic. As such, there has been a resurgence of interest in Soviet art, although sales of Socialist Realism (imposed 1932-1988 - a glorified depiction of communist values) remain limited (Figure 4).

**Russian International Influence and Effect 1: Crimea & Ukraine**

January 2018, pro-Russian authorities started restoring the oldest and holiest part of the Khan’s Palace of Bakhchissaraj complex (1532) and announced plans to restore the entire palace. The site is one of the best-known Muslim palaces in Europe and is located north-east of Sevastopol. Built for the Crimean Khans, the dynasty of Genghis Khan’s descendants was dethroned after tsarist Russia’s annexation of the peninsula in 1783. The refurbishment project is being carried out by the Kiramet Company of Simferopol and the main contractor is the Atta

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*Figure 4: The death of the Political Commissar by Petrov-Vodkin (1928) an oil on canvas held at the Russian Museum. Images such as these are finding a new market in Russia because of renewed interest in Soviet art as a direct result of the Kremlin’s cultural policies (Released).*

*10 The Telegraph, Russian Sales Bounce Leaves Soviets Behind (05 December 2017).*
Group (specialises in contemporary architecture) of Moscow. Neither company have any experience with restoration work thus (deliberate?) incompetent restoration is posing a threat to the Palace which could lead to complete loss of the monument (Figure 5).

This threat to a Crimean Tatar palace can be viewed as destruction through restoration by damaging a jewel of Ottoman architecture. In the Crimea, matters of Tatar heritage have become political issues since the Russian annexation, and the restoration of the Bakhchissaraj Palace - the most potent monument of the Crimea’s pre-Russian history. Tatar’s view the Palace as the most significant symbol of their lost statehood.

Crimea’s location and cultural openness made it an important centre of Muslim culture. The restoration is part of the Kremlin’s broader campaign of pressure on the Crimean Tatar community that has included abductions, arrests, searches and sentences for alleged terrorism and membership in radical religious groups. Moscow has also introduced history textbooks that describe how Crimean Tatars

Figure 5: The Big Khan Mosque at the Palace of Bakhchissaraj, Crimea. The Palace is currently undergoing refurbishment by the Kiramet Company of Simferopol with the main contractor being the Atta Group of Moscow; neither have any experience with restoration work. Photo A. Savin, Creative Commons Attribution-Share Alike 3.0 Unported license, Wikimedia.
pillaged Russia, enslaved and sold tens of thousands of captives, and obediently served Ottoman sultans - the tsars' arch-enemies. As such, Crimean Tatars fear the Kremlin, after annexation, is chipping away at the identity of the 250,000-strong Muslim ethnicity through assimilation and erasure of historic memory. This begs the question: is Russia attempting to erase Crimean Muslim culture?\textsuperscript{11}

Cultural appropriation was established in August 2014 when the State Council of Crimea adopted a Law on Sites of Crimean Cultural Heritage which entitles the Russian Federation to all museum artefacts and cultural monuments of the peninsula. In October 2015, Prime Minister Medvedev signed an order that included more than 220 cultural and historical monuments of Crimea in the list of Russian federal sites after which a reported massive transfer of cultural objects from Crimean museums to Russia began, coinciding with a reported increase in illicit trading.\textsuperscript{12} Museum collections, including artworks, unique exhibits of Orthodox heritage, and artefacts of overtly political symbolism have been moved from the Crimea to the Hermitage Museum in a move designed to assert Russian sovereignty through cultural heritage.\textsuperscript{13} Approximately 15,000 artifacts, of both local and national significance, have been lost under Russian occupation in Crimea and eastern Ukraine prompting the Ukrainian Minister of Culture to request that museum staff conduct an audit of all icons and other cultural and historical treasures in the temples of the Ukrainian Orthodox Church.\textsuperscript{14}

Further, President Putin’s dive to explore an ancient shipwreck off the Crimean coast in August 2015, accompanied by Defence Minister Sergei Shoigu and the head of the Russian Geographic Society, can be viewed as the Russian Federation enforcing sovereignty of Crimean territorial waters.\textsuperscript{15}

**Russian International Influence and Effect 2: Syria**

Russian - Syrian cultural relations remain strong to the extent that the respective governments have collaborated on projects celebrating their joint victory over terrorism, such as a photographic exhibition entitled *Syria Will Triumph* shown at several venues in Russia and Damascus. Archaeologists from Russia’s Heritage Institute have already entered Palmyra and Aleppo as part of a group

\textsuperscript{11} aljazeera.com: Is Russia attempting erase Crimean Muslim culture?
\textsuperscript{12} atlasobscura.com: Ill-gotten treasures of ancient Crimea are flooding eBay.
\textsuperscript{13} euromaidanpress.com: Ukrainian experts hope UNESCO status will help preserve ancient Trypillian culture.
\textsuperscript{14} siutelgram.media: The Minister of culture ordered the temples of the UOC to conduct an urgent inventory.
\textsuperscript{15} Daily Telegraph, Vladimir Putin plunges into Black Sea in research submarine (18 August 2015).
of cultural scientists tasked with assessing the condition of the monuments following months of control by Daesh. In June 2018, the Russian news agency TASS reported that Russian archaeologists hope to undertake excavations at the Palmyra UNESCO World Heritage Site, following suspension of an arrangement made with the Syrian government in spring 2015, several days before the start of offensive actions in the Palmyra area.\footnote{16 TASS: Russian archaeologists eyeing excavations in Palmyra after restoration of Tadmor.}

The purpose of these missions is reconnaissance and to report back to UNESCO on the condition of the World Heritage Sites with a view to potential reconstruction; the archaeologists’ safety is guaranteed by the Russian Defence Ministry (Figure 6). By establishing baseline evidence for the conservation of Syria’s war-torn heritage, Russia plans to have an influence in shaping Syria’s future. Perhaps more significantly, by making the Assad regime a stakeholder in an international archaeological effort supported by UNESCO, the Arab Republic is provided with political capital to find its way again on to the international stage.\footnote{17 Plets, G., 2017, Violins and trowels for Palmyra: Post-conflict heritage politics.}

Another expedition by Russian archaeologists to Northern Syria is seeking to explore a group of Dead Cities - some 700 abandoned settlements lying

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{image6.png}
\caption{Following destruction by ISIL in 2015, Russian sappers began mine clearance in Palmyra after Syrian government forces regained control of the ancient city in March 2017 (licensed under the Creative Commons Attribution 4.0 licence. Mil.ru).}
\end{figure}
between Aleppo and Idlib. A key objective of this research has been to reach the Monastery of St. Simeon Stylites (390-459 AD) which is a significant site for Orthodoxy and Christian heritage in general as it comprises one of the oldest surviving church complexes. Such investigations serve to provide a tangible link between Russian and Syrian identity.

**The Wider Russian Cultural Offensive**

Since 2009, Russian cultural centres have been opened in Arab countries including Jordan, the Palestinian territories (West Bank), and United Arab Emirates (UAE). There have been Russian cultural centres in Egypt and Syria since the 1960s. A chief intent is for the Orthodox Church to increase its presence in the Holy Land. To the west, communities of Russian Orthodox believers living in Portugal have recently been given territory for liturgical usage: a large plot of land in the resort area of the city of Cascais, near the capital city of Lisbon, has been leased to the Moscow Patriarchate which is planning to build a church and parish community buildings in order to project influence.

In January 2017, ruins of a church in the village of Tsebelda, in Gulripshi district of breakaway Abkhazia, were demolished with a bulldozer by Russian forces and irretrievably lost. According to a report, the territory was handed over to Russian border guards for a new military firing range for Southern Military District’s 7th Brigade. The damaged site consisted of ruins dating from the 8th and 9th centuries and the late Middle Ages, as well as a 20th century Polish cemetery. This act was seen as a contravention of Georgia’s sovereignty and territorial integrity causing the United States to condemn the actions at the Organization for Security and Co-operation in Europe.

Finally, in November 2017, the Iranian Cultural Heritage and Tourism Organization and Russian State Hermitage Museum signed a cultural Memorandum of Understanding (MoU). Under the agreement, Iran and Russia will conduct joint training, projects in archaeological excavations and research on repair and protection of historical monuments. It is speculated that a focus of activity will be on the first Russian parish founded in Persia in the sixteenth century.

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18 **rbth.com:** Archaeologist: For Russia, Syria’s cultural heritage is personal.
19 **US Mission to the OSCE:** Condemnation of Russia’s Destruction of Cultural Heritage in Georgia.
20 **irna.prg:** Iran, Russia sign MoU for cultural heritage cooperation.
Conclusion

The trend of the Kremlin’s tilt to anti-Western nationalism began after massive protests against Putin’s third election in 2012. This so-called ‘Snow Revolution’ has moved Russia towards a colonial ‘prison of nations’ with a hardline course to assimilate national minorities.

Russia sees itself as the last keeper of European culture, Christian values and a truly European civilisation. The evolution of this traditionalist counter-culture is consistent with the Kremlin’s dominant ideological agenda manifested through the *National Security Strategy to 2020*, but as Russian economic influence gets weaker, this ideological influence will get stronger. As such, culture is becoming another state-owned resource to be exploited with renewed identity and culture filling the gap of material wealth.

Cultural Heritage is therefore being weaponized in three principal ways: Public diplomacy, primarily with the help of various organizations, events, forums, and conferences as a means of extending soft power; Media influence, especially through the mobilization of international resources available to news networks, such as RT & TASS, and; Protection of the Russian minority/compatriots abroad, including access to appropriate cultural, ideological and patriotic information/education, often through the application of hard power (Figure 7).

![Figure 7: Theoretical model showing the relationship between cultural heritage and the application of both hard and soft power as exercised through the Defence and Cultural Ministries of the Russian Federation (Mark Dunkley).](image-url)
Within Russia, culture and geopolitics are reinforcing one another in a way that is reminiscent of the Soviet state as well as the Tsarist one. Current trends indicate the escalation of the weaponization of culture as part of a long-term strategy to preserve and promote the cultural heritage and identity of the peoples of Russia, and to extend its influence and sovereignty. In a way, reminiscent of

*The ruins of Chersonesos in the Crimea, now under Russian control. Photo by Dimitry A. Mottl, Creative Commons Attribution-Share Alike 3.0 Unported license, Wikimedia.*
George Orwell’s dystopian novel *1984*, by weaponizing and controlling the past, the Russian Federation is seeking to secure its future.

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Looting as a Weapon of War and a Moral Right?

Sami Fortune Winton of the Cranfield Forensic Institute looks at the looting of Yuanming Yuan, as a historic case study with far reaching consequences.

The picture shows Yuanmingguan Old Summer Palace ruins from the side. Photo: Honeyhueyue, Creative Commons Attribution-Share Alike 3.0 Unported License, Wikimedia.
In 2009 two beautiful but rather ordinary looking 18th century bronze heads were offered up for sale by Christies’ auction house in Paris. Depicting a rabbit and a rat, the heads had once been part of a zodiac fountain at Yuanming Yuan, the fabled Chinese summer palace of the Ching dynasty. The winning bidder, Mr Cai Mingchao an adviser to China’s National treasures fund refused to pay the winning bid of over €15m, on moral and patriotic grounds arguing that they had been looted by British and French forces in 1860 and that they rightfully belonged to the Chinese people. As a direct result of the sale China complicated Christies business interests in China, while French state court action backing the sale, and an offer from the owner Pierre Bergé to exchange the heads for nothing in return for a free Tibet, further inflamed diplomatic and bilateral relations between China and France. The situation was only resolved four years later when Francois-Henry Pinault, in charge of Christies, accompanied French President Hollande on a state visit to China and offered to return the heads. They were subsequently returned in an elaborate high-profile ceremony, an almost symbolic state absolution for historic-looting which has had far reaching contemporary consequences.

Pillage, plunder, ransack, pilfering, pickings and loot all describe one of history’s oldest recorded human actions. These words alone are usually enough to conjure images of Viking marauders, Alexander the Great’s sacking of Persepolis and, in more recent times, the Nazi theft of art masterpieces, or even the London riots in the summer of 2011. The word loot itself made its way into English from the Hindi Luth meaning to rob, perhaps a testament to British colonial rule and the exploitation of not only material resources, but also of ideas, technology and tastes. Although often perceived as a simplistic and opportunistic act of theft, looting, its causes and especially effects, are much more complex and are interwoven with notions of revenge, economic gain

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1 This figure is disputed, sources such as the telegraph and Reuters (https://uk.reuters.com/article/us-china-france-auction/china-formally-demands-halt-of-bronze-heads-sale-idUKTRE51N1YF20090224, Accessed; 14/01/19) put this figure at around €15,000,000, whereas the Artemis Law centre for the University of Geneva cites €28,000,000.
4 Former Sanskrit origins to Lut of the word may be found in Lunth while the Urdu word Luthna is also related.
and trophyism. The act itself if undertaken in a group context can lead to the ‘Carnivalesque’ - a special phycological state with few limitations, where actions out of the ordinary are indulged.

Although the act of looting is now looked on by 21st century Western eyes with distain and disgust, the notion of looting as a weapon of war and a moral right seems only to have begun to change in the first half of the 20th century. Examined here are the causes and effects of looting and the subsequent destruction of Yuanming Yuan (The Garden of Perfect Brightness, also known as The Summer Palace), committed in October 1860 by British and French forces during the Second Opium War in China. This act was lamented at the time as an attack by:

*Bandits...one called France the other England...(upon) a miracle called the Summer Palace,*

And has surprised many because of its historic and contemporary political, social and economic reverberations.

**Why does Looting Matter?**

Besides the concern over the potential effects of looting, be they political, economic or social, one should ask the question why does the act of looting matter? Primarily when dealing with looted artefacts, the act of looting leads to a loss of cultural heritage and historic knowledge. Frantic looting of objects *in situ*, which often occurs because of contextual constraints in time and space, not only frequently damage the object itself, but remove an artefact from its context. Contextual removal limits the understanding of a particular object, especially if it is rare, because context informs of its usage, composition, how it was created and its narrative conclusion. Objects in context can give us an insight into the reality of life for historic persons, but also provide important evidence for larger sites - how they were used or when they were occupied and why they were abandoned. Therefore, a site and its relationship to an object are often critical for understanding both the site and the object.

Organised looting has been a systematic feature of most historic conflicts from around the world throughout history. Most major European nations were involved in large scale acts of looting at the end of the 19th and well into the

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20th century. A notable example may be seen with the pillage of Cork in 1920. Considered acceptable practice in Britain, loot and the prize money taken by capturing ships or other enemy property was institutionalised and carefully organised and divided. Veterans of campaigns had to verify their eligibility to loot by proving their campaign service, while well-known establishments, such as the Chelsea Barracks, were famous as a place for the division of campaign spoils. Distribution could take years and, though the government certainly benefited from the sale of captured booty, they were often in arrears regarding the award of prizes.

Occasionally, exclusive treasures such as the Kho-i-Noor diamond were deliberately and openly removed through coercion and given to the monarch (in this case Queen Victoria), sometimes as a condition of reparations or terms of surrender. Interestingly, this idea of looted objects as justice for war reparations was still held by members of the US military and cultural establishments as late as 1945 following the conclusion of the Second World War. Henry Francis Taylor, the well-known director of the Metropolitan museum in New York, argued that:

*The American people had earned the right in this war to such compensation if they choose to take it…and act in the best interests of a nation which has lavished its blood and treasure upon an ingrate Europe twice in a generation.*

This very much reflects 19th century and earlier views regarding rights of war and loot. In fact, a shipment of European art treasures, that was well underway

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8 The last awarded prize by the U.S Navy was in 1941 for the capture of a German ship, see for more information http://www.strategypage.com/cic/docs/cic205b.asp#one
10 Matten, Places of Memory in Modern China: History, Politics, and Identity.
15 Ibid.
to the US at the close of the Second World War, was only stopped through the 
mobilisation of protests, known as the Wiesbaden Manifesto, by monuments 
officers, who had risked their lives during the German retreat to trace and protect 
much of the Nazi art loot taken from throughout Europe.\textsuperscript{16} Although Barkan 
amongst others has suggested that looted Nazi art was hidden to be used as a 
bargaining chip, it seems that looting of crucial German patents and intellectual 
property were just as important. The locations of several secret German archives 
were leaked to the Allies by the upper echelons of Nazi command, perhaps in the 
hope of guaranteeing their lives post the inevitable German surrender.\textsuperscript{17} World War 
Two certainly saw some of the most wide-spread looting by German forces on art 
collections across Europe. The turning tide of the war from 1943, combined with the 
ideological, political and economic efforts of Allies to combat the Nazi war machine, 
seems to have transformed attitudes towards looting from indifference to an act of 
abhorrence. The effects in this change in policy are personified by the formation 
of the Monuments’ Men organisation tasked with locating and protecting Nazi loot 
during the retreat of the German army, that became a catalyst for the later creation 
of the 1954 Hague Conventions.

As of 2017, more than one third of the world’s states have not signed up to the 
1954 Hague Conventions, which might indicate a still-differing view on looting, 
its morality and how it might be used in conflict. Public antipathy towards looting 
and looted objects is certainly challenged by national museums and other state 
collections promoting national pride through collection, interpretation and display 
of objects. Importantly, we must not consider that the West has a monopoly on 
morality on the international stage. Other cultures consider property questions 
differently and may thus have different attitudes towards looting. As we have seen 
Western moral attitudes towards countering looting are relatively recent.

One of the most prolific examples of looting with the consequences reaching 
right up to the modern day may be seen with the French and British acts of 
looting and subsequent destruction at Yuanming Yuan. Yuanming Yuan, 
often referred to in the English-Speaking world as the Summer Palace, was the 
political heart of the Qing - China’s last imperial dynasty. Sprawled over some 
860 acres, it comprised of three main gardens, several palaces and thousands 
of rooms.\textsuperscript{18} Although referred to as the Summer Palace, the Qing court with its

\textsuperscript{16} Ibid.
\textsuperscript{17} Farrell, Joseph P., \textit{The SS Brotherhood of the Bell : NASA’s Nazis, JFK, and Majic-12} 
(Adventures Unlimited Press, 2006), pp.2-3 of section 1B titled German potential in late 
1944 early 1945.
Northern Manchurian origins spent the majority of the year there, rather than in the ceremonial Forbidden City, because of its more amenable climate. Begun in the 18th century by the Qianlong emperor, by the mid 19th century it was certainly considered an architectural wonder, and contained palaces in a variety of styles including that of Xinjiang and the European Baroque. General Montauban commander of the French forces described it as being:

…impossible...for me to convey to you the magnificence of the many buildings which are known as the emperor’s summer palace...; a succession of pagodas all contain gods of gigantic size in gold, silver or in bronze. Thus, one single bronze god, a Buddha is about 70 feet high, and all the rest is of a piece; gardens, lakes and curious objects piled up for centuries in white marble buildings, covered with
dazzling shine tiles of every colour; add to that views of the countryside and your excellency will have but a feeble idea of what we have seen.\textsuperscript{19}

The centrepiece of the European style palaces was certainly the zodiac clock fountain; its spouts were ornamented by cast bronze heads each different and representing a variety of animals including a monkey, an ox, a tiger and a rat.\textsuperscript{20} These pieces designed by Italian monk Giuseppe Castiglione, and looted by British and French forces in the 19th century, have subsequently become symbols of the ransack and destruction of the palace. Ironically, despite their European design they have been a source of great Chinese national pride and zeal, especially when some examples occasionally appear at international auction.

The events leading to the destruction of the palace began towards the end of the Second Opium War (8 October 1856 - 24 October 1860). This war was fought by the British and the French governments to force more Chinese ports to open for international trade, as well as to legalise and compel the purchase of Opium, thus attempting to reduce a severe British trade deficit in silver. This deficit had occurred during the previous century and a half because of Britain’s growing demand for tea and China’s insistence on payment for it in silver. After landing troops on mainland China in the summer of 1860, British and French forces repeatedly defeated Qing armies before diverting their attention on 7 October 1860 to Yuanming Yuan.\textsuperscript{21} Despite the fact that French sentries were posted, but facilitated by the absence of the Chinese Emperor and his family, initial looting seems to have been opportunistic commencing with attempts to appropriate official ‘gifts’ for both the Queen Victoria and the French emperor. Objects that were seized included precious jade,\textsuperscript{22} gold sculptures, vases and silks. Even previous objects given by Europeans as diplomatic gifts were not immune - one watch seized was labelled as a gift to the Emperor by Lord McCartney.\textsuperscript{23} What was to become symbolic later, was the looting of the zodiac bronze heads.


\textsuperscript{22} One jade sculpture of a water buffalo was rescued by a soldier after another tried to break it up to smuggle more easily. https://www.bonhams.com/auctions/23237/lot/158/ Accessed; 25/07/2018.

As the looting progressed there was certainly a feeling of urgency feeding into a frenzy; take what you can while you can before it’s all gone. A. B. Tollach, a soldier present during the events, had loaded up a pony full of loot and, as he left the palace, he sang out in Hindi to a detachment of Sikh cavalry, *Be quick or it will be gone*. By the time most British and French regiments stationed at Yuanming Yuan had been drawn into looting, a psychological atmosphere of unrestricted frenzy, also termed carnivalesque, seems to have been experienced by looting troops both French and British. Stevenson, a senior British officer describes the atmosphere: ‘…fancy having the run of Buckingham Palace and being able to take away anything you liked.’ The carnivalesque also manifested itself with many French troops reportedly, ‘…dressed in Qing robes…’ or ‘…richly embroidered robes of women…waring fine Chinese hats.’ This sense of freedom also resulted in the destruction of objects for pure pleasure. Lord Elgin almost ashamedly wrote that: ‘…[there was not a room] in which half the things had not been taken or broken to pieces.’ Several officers in their accounts identified looting as necessary to control the army and to reaffirm army command, despite their personal gain afforded from the pillage:

*It was best for officers to be prudent and patient, waiting for soldiers to fatigue themselves and return of their own accord to their accustomed yoke.*

Essentially this appropriated the approach of earlier medieval societies in the use of the frenzy of carnival to reinforce the strict moral code and the effective day-to-day running of an authoritative military structure, similar to a feudal one.

Scrambling to justify this epic act of cultural vandalism, countless senior officers wrote of its destruction in retaliation for the torture and murder of a British delegation sent to demand terms to end hostilities after four years of the Second Opium War. Ironically surviving French and British sources concerned with looting, which tend to have been kept out of official state papers, often blamed each other and occasionally colonial auxiliaries or local Chinese themselves; events were justified after the fact.

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24 Ibid p.79.
25 Ibid.
26 Ibid, p.78.
27 Ibid, p.79.
28 Ibid, p.80.
The Auction

Many objects looted from the palaces were immediately categorised, appraised by an auction committee and sold to assembled troops and officers. Proceeds were added to any treasure already seized. The British Army already had a more organised approach to looting than the French, organising small teams to seek out, select and carry away the most important items. The auctioning of looted objects immediately, as opposed to sending the loot back to Britain for distribution, is significant. The auction may reflect or enforce class distinctions by allowing officers with larger purchasing powers to have the pick of the loot that would potentially have been worth much more back in Britain. This certainly seems to have been the case when officers such as Harris were purchasing pearls off French looters who were ignorant of their true value.\(^\text{30}\) Proceeds from the sale, totalling some £26,000,\(^\text{31}\) were divided much in the fashion of Naval prizes, with privates receiving £5 7s each while one senior officer received as much as £350.\(^\text{32}\) The auction was further symbolically significant, by holding the sale immediately and including many of the Emperor’s personal effects, it served to undermine the

\(^{30}\) Ibid.


\(^{32}\) Ibid, p.86.
mysticism, power and authority of an individual who was considered by many to be the ‘Son of Heaven’. Once the spoils were divided and sold there would be no undoing or negation by the Qing government. The capture and presentation of the royal Pekinese dog to Queen Victoria, whom was named, ‘Looty’, further reinforced the idea of Chinese subjugation.

To come back to an event I mentioned above, which occurred before and during the looting at Yuanming Yuan and had severe implications on the fate of the palace, was the capture and torture by Qing officials of members of a British delegation in mid-September. Harry Parks, a controversial British official, had been sent by Elgin along with his private secretary Henry Loch, a few French officers and some Indian soldiers in order to force a negotiation for the end of hostilities before winter set in. After protracted discussions the Chinese arrested the delegation and tortured several of them, many being tied in stress positions, beaten and subsequently left exposed to the elements for several days. Several accounts describe how some victims were gnawed at by maggots, while at least one soldier died from torture inflicted by a sword.

Although it seems that the Chinese were aware of the influence of Harry Parks on the British, probably because of his exploitation of the arrow incident which lead to the war, it seems that Ching officials thought he had military influence over the British Army and that through his capture they could control hostilities.

Although looting is often cited as just retribution for the capture of the British delegation, it must be remembered that news of this event on 14 October 1860, was significantly after the looting had taken place. However, news of the torture and murder of some members of the delegation by 18 October 1860 was a significant factor in the decision to subsequently burn the palaces which took an estimated 4,400 troops three days to destroy. Lord Elgin the chief commander of British forces realised the enormity of the action, but concluded it was the right of the army to seek retribution especially as items of value had already been taken.

34 Controversial because of his exploitation of a minor shipping incident on a vessel named the Arrow, leading to the Second Opium War.
36 Ibid.
37 Bruce, J., & Warland, T., (editor), Letters and Journals of James, Eighth Earl of Elgin - James Bruce Earl of Elgin, (2009),p.365
38 Ibid
Sir Garnet Wolsey, supported Elgin’s statements, and seems to have viewed the Chinese with contempt, arrogantly boasting of the destruction of the palace as if it was a punishment for misbehaving children:

*The destruction of the summer palace was the strongest proof of our superior strength it served to undeceive…the absurd conviction of their monarchs universal sovereignty.*

Lord Elgin's decision to destroy the palaces was certainly a controversial one. Although French writer Victor Hugo’s lament widely quoted, voices from within the British government including the Marquis of Bath and Irish MP Vincent Scully described the act as ‘vandalism’ and ‘an act of barbarity’; and both compared it to the loss of important ancient sites, such as the destruction of the library of Alexandria or the burning of the great palace of Persepolis. With this backlash in mind, in the immediate years after the event, the accounts of the torture and execution of several members of the delegation were considered so important to justify the destruction of the palace that their accounts were publicised much like witness accounts albeit in the court of public opinion. Reverend Mc Ghee’s famous work *How we got to Peking*, (1862), details the delegation’s accounts of arrest and torture in individual accounts which were named and signed along with details of regiments in which they served.

**Effects**

In the wake of a weakened central authority, the Qing were faced with a string of major uprisings such as the Taipei and Dungan rebellions in the decades after the palace’s destruction. Within a generation, the ill-feeling caused by the destruction of Yuanming Yuan, and compounded by Qing grievances concerning trade and creeping western cultural influences, encouraged the Chinese government into supporting the hugely popular Boxer rebellion (1899-1901) that almost succeeded in removing foreign influence in the country. Their authority, however, was certainly tarnished by the palace’s destruction and during the Boxer rebellion eleven Qing governors refused to enact the edict for action against the European

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43 Ibid
powers: an event which would have been unthinkable prior to the destruction of Yuanming Yuan.

Additionally, one of the most important medium-term effects of the destruction of Yuanming Yuan was its contribution to the fall of the Qing dynasty. The destruction of the palace combined with a subsequent string of humiliating Qing defeats against foreign powers, and the resulting economic and cultural subservience to colonial nations proved to be significant in the revolutionary nationalist movements that swept away the imperial regime and forced the abdication of the last emperor Pu Yi in 1912.

The looting and destruction of Yuanming Yuan continues to cause problems for bilateral relations in the 21st century. When former Prime Minister David Cameron took business delegations to China in 2013 and 2015 meetings between the two governments were overshadowed by demands for the return of looted objects from Yuanming Yuan. The majority of the public complaints demanding the return of cultural property were sent through the British governmental profile on the Chinese messaging app Weibo and significantly damaged the British government’s negotiating leverage through the use of soft power. It is unclear whether the campaign was initiated by the Chinese

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45 Tony Blair was also reportedly asked about the return of Chinese objects during his 1998 China visit see; https://www.scmp.com/magazines/post-magazine/long-reads/article/2097402/chinas-stolen-cultural-relics-why-numbers-just
government or an independent popular movement within China or a combination of both. National pride and the overcoming of historic shame through a new and stronger China are some of the ways in which the Yuanming Yuan site has been harnessed to strengthen loyalty to the government, disdain at non-communist forms of rule and warnings with regard to foreign relations.

**Auction Houses**
A Chinese reversal in policy from the days of the Cultural Revolution has awakened a keen sense of nationalistic pride in the nation’s art and cultural heritage which is still overshadowed by the destruction of Yuanming Yuan. Huge governmental efforts have been spent trying to track down and return significant looted items. Additionally, several pieces presented or purchased at auction by wealthy individuals have subsequently been donated to the Chinese government. Vast sums have also been set aside for significant pieces of 1860s loot appearing at international auction. Among the most expensive valued have been the zodiac heads from the European palaces: the Rabbit and Rat heads both estimated at $10-$13 million and auctioned by Christie’s and Sotheby’s respectively. Such has been the public interest in China for the return of the looted goods that some auction houses refused to sell goods identified as suspected loot, for fear of affecting Chinese business interests within the auction sphere of influence. Indeed, in 2013 soon after the return of the Rabbit and Rat heads to the China state, Christie’s was granted a licence to operate there independently.

**Conclusion**
The destruction of Yuanming Yuan is one of the most significant acts of looting and cultural destruction in recent times. The Palace’s sacking and subsequent destruction warn us of the dangers of actively participating in acts of looting and cultural destruction as well as of the terrible consequences that can still

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49 [http://www.chinadaily.com.cn/world/2012-11/05/content_15873146.htm](http://www.chinadaily.com.cn/world/2012-11/05/content_15873146.htm).
occur by overlooking acts of vandalism occurring in the vicinity of a military power. Sadly, a significant historic and cultural site was lost, reflecting the high point of Qing dynasty’s architectural and artistic achievements. Carnivalesque attitudes and wanton destruction experienced by French and British armed forces were recognised by senior officers who failed to intervene, perhaps due to their personal profits acquired through the looting. The burning of the palaces by Lord Elgin shows a contempt for a rival, perhaps seen as culturally inferior, echoing the Chinese breaking of diplomatic conventions with their torture and execution of the British delegation who they considered European ‘barbarians’.

Yuanming Yuan demonstrates how looting and the destruction of cultural heritage sites can undermine state authority, and national stability. It shows us how the attack and destruction of even symbolic cultural sites interwoven in the authoritative fabric of the state can negatively affect future bilateral relations as seen with the case of David Cameron’s trade delegations. Further, it shows how destroyed heritage sites can be used to harness popular loyalty by governments.

Yuanming Yuan serves as an important reminder, especially when regarding the protection of cultural heritage in areas of conflict in the contemporary age. Failure to do so can have catastrophic consequences not only in historical and cultural spheres, but reverberating effects in politics and diplomacy, while potentially causing echoing effects in future conflicts decades if not centuries after an act.

Exemplified by Sir Garnet’s statements and Lord Elgin’s actions, British and French forces perceived themselves as a civilizing modern force against a barbaric Chinese foe, and yet the catastrophic end of Yuanming Yuan is ironically summed up by French poet Victor Hugo writing soon after the destruction;

*Look what civilization has done to barbarism.*

**Sami Fortune Winton** is a PhD student investigating archaeological looting and the illicit trade in art and antiquities. Coming from a background in Islamic artefacts and architecture he is using his specialist knowledge of the diamond industry together and applying it to the antiquities trade.

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Pictures are the ruins of Yuanyingguan from the North Side. Photo: Creative Commons Attribution-Share Alike 3.0 Unported license, Wikimedia.
Environmental Degradation in the Battlespace

Lieutenant Colonel Marko Bulmer, SO1 Geology, Military Geology Cell, 170 (Infrastructure Support) Engineer Group, examines the impact of the Syrian conflict to the oil fields along the Eurphrates River in Syria.

Figure 1. Map showing the Deir Ezzor region with oil and gas fields, anti-IS airstrikes as well as areas of artisanal refineries. Modified from Solomon et al. 2016.
On 3rd December 2015, Parliament debated and then voted for UK airstrikes against the so-called Islamic State of Iraq (IS) in Syria. The United States along with France and Russia had already been conducting missions in Syria since 2014. That same day, RAF Tornadoes carried out the first air strikes against the IS-controlled Omar oil fields. The then Defence Secretary, Michael Fallon, stated the aim was to strike ‘a very real blow on the oil and revenues on which IS depends’. Prior to this, targeting oil operations had been restrained due to the complexities that rebels supporting the anti-IS coalition depended on IS oil, as did the local population, as well as leading to environmental degradation. Advice was canvassed from a cross-government oil hazard working group. This examined airborne hazard, fires and spills and environmental hazards related to gas-oil separation plants (GOSP’s) and well heads. The Military Geology Cell provided subject matter advice and expertise.

Environmental Stress And The Rise Of IS
Syria and Iraq experienced extreme environmental stress from a drought that lasted from 2007-2010. Water scarcity played a significant role in creating the conditions that led to the political unrest and violent insurrection in Syria, in the spring of 2011, which spilled over into Iraq. The high air temperatures associated with the drought caused an increased demand for fuel and electricity for air conditioning. In Syria, the drought created food insecurity and migration, which could not be addressed effectively by the government. This further deepened ethnic and socio-political fractures that IS was able to exploit. Early on IS demonstrated that they understood the military significance of capturing and then operating, denying or destroying critical infrastructure such as electricity, fuel, food, water and transportation. This included the environmental resources that underpinned them. IS attacked both government forces and opposition rebels, and by December 2015 it controlled territory in western Iraq and eastern Syria containing an estimated 2.8 to 8 million people. Once IS forces came under attack by anti-IS forces, they attempted to delay the advancing force by damaging, denying or destroying natural resources and associated infrastructure.

Oil and Gas Fields
Oil production in Syria was of a heavy ‘Souedieh’ grade (or Syrian Heavy) until the 1980s when light crude ‘Syria Light’ was discovered around Deir Al-Ezzor. The combination of the ‘Souedieh’ grade being heavy (API gravity of 22-24) and sulphurous (3.9%) requires specific refining capacity. The majority of refineries capable of refining heavy crude are in the United States (US) and European Union (EU) and, increasingly, China. In 2011, when sanctions were imposed on
the Syrian regime, 60% of oil exports from Syria were heavy grade. The light crude ‘Syria Light’ discovered around Deir Al-Ezzor has an API gravity of 38 and a sulphur content of 0.68%. Local Syrian refineries needed this ‘Syria Light’ to process products for domestic needs. ‘Syria Light’ attracted international interest including UK, Netherlands, India and China that were part of the Al Furat Petroleum Company.

In December 2011 when the EU widened its sanctions on Syrian oil companies, this included Al Furat, forcing several international partners, (Shell included) to cease operations in Syria. Within IS, the Shura council identified oil as fundamental to the survival of the insurgency, and critically, to finance their intent to create a caliphate. In 2013, IS moved east down the Euphrates and captured oil fields in the Deir Al-Ezzor region including the al-Omar, Diero and Al-Tanak fields (Figure 1). These fields around Deir Al-Ezzor were producing 34,000 to 40,000 barrels per day (bpd) before being captured. IS’s foothold in Syria’s oil-rich east was used, in conjunction with control of water, to consolidate control over eastern Syria after the capture of Mosul in 2014. That same year it is estimated that IS revenues combined from taxes and fees, oil, kidnapping, looting, confiscations and fines was $1890 million. For the Syrian government hydrocarbon production plunged from 383,000 bpd in 2010 to 10,000 bpd in 2015 and 2016. As well as the loss of production, critically, the Syrian Government in 2014 had lost control of ‘Syria Light’ crude.

On 10 September 2014, US President Obama announced his intention to bomb IS targets in Syria, and called on Congress to authorise a program to train and arm rebels who were fighting IS and the Syrian forces of Assad. The Combined Joint Task Force - Operation INHERENT RESOLVE (CJTF-OIR) formed in October 2014. In November 2014, an article in Bloomberg News reported that IS oil business had been significantly reduced by US airstrikes. Records captured by US forces in a raid, in May 2015, that killed Abu Sayyaf the ‘emir’ for oil production, showed the significance of oil to IS prompting an increase in airstrikes targeting oil related infrastructure.

As of August 2015, US-led coalition aircraft had reportedly flown a total 45,259 sorties in the previous 12 months of operations. Russian airstrikes in support of the Syrian Government began in September 2015 and were reported to have been more aggressive in destroying oil infrastructure compared to the coalition approach. In October 2015, the Financial Times reported that of the 10,600 airstrikes undertaken by the anti-IS coalition since August 2014, only 196 targeted oil infrastructure and that IS was generating approximately $1.5 million per day from oil. On the 21 October 2015, Operation TIDAL WAVE II was launched and focused on oil transport, refining and distribution facilities and
infrastructure controlled by IS. The bombing of the Omar oil field marked an increased focus by the anti-IS coalition on oil and gas infrastructure in Syria. By late December 2015, the US military spokesman Colonel Steve Warren announced that airstrikes conducted by the US-led Coalition had destroyed 90% of IS’s oil production and 400 tanker trucks. On 2 April 2016, the *Washington Post* reported more than 200 strikes against oil wells, refineries, pipelines and trucks.

**Analysis of Oil sites**

Daily visible satellite images from the Moderate-Resolution Imaging Spectroradiometer (MODIS), Visible Infrared Imaging Radiometer Suite (VIIRS), and Operational Land Imager (OLI) passing over the Euphrates were examined for hotspots and plumes. These were correlated with open-source reporting of airstrikes, and compiled as a layer in a Geographic Information System (GIS). The MODIS instrument on the NASA Terra and Aqua satellites captured data in 36 spectral bands ranging in wavelength from 0.4 µm to 14.4 µm. The VIIRS instrument on the Suomi National Polar-orbiting Partnership (Suomi NPP) can collect data in 22 different spectral bands of the electromagnetic spectrum, in wavelengths between 0.412µm and 12.01µm. Resolutions sufficient to observe oil infrastructure on the ground in Deir Al Ezzor were examined using NASA and ESA satellites, such as the operational land imager (OLI) on Landsat 8 and Sentinel-2A, and compiled as a GIS layer. Within Deir Al-Ezzor, four groupings in the oil and gas fields were examined (Figure 1) and 151 sites with oil spills identified and compiled into another GIS layer.

These spills are all associated with oil facilities and well-heads accessed from roads and pipelines close to roads. Group 1 includes the Al Isba and Jafra oil and gas field; group 2 includes Omar north and Sayjan oil field; group 3 the Azraq, Mqaat, Maleh, Tanak oil and gas fields; and group 4 the Shaitat and Sarhit oil fields. In Group 1, spills are visible in an image from 26 August 2013. In Group 2, they are visible in images from 15 Dec 2012 and 2 Mar 2014. Those in Group 3 are visible in images from 2 Mar 2014 with spills covering larger areas that observed in Groups 1 and 2. Those in Group 4 are not visible in an image from 3 August 2011 but are from 2 March 2014. What is apparent is that even before the airstrikes began there were oil spills around wells, pumping, storage and refining facilities. Very early in the Syrian conflict in 2011, intense fighting in and around Deir Al-Ezzor destroyed oil and gas infrastructure, caused spills and the management structure to collapse. Already poor maintenance and operations standards were further weakened by the lack of spare parts due to sanctions. This highlights the importance of baseline surveys of environmental conditions around these sites prior to any being selected for airstrikes.
Airstrike video from CJTF-OIR show the Omar Gas Plant in Group 2 was targeted in October 2015. Three installations in Group 3 (Figure 1) were hit by airstrikes igniting oil fires and causing spills (Figure 2). The RAF munitions used were laser-guided Paveway IV and Brimstone. MOD Russia published airstrike videos of oil facilities at Azraq as well as the Omar Gas Plant and Saban Central Processing Facility being hit. The response of IS and militias was to pump crude at individual well-heads and excavating large pits for storage thereby showing second and third-order effects in battle damage assessments. Figure 3 shows oil spills from well-heads around the Tanak Oil and Gas Facility visible in images from 3 February 2014. Three spills imaged on 2 March 2014 cover areas from 0.03 km² to 0.19 km². Figure 4 shows an enlargement of the area of these three spills where lines of tanker trucks can be identified. Their presence shows these...
spills being directly related to crude being pumped at the well-heads. A total of 169 tanker trucks were identified at this location (Inset b, c, and d) enabling a first order assessment of the volumes of crude being pumped from well-heads 1, 2 and 3. The measured dimensions of trucks vary, but the average fits a tanker truck of 8,800 gallons (33,311 Litres (L)). If all 169 tanker trucks were filled from the three well-heads that would amount to 1,960,400 gallons (7,419,100 L) or 46,676 barrels. These tankers became targets for Coalition airstrikes (inset e) to reduce the movement of crude to refineries.

Figure 3. (a) Digital Globe image from 3 February 2014 showing the Tanaq Oil Facility and well-heads. The white boxes show areas studied in further detail and shown in the insets. (b) The Facility before it sustained damage. (c) Oil spillage from well-heads in the Tanaq oil field. The area of surface oil spills has been calculated for three areas associated with three well-heads 1, 2, and 3. Images from Google Earth.
Figure 4. (a) Enlargement of inset c in Figure 3 showing three well-heads 1, 2, and 3. Long lines of tankers can be seen associated with each of these well-heads. Tankers are filling directly from the well-heads and there is no value system to stop flow. Flows can be seen diverting around berms and embankments and following local drainage lines. Images from Google Earth.

Figure 4 (b): Anti-IS coalition airstrike footage of a targeted tanker 8 December 2016. Image from footage released by OIR, December 2016.
Analysis of Artisanal Refineries

The response to targeting of the professional refineries was a growth of artisanal refineries (ARs) operated by civilians, but run by a complex relationship of business interests, tribes, IS and other armed groups. Within the Deir Ezzor region (Figure 1), 8 (A1 to A9) areas between Raqqa and Deir Al-Ezzor with high concentrations of artisanal refining, covering a ground area of 76.5 km², were examined. The number of ARs identifiable in images over these areas increased dramatically from 2014 to 2016. By September 2016, a total of 4,815 refineries were identified within the eight areas and geolocated (A6 contains natural oil seeps from well-heads). The number of refineries per area ranged from 51 in A2 (0.63 km²) to 1,101 in A5 (16 km²). In A9, 672 ARs were identified covering an area of 6.3 km². Figure 5a shows 43 ARs in an area of A9, constructed and operated next to each other, and connected by tracks to Highway 6 running between Raqqa and Dier Al-Ezzor. There appears to be a common design with each AR consisting of a furnace, a reservoir for condensing and a collection point (a, b, c). These ARs became targets for airstrikes (Fig. 5c) and the US hit 872 in 2016 (329 in July alone), but the numbers constructed continued to increase.

Figure 5. (a) MODIS image from 22 September 2016 showing artisanal refineries in Area 9. Different elements are labelled. (b) An example of a furnace used to boil crude oil at an artisanal refinery. Image from TRT World and Agencies. (c) Anti-IS coalition airstrike footage of a targeted artisanal well July 2017. Image from footage released by OIR, July 2017.
Excavation
Blade marks around the refineries shows they are constructed using a bulldozer and one can be seen in Fig. 5a (feature e). The width of the blade marks ranges between two to three metres, with track marks being 10 to 16 m long, and between 14 and 18 needed to complete construction. Aggregated, this gives an average total length of 223 m excavated by bulldozer at each AR. Using an excavation rate of 40 m per hour, construction of one AR took 5.5 hours. The design required the furnace to sit at a higher elevation than the collection point so the bulldozer operator likely graded the cooling reservoir to create this elevation. Using these numbers and design requirements, a single experienced operator would likely construct a maximum of two ARs per day over a 10-hour shift. Multiplying excavation time per refinery by the 4,815 ARs identified, a total of 26,936 excavator hours were required. If a single operator worked 313 days in a single year, then he could construct 626 ARs. This indicates that both bulldozers and operators were critical to the development of AR capacity. Interdicting them would be more effective than targeting the ARs.

Reservoir
The average length and width of the reservoirs in the nine AR areas examined is 18.9 m and 2.9 m respectively. The spectral properties of reservoirs vary, but are consistent with water as the coolant. Some are lined with fabric but most not. The depth of the reservoirs is unknown but if it was one metre, then the volume of water used in each was 0.23 m³ (230 l). Aggregated over the 4,815 ARs a total of 1,127 m³ (1,127,000 l) of water was needed. It appears that water was not recovered, but released by breaching the reservoir. This water had to be delivered indicating that water tankers and operators were critical to the development of artisanal refining capacity. Interdicting them would be more effective than targeting the ARs.

Function
It is very hard to see furnaces in the visible images because they are black and surrounded by spilled crude oil. The sizes of furnace vary and are made from vessels such as oil drums, fuel storage tanks and boilers (Fig. 5b). It is not known whether a different furnace was used for each of the 4,815 ARs examined, but they appear to have originated from above ground fuel tanks taken from houses and business, possibly excavated from below ground and from damaged oil and gas facilities. These repurposed furnaces were effective but inefficient. When heated to 1,100 degrees Celsius benzene will have been distilled followed by kerosene at 1,800 C and diesel at 2800 C. Propane and butane will have been driven off
but not collected. The use of Syria light with lower API and sulphur content is significant to the success of these ARs. The gases from the boiled crude enter a pipe that travels through the reservoir, during which the gas condenses to a liquid which flows out of the pipe into a container. Additional products released into the air will be sulphur dioxide, nitrogen dioxide, carbon monoxide, polycyclic aromatic hydrocarbons and lead. Left over products in the furnace will include paraffin wax, lubricating oil and tar. Many of the children who worked the ARs incurred skin and respiratory diseases, and severe burn injuries that will impede future livelihoods.

**Impact**

The average area of oil spillage around each of the ARs examined is 5,913 m². In aggregate this gives a first order calculation of 28.4 km² of contaminated ground around the 4,815 ARs examined. Oil products are a mixture of many different chemicals, making predicting their environmental fate and effects difficult. The rate at which this infiltrates will be related to the local geology. The spectral signatures of contaminated land at ARs are being altered by wind-blown dust and sand, flooding, vegetation, animal and human activity. These processes are mobilizing the contaminants at the ARs following wind patterns, drainage lines, grazing and transport routes. The areas impacted are therefore continuing to enlarge. MODIS images of flooding in the Omar oil field in April 2011 revealed local drainage lines. Oil spills are following local drainage into depressions and towards the Euphrates combining with water and evaporating. In subsequent storms, water accumulating in depressions that drain to the Euphrates will increasingly become contaminated. This will require the monitoring of natural and engineered water infrastructure.

**Target Selection**

Although essentially forbidden by the Geneva Conventions, attacks on industrial infrastructure, including oil facilities, have become commonplace in armed conflict. IS have systematically carried out attacks on oil facilities and intentionally caused environmental destruction. Operation TIDAL WAVE II was justified as targeting 'war sustaining' activities. IS’s response to this loss by filling tankers at well-heads and establishing thousands of makeshift ARs required a determination that these were legitimate military targets providing fuel to run IS operations, money to finance their continued attacks throughout Iraq and Syria, and that they were economic assets. The sheer number of AR made it unfeasible to destroy each one. Analysis here shows that critical elements in the development of the AR’s were bulldozers and their operators, as well as

Conclusions
The Deir Al-Ezzor oil fields have been heavily fought over since 2011. Fighting continues and in August 2018, IS conducted a successful raid on the oil fields in Deir Ezzor controlled by the Syrian Democratic Forces. The fighting has resulted in a toxic legacy in the population and the landscape that further degrades an environment impacted by previous industrial activity, desertification and unsustainable agricultural practices. The professional oil sector is no longer functional and well-heads are damaged. It will require stability, time and investment to be rebuilt. In the meantime, the artisanal oil sector will likely continue to operate.

Examination here has shown that remotely identifying environmental degradation caused by parties to the Syrian conflict is possible and quantifiable in the Deir Ezzor region. This enables attribution of IS actions assisting in their prosecution and messaging against ideology. Such examinations identify environmental hazards and the types of toxins to which AR workers have been exposed. They reveal the need to protect civilians from further exposure over the short and long term migration of oil related toxins. Combining the examination here with other studies, it is estimated that there are over 10,000 ARs around Deir Ezzor with a similar number around Sinjar, Qayyara, Hawija and west of Raqqa.

Vital to effective recovery and reconstruction is communicating risk to civilians of continuing to operate artisanal refineries to prevent exposure to toxins and further environmental degradation. Like protection from torture and religious persecution, a healthy environment is a human right that is getting greater scrutiny in conflict-affected countries. The wider issue of the environmental footprint of conflict and the way it affects populations is gaining a strong legal framework to address liabilities and provide timely support to those affected. The complexities and costs involved in oil and gas fires, leaks and spills are well-documented, and are paramount considerations in maintaining the support of rebels supporting the anti-IS coalition and the local people in the continuing fight, recovery and reconstruction.

**Lieutenant Colonel Bulmer** is a professionally qualified geologist. This work was undertaken while he was SO1 Geology in the Military Geology Cell, 66 Works Group, RE. The MGC provides geological advice and expertise to military commanders to ensure maximum advantage is obtained from the ground and subterranea.
Figure 6. (a) Plan view schematic of an artisanal refinery site. A shows a refinery in use and B the contamination left after its use. (b) Profile view schematic of the processes in the artisanal refining. Key elements are labelled.
Major Toby Gane, Army Reservist, SGMI, looks at the tenets of the 1954 Convention for the Protection of Cultural Property in the event of Armed Conflict in context of Underwater Cultural Heritage (UCH) and in conjunction with the Army’s Cultural Property Protection Unit (CPPU).
The Convention for the Protection of Cultural Property in the Event of Armed Conflict (the Convention) adopted at The Hague (Netherlands) in 1954 is the basic international treaty articulating rules to protect cultural heritage during armed conflict. It standardises the conduct of nations during war and military occupation in order to assure the protection of cultural sites, monuments and repositories, including museums, libraries and archives.¹

The Convention was ratified by the UK Government, 63 years after it was formalised, on 17 September 2017 and underlines the UK's commitment to protecting cultural heritage assets during conflict. But where does cultural heritage found in seas, rivers and lakes - known as Underwater Cultural Heritage (UCH) - fit into the Convention’s remit?

Defining UCH
The application of archaeological techniques to study cultural remains that exist beneath the water is a relatively new discipline in comparison with its terrestrial counterpart. It was not until the 1950s and 1960s - almost 100 years after terrestrial archaeological techniques were being developed - that genuine archaeological processes were applied to sites underwater.² Since the 1960s the discipline has had growing reach and effect, but has not quite managed to keep pace with terrestrial archaeology for research funding or even recognition as a serious academic practice.

UCH, made up of heritage assets that are submerged, is complex and includes a wide array of material encompassing almost everything that can be found in a terrestrial archaeological assemblage, plus a multiplicity of items than are only ever found at sea. In simple terms UCH can be split into four different categories: boat and ship wrecks; aircraft crash sites; submerged landscapes and palaeo-landscapes, and; maritime infrastructure.

Ship and Boat Wrecks
Probably the most universally recognised and understood category of UCH is that of sites made up of seafaring and other water craft. Humankind’s use of the sea over millennia is represented in the archaeological record in the form of ship and boat wrecks and hulks (those wrecks not fully submerged) as well as the flotsam, jetsam, lagan and derelict (legal terms that refer to maritime material) that marks their passage and loss. Because of the nature of the material remains, the nautical

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remains that make up this category represent a true global cultural resource, no matter where they lie.

**Aircraft Crash Sites**

Around the UK coast there are thousands of aircraft crash sites, the vast majority of them military. Most of these date to the Second World War.\(^3\) Some however, although extremely rare, may date to the First World War. Other regions of the world also hold aircraft crash sites dating to these conflicts. Aircraft crash sites are often encountered during offshore development and can be a fascinating source of evidence for technological change, historic campaigns and even personalities.\(^4\)

**Submerged Landscapes and Palaeolandscapes**

The British Isles, as little as 6,000 years BC, were still connected to the European mainland. Before this, there were a series of glacial and interglacial cycles in which our human ancestors would exploit areas that are now seabed, for resources.\(^5\) Recent discoveries in England show that early humans inhabited

\(^5\) Tizzard, L., et al., 2015, Seabed Prehistory: Investigating the Palaeogeography and Early Middle Palaeolithic Archaeology of the North Sea, Wessex Archaeology Report no.35.
areas of what is now the North Sea basin at least 900,000 years ago.\textsuperscript{6}

These drowned landscapes that our distant ancestors once roamed, are referred to as submerged palaeolandscapes. More recent submerged landscapes are present in the archaeological record, such as the medieval port town of Dunwich, which now lies just off the coast of Suffolk.\textsuperscript{7}

\textbf{Maritime Infrastructure}

The coast has been an important zone for exploitation of the environment as long as humans have existed. The remains of a plethora of different archaeological material lie in the intertidal zone, and on or in the seabed, that attest to the past ingenuity of communities. Everything from prehistoric fish traps, trackways and navigation markers to the remains of salt making sites, former wharves, staithes and other port or harbour infrastructure.

Together these four categories make up an important but fragile and submerged cultural resource, and one that is not able to regenerate like other environmental subjects. It is also finite and when it is removed from its context without adequate archaeological controls, information about the past is usually lost forever.

What Does the 1954 Convention Protect?
The Convention is to some extent clear about what it is designed to protect and at the same time ambiguous. The convention refers unequivocally to protecting cultural property. Article 1 of the Convention sets out its definition of cultural property, which states, irrespective of ownership, that it is:

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\text{…movable or immovable property of great importance to the cultural heritage of every people, such as monuments of architecture, art or history, whether religious or secular; archaeological sites … and other objects of artistic, historical or archaeological interest.}^8
\]

This appears to be an unambiguous description of many cultural heritage assets known to exist on land and underwater around the UK, and is likely to reflect a reasonable percentage of those not yet found. The term ‘great importance’ is subjective and open to interpretation. But does this mean that only those submerged sites that have already had conferred some form of statutory recognition or protection will be accepted as protected by the 1954 Hague Convention? Or is there a tacit acceptance that in an environment such as the marine zone, where a thorough understanding of the significance of what is present on and in the seabed around our coasts is not possible, there will be cultural property of equal importance to that with statutory protection or recognition that is not yet known and that will be conferred protection by the Convention?

The Department for Digital, Culture, Media and Sport (DCMS) set out implementation guidelines for the Convention in November 2017.\(^9\) In it, seven classes of cultural property are referred to which fall broadly into the three categories of sites, depositories and monuments. As far as UCH is concerned, it is only represented by the 'sites' category, which is made up of: All listed buildings

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of Grade I (England and Wales), Category A (Scotland) and Grade A (Northern Ireland) status; All historic parks and gardens of Grade I status in England and Wales; and, All UK World Heritage Sites, excluding those which are inscribed as natural sites only. In effect, DCMS had initially chosen to list nothing fully submerged, and only three historic vessels that are listed under the Planning (listed Buildings and Conservation Areas) Act 1990: The Cutty Sark, the South Shields Lifeboat and the Phoenix Unit (part of the Second World War Mulberry Harbour) in Portland Harbour.

Realising their omission, DCMS extended the cultural property protection conferred by the Convention to include (in England) 53 wrecks protected under the Protection of Wrecks Act (PWA) 1973 (Section 1), protected for their archaeological, historical, or artistic merit; one wreck protected under the Protection of Wrecks Act 1973 (Section 2), dangerous wrecks; thirteen wrecks and ships in the intertidal zone scheduled under the Ancient Monuments and Archaeological Areas Act 1979; and, 36 wrecks protected under the Protection of Military Remains Act 1986. This, with the listed ships already mentioned takes the total number of the wrecks and ships given protection by the Convention to 106 in the UK, including UK waters.

On the face of it, this appears like a positive level of protection. However, the situation is more complex and diverse than the protection conferred might suggest. Wreck sites designated under the 1973 and 1986 Acts, and the NI Order 1995, and those designated as Historic Marine Protected Areas in Scotland, have yet to be fully adopted by DCMS, but they do form part of the recommended UK Cultural Property Protection database. In reality, the level of protection for the UK’s sensitive, non-regenerative UCH assets falls below a minimum that would be expected by society and that stated in the Marine Policy Statement. The following three subheadings explain why.

**UK Territorial Waters**

Most of the protected UCH mentioned above fall within UK territorial waters, as defined by the 1982 United Nations Convention on the Law of the Sea (UNCLOS) as the strip of the marine zone that extends from the mean low water mark out to 12 nautical miles (nm). Only a few wrecks protected as military remains lie outside of this area despite UK waters, known as the exclusive economic zone under UNCLOS, extending up to 200 nm offshore. Despite the colossal

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Scans of ships destroyed in the Battle of Jutland 99 years ago have been made for the first time using 21st Century technology. The colourful three-dimensional images made by Royal Navy survey ship HMS Echo belie the horrors played out off the coast of Denmark one Wednesday afternoon during the First World War. They show the twisted and battered wreck of HMS Invincible, one of 25 warships - 14 of them British - that were blown up on May 31, 2016.

Photo: Royal Navy, Crown Copyright

A representative map of known wrecks and recorded losses on UK waters showing the number and density of heritage assets. © Crown Copyright
potential for highly significant UCH to exist outside of territorial limits,\textsuperscript{13} statutory instruments to protect UCH have been limited for use with the territorial limit, or in the case of military remains, have inadequate UCH age limits within which UCH can be protected leaving older wrecks without any protection at all.\textsuperscript{14}

**A Restriction of Site Types**
The protected UCH mentioned above also represent just one category of marine heritage asset - boats and ships. This leaves out important assets set out in the categories of aircraft crash sites, submerged landscapes and maritime infrastructure. Many different types of heritage asset are represented within these three categories, but appear not to be recognised under the terms of DCMS’s population of the Convention’s database for the UK.

**Understanding the Baseline**
Archaeologists and historians would generally accept that the understanding of the cultural heritage resource on land is good. What is referred to as the archaeological baseline is well-established on land, meaning that a sound understanding of the known and potential UCH in a given location has been established, or could easily be established. The same cannot be said about the archaeological baseline underwater. For diverse environmental and statistical reasons, the potential for UCH is not well understood and the completeness of known UCH databases is not well-established below the high-water mark.

Archaeological assessments for development in the intertidal, nearshore and offshore environments frequently attest to the potential for previously unknown UCH sites to be encountered. The potential is also supported by statistics. Estimating the numbers of heritage assets in the marine zone is fraught with risk, but one of the most comprehensive wreck databases, which is routinely updated with new data, estimates that UK waters top the world wreck league with an estimated 38,400 known or potential wrecks.\textsuperscript{15} Compare this to nations with greater seabords than the UK’s, such as the United States with only 21,990 wrecks, or just 14,400 known wrecks in the Mediterranean Sea. Our close neighbour France can only muster 6,900 known wrecks. The proximity of two world wars to UK waters has left an immense legacy on the UK’s doorstep.

\textsuperscript{13} For example, HMS Victory (1744) in the recent proposed project by Odyssey Marine International.
\textsuperscript{14} Under the Protection of Military Remains Act 1986, protection as protected places can only be conferred on vessels that sank after 4 August 1914, whilst controlled sites must have been wrecked in the last 200 years.
\textsuperscript{15} Wreck Site: https://www.wrecksite.eu/ accessed June 2018.
So, casting our mind back to the 106 wrecks with some form of statutory protection in English waters, out of a potential 38,400 wrecks in UK waters, this equates to about 0.2% of wrecks receiving protection in UK waters. This nowhere near expresses the actual percentage of the number of important wrecks in UK waters, and it is symptomatic of a poor understanding of the historic marine environment, and of legislation that only protects ‘Grade I’ status exemplar sites. Compare this to the roughly 9,300 Grade I listed buildings, 21,800 Grade II* listed buildings, and around 500,000 or so in total (including Grade II listed buildings), and a further 37,000 scheduled heritage assets, a smattering of 44 registered battlefields, and 1,600 registered parks and gardens, and the disparity between terrestrial and marine protection becomes readily apparent.

To then translate this flawed and gapped sample of 106 UCH examples into the list encompassed by the 1954 Convention in the UK, vastly under-represents the important UCH that archaeologists and historians recognise exists in the marine zone around the UK, and this scenario will be the same around the world’s littoral zone. The way to address this disparity is for the unit tasked with implementation of the Convention, to adopt UK policy in that:

The absence of designation for such assets does not necessarily indicate lower significance and the marine plan authority should consider them subject to the same policy principles as designated heritage assets.\(^\text{17}\)

Managing assets according to their significance, rather than what is strictly on a list, will help bridge the divide in important cultural property that will otherwise be overlooked.

**UCH in the 1954 Convention**

What the Convention does not definitively say, is anything at all in relation to specifically underwater cultural property. This would be worrying were it not for the fact that the Convention itself also does not in any way state that UCH should not be included in the remit of the Convention. This point was at first overlooked by the UK Committee of the Blue Shield, who - as a result of an absence of professional representation for UCH on the committee - initially decided that UCH should not be included.\(^\text{18}\) However, a more inclusive approach has since

\(^{16}\) Telegraph online: https://www.telegraph.co.uk/property/buy/mapped-which-areas-have-the-most-listed-buildings/ accessed on 21 October 2018.


\(^{18}\) Pers. Comm. Professor Andrew Shortland, Cranfield University.
been adopted concerning what heritage assets to include within the ambit of the Convention and this has been translated into policy by DCMS.

It is worth noting the general protection offered to underwater cultural heritage afforded by the 2001 Convention on the Protection of the Underwater Cultural Heritage. Currently 56 States/Parties have ratified this Convention (not including the UK at the time of writing) but it does not offer advice as to how States/Parties might react during instances of armed conflict.

**Protecting UCH Under The Terms Of The Convention**

The CPP community, both outside the military and those with an awareness within it, are going to watch with interest how the Cultural Property Protection Unit (CPPU) will develop its capabilities and reach. Much has been made, in the run up to the formation of CPPU, of a database that will underpin how cultural property will be protected by establishing the data within the planning, intelligence preparation of the battlespace (IPB), and targeting processes to minimise any adverse effects on cultural property. Creating a mind-set that takes

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into account cultural property at complex divisional, brigade and battlegroup HQ level will be challenging enough, let alone at sub-unit level on the ground, and the CPPU will have its work cut out for it. But there has been, for some time, a system of ensuring that impacts do not result in adverse effects which has been used effectively in industry. Falling under the requirements of the European Environmental Impact Assessment Directive (85/337/EEC) in force since 1985 (amended 2011), and applied to a wide range of defined public and private projects, the UK’s Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (the ‘2017 Regulations’) ensure a detailed and comprehensive approach to accounting for the environment in the planning process. This includes the historic environment.

Environmental Impact Assessment (EIA) has been used in UK planning projects since 1990, and has helped to mitigate effects on the environment by development projects by using the ‘polluter pays’ principle. This is true even of highly complex, time-pressured and budget-limited development projects involving multiple agencies. Whilst it is too long-winded and complex to be used by the military, the approach could be streamlined and truncated to provide a system of assessing significance and mitigating impacts on heritage by military operations in conflict scenarios. The process involves key stages of: assessment; survey; evaluation; alteration to plans; and mitigation. This process may be followed up by analysis and publication. What is obvious is that any ‘EIA’ process adopted for military operations would be covered by the principle of military necessity - although this is not very far removed from the development-led approach of weighing up the ‘public good’ afforded by major infrastructure projects against irreversible impacts on the environment. Perhaps more significant, is the need of any operation to maintain a tempo that may not be conducive to an EIA process, and any pre-work could potentially be an Operational Security (OPSEC) issue as it may, under certain scenarios, flag future intent. Nonetheless, it is important that UK CPP initiatives are not just map and database exercises subsequently fed into targeting cells, and that a true ability to assess on the ground (and in submerged environments if need be) provide a dynamic and adaptable capability.

Given the limitations of a CPP unit of the British Army tasked with dealing with the protection of cultural property (in terms of resources and personnel), there will be a need to reach out to other joint capabilities that exists within the

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military to bring the right skills to effect, in exactly the same way as, for example, archaeologists look to bring in a range of science and technology strands to support their work. The newly formed CPPU which sits within 77th Brigade - with just 15 personnel - will need to do the same or face the potential of being overwhelmed by the task in hand. Compare this resource with that of the counterpart Italian Carabinieri unit tasked with CPP duties, which is at battalion strength.

Within the Armed Services are some highly capable units bringing cutting edge technology to bear in the battlespace that could be encompassed in an integrated approach to protecting cultural property. These could include units such as Royal Engineer (RE) survey, LIDAR, unmanned aerial systems and remote sensing squadrons, but specifically for submerged environments, there
are some other specialist units. For example, RE, Royal Logistic Corps (RLC) and Royal Navy (RN) divers could be tasked with assessment and evaluation, and even mitigation tasks. The parallel for this is the US Army Corps of Engineers that provides a wide ranging marine archaeological capability and regulatory function for major infrastructure projects in the US.\textsuperscript{21} The Royal Navy’s Maritime Autonomous System Trials Team (MASTT) is a small Portsmouth-based Royal Navy unit testing new unmanned systems, and their work would be instantly of use for CPP assessment, evaluation and mitigation activities in the marine zone.

**Conclusion**

Broadly, the measures set out to protect cultural property during armed conflict will, by their very nature, be complex. It is no different in the marine environment, but so far the measures taken in respect of UK UCH do not reflect the broad nature of UCH in UK waters, and this is likely to be echoed wherever the Convention may come into force around the world. The UK has a technically advanced nearshore and offshore construction industry that takes its environmental and historic environment responsibilities relatively seriously. Even so, the low level of baseline understanding of the marine historic environment means that chance discoveries routinely happen, even where a high degree of attention has been paid to the assessment and survey stages of the development process. Around the world this likelihood of chance discoveries is expected to be heightened where baseline knowledge of what lies on the seabed is even lower.

CPP activities must therefore not be prescriptive desk-based actions that follow a limited - and probably flawed - view based on lists of assets put together with old, partial, biased and possibly inaccurate data. Instead it must make sure it has the flexibility and resources to reassess data against ground-truthed information, with the ability to challenge and update the facts as necessary, and undertake assessments of significance of all types of cultural property. The CPPU will need to be supported by a range of agencies if it is not to be overwhelmed. Information never stands still and CPP assets must keep up with all aspects of the very large database it will inevitably have to deal with. This will be a weighty task whether on land or under the waves.

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The Two Wrecks; The Dias (left) lying partly sunk on the far side of the Harpoon Jetty, (originally Viola) was built at Beverley near Hull in England in 1906 as a trawler. She whaled briefly at Cape Lopez off the Congo. She came to South Georgia in 1927, but was only ever used as a sealer there. The Albatross (right) was built at Svelvik in Norway in 1921 and was subsequently converted from whaling to sealing. Photo: Corporal Mark Ballantyne RLC, Crown Copyright.
Evolution of Russian Information Warfare

Alexander Hryb, DCSU, analyses Russia’s use of Information Warfare from Deceive and Distract to Destroy and Deny its opponents.

Sloviansk city council under control of armed forces. The masked men are holding Kalashnikov assault rifles (AK-74) and have rocket launchers on their backs (very similar to Soviet/Russian RPG-26). Photo: Yevgen Nasadyuk, Creative Commons Attribution-Share Alike 3.0 Unported license, Wikimedia Commons.
Russia is waging the most amazing information warfare blitzkrieg we have ever seen in the history of information warfare.

General Philip Breedlove, NATO summit 2014.

We are in a state of information war with Anglo-Saxons.

Putin’s spokesman Dmitriy Peskov, March 2016.

Russian military doctrine traditionally used the term ‘Information warfare’ to cover what is now accepted as ‘hybrid warfare’ tactics. Information warfare would include elements of both ‘maskirovka’ (deception) as well as ‘active measures’ to create effects (events) on the ground that could be used to advance overall military strategy. In short, the ultimate objective for Russian Information Warfare strategy is to Deceive, Distract and Destroy the adversary. The latter element contrasts with Western (NATO) approach to information operations which are limited to military deception and influence of the adversary’s will to fight (NATO JFC 2009).

The Crimean takeover and armed conflict in Ukraine served as a test ground for the new Russian information warfare tactics. It had been years in preparation and therefore helps to recreate accurately its planning timeline, preparation and execution stages. Analysis of the Russian Crimean campaign, and information warfare tactics against Ukraine in general, helps to establish information warfare methodology, media toolkit, impact on the target population, as well as shortcomings that could be exploited in order to dispel deception elements of hybrid warfare, which amounts for up to 80% of the hostile course of action.

**Definitions of Hybrid Warfare vs Information Warfare**

Russian literature mostly refers to the term ‘hybrid warfare’ when describing hostile actions by Western countries against Russian interests. Although one can argue that the ‘hybrid warfare’ term has been subsequently adopted by the Russian military thinkers, they still prefer to use the more traditional term ‘Information war’ to describe their own tactics. NATO’s *Handbook of Russian Information Warfare* underlines the fact that in Russian military thinking ‘Information warfare’ is not limited to armed conflict and is considered to be ongoing in peace time:

…the concept carries within it computer network operations alongside disciplines such as psychological operations (PsyOps), strategic communications, Influence, along with intelligence, counterintelligence, maskirovka, disinformation, electronic warfare, debilitation of communications, degradation of navigation support, psychological pressure, and destruction of enemy computer capabilities.²

Maskirovka in this quote is used in a more narrow (tactical) way, while some authors refer to a wider strategic approach when:

Maskirovka is in fact war that is short of war, a purposeful strategy of deception that combines use of force with disinformation and destabilisation to create ambiguity in the minds of Alliance leaders about how best to respond.³

Both Russian and Western definitions seem to agree that ‘hybrid warfare’ includes conventional, irregular and cyberwarfare targeting of the enemy on the conventional battlefield, the indigenous population of the conflict zone, and the public opinion of the international community in order to achieve political objectives on the ground and avoid attribution of (military) aggression. Apart from cyberwarfare, no other element is entirely new, so the novelty of ‘hybrid warfare’ is primarily in the correlation of factors applied. While 20th century conventional warfare was fought mainly on the battlefield with some elements of information warfare, ‘hybrid warfare’ is mostly conducted in the information (mass/social media) and cyber space (networks), with conventional battlespace being optional or additional.

Some Russian authors have even suggested that, ideally, information warfare alone can achieve political victory over adversary through successful imposition of ‘self-destructive information systems’ on the target population; this causes the population to voluntarily disarm and give up due to ‘reprogramming’ and subsequent loss of will to fight.⁴

The Russian Ministry of Defence had adopted such an approach by 2011 when it stated that new rules of international engagement require steering the adversary towards self-destructive course of action in peace time via ‘...destabilizing the society and state, and forcing the state to make decisions in the interests of the

² Giles, K., 2016, Handbook of Russian Information Warfare, Nato Defence College, p 6
opposing party’. In this respect information warfare signifies the return of what George Kennan defined back in 1948 as a ‘political war’, when he encouraged American leaders to disabuse themselves of the handicap of the ‘…concept of a basic difference between peace and war…’ and to wake up to ‘…the realities of international relations - the perpetual rhythm of struggle, in and out of war.’

When the Chief of the Russian General Staff presented the state’s new Defence Doctrine in 2013, he emphasized the lessons learned from Western ‘hybrid warfare’ ie. the Arab Spring and Colour Revolutions in Eastern Europe. In Gerasimov’s words, the modern military conflict is an integrated application of military, political, economic, informational, and other powers by state and non-state actors to achieve their political goals. President Putin signed the new Russian Defence doctrine in December 2014 prompting conclusions that ‘…for Russian military leaders warfare is ‘…not continuation of politics by other (military) means’ but an integral part of politics.’ Ermus and Salum analysed differences and similarities between Gerasimov’s New Generation Warfare and the US Special Forces unconventional warfare operations and arrived at the conclusion that the Russian concept relies much more heavily on information operations.

Post-Soviet Russian Theory of Information Warfare And Its Likely Objectives Soviet information operations were at the centre of the USSR’s internal and external activity as propaganda of communist ideology worldwide was an official foreign policy objective. During the Cold War disinformation was part of ‘active measures’ conducted covertly by the KGB and overtly by the International

6 Political war concept was defined in a 4 May 1948, memorandum produced by the State Department’s policy planning staff under George Kennan: ‘Political warfare is the logical application of Clausewitz’s doctrine in time of peace. In broadest definition, political warfare is the employment of all the means at a nation’s command, short of war, to achieve its national objectives. Such operations are both overt and covert. They range from such overt actions as political alliances, economic measures (as ERP—the Marshall Plan), and ‘white’ propaganda to such covert operations as clandestine support of ‘friendly’ foreign elements, ‘black’ psychological warfare and even encouragement of underground resistance in hostile states’.
8 Gerasimov, V., 2013, Ценность науки в предвидении. Военно-промышленный курьер 8 (473).
Information Department in charge of Soviet broadcasting. However, the KGB’s ‘black propaganda’ - creating forgeries and propagating rumours - was more tactical by its nature. For instance, the KGB promulgated India-focussed publications and international media claiming that HIV AIDS was an American military created biological weapon that got out of control. Although relatively successful, this campaign was not more than a distraction in Soviet-American confrontation. Strategic Soviet disinformation, pushed through various cultural organisation and state press agencies, was essentially meant to create an agenda in the information space that would highlight deficiencies of the capitalist world and highlight benefits of the communist system. The CIA estimated that the USSR spent more than $4 bn a year on ‘active measures’ operations annually in 1980s, and over 10,000 disinformation operations were conducted by the Soviet Bloc over the course of the Cold War (KGB alone employed up to 15,000 officers engaged in psychological warfare and disinformation). However, by 1991 Russian elites gave up entirely on the communist ideology and therefore the case for ‘active measures’ against

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the capitalist Western world lost its *raison d’etre*. Yet, President Yeltsin’s decade of infatuation with Western liberal capitalism and democracy proved to be no more than a creative break from the Cold War confrontation. The KGB’s Vladimir Putin, in political power since 1999, reinvented the ideological basis for geopolitical confrontation in the form of the Eurasian neo-imperial ideology and an alternative to the European Union - the Eurasian Union. Cold War disinformation warriors quickly jumped on the opportunity to justify their existence.

Most Post-Soviet Russian bibliography on information warfare associates the collapse of the USSR with clandestine psychological or information warfare operations conducted by the West through deep infiltration; so that even President Gorbachev is often portrayed as a ‘…Western agent of influence…’ \(^{11}\) One of the key thinkers (Academician of the Russian Military Academy of Science) Igor Panarin concluded that ‘The USSR’s defeat in the Cold War was defeat in the information-ideological war’ \(^{12}\) What is more important, this war against Russia was perceived as ongoing long after the USSR’s demise: ‘Psychological wars never end and therefore we are still under the artillery barrage.’ \(^{13}\) The Russian ruling elite widely shared this conclusion and attempted to safeguard state ‘information security’. President Yeltsin instructed newly appointed Defence Minister General-Colonel Rodionov (18 July 1996) that:

*Along with appropriate maintenance of the nuclear deterrent we should pay more attention in developing entire multitude of information warfare means.*

The Security Council of the Russian Federation developed a new Doctrine of Information Security of RF that was approved by President Putin in September 2000. The new doctrine listed the key external threats: attempts by a number of foreign states to diminish national interests of the Russian Federation in the information sphere (both internally and internationally), and hostile information warfare development (both through mass media and cyber). Igor Panarin summed up the ultimate goal of the Russian information security strategy as securing effective functions of societal information sphere in global competitions with leading nations and domination in the regions of key geopolitical importance for Russia. He defines these geopolitical areas in terms of neo-Eurasian ideology:

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\(^{12}\) Panarin, I., 2003, *Informatsionnaya voyna i vybory*. Moscow, p 40

\(^{13}\) Pocheptsov, G., 2001, *Teoriya Komunikatsii*. Moscow, p 284
Russian political elite should become ‘passionarnoy’ (energetically active) and develop new geopolitical doctrine based on ‘noosphere’ matrix of Russian super-ethnos consciousness. This doctrine should protect ‘noosphere’ matrix of consciousness from negative information influence from geopolitical adversaries in federal and regional elections.\textsuperscript{14}

Zavadski introduced one of the most quoted Russian definitions of information warfare:

\textit{Information warfare consists of actions taken to achieve information superiority of national military strategy through influencing adversary’s information and information systems and, at the same time, defending your own information and information systems.}\textsuperscript{15}

Panarin distinguished \textbf{two key elements in information warfare} (protivoborstvo): info-technical (information systems or \textit{sistemy sviazi}, telecoms and Electronic Warfare) and \textbf{info-psychological} (influencing public opinion and psychology of ruling elites). Interestingly, Panarin considered China as a world leader in information warfare and claimed that the term ‘information warfare’ appeared first in China back in 1985. The Chinese approach combines both ancient and modern. Panarin quotes Sun Tzu that the best policy in war is to capture a country intact as destroying it on the battlefield is too easy: ‘\textit{Ultimate excellence lies not in winning every battle, but in defeating the enemy without ever fighting’}. According to Panarin, the modern Chinese military adopted information doctrine developed by the Soviet Chief of General Staff Marshal Ogarkov, which did not take root in the USSR, but was adopted by the Chinese military thinker Wang Pufeng. According to Panarin the toolkit for psychological warfare has not changed much in time and includes disinformation, gossip (\textit{slukhi}), propaganda etc. What makes modern warfare different is the technical means of global mass media and satellite TV when foreign leaders can address targeted population of other countries directly.

Zinoviev identifies ‘\textit{zapadnizatsiya}’ (Westernisation) as a Western information warfare tactic which was employed in time of peace to promote superiority of the Western way of life in order to subjugate non-Western people around the globe. He states that the West targeted the USSR as a Communist state but instead destroyed Russia:

\textsuperscript{14} See Panarin, p 27
The bomb of zapadnizatsiya detonated in Russia and caused unprecedented destruction not only in state structures, economy, ideology and culture but in the fabric of society. No conquest or weapon could have achieved so much in such a short period of time and on such a scale in the past. …Communism was the target but Russia was killed. The West achieved the greatest victory in human history with this weapon defining, in my opinion, future social evolution for centuries to come.16

Assuming that society could be understood as a self-learning information system, Rastorguyev suggests his own definition of information warfare as actions aiming at causing material loses through information application, and gaining advantage in sharing limited material resources. Society as self-learning information system can win the war if it can identify which incoming information or ‘encoding’ is useful and which would lead to destruction. Rastorguyev suggests a winning algorithm that can ensure victory over adversary through mapping of information, which looks like a methodology of the time-tested KGB ‘reactive control’ technique adopted for the information age:

- Identifying key basic elements of adversary’s information system space;
- Identifying key characteristics and potential of adversary’s basic elements within the information system;
- Modelling possible reaction of basic elements to different incoming ‘coding’ information;
- Selection of the most desirable reaction of the basic elements;
- Preparation of societal space where these basic elements of public opinion exist;
- Execution of the most desirable scenario.

Rastorguyev’s algorithm was designed for both information warfare planning as well as identifying whether the host society is under attack from an alien information system. However, his mathematical modelling shows that it is impossible to identify whether a society is under information warfare attack because the incoming flow of information is constant. Therefore, he implies information warfare is perpetual and could be detected only from post-event results of destruction ie; when it is too late to react. These results are similar to the aftermath of any war:

• Death and emigration of local population;
• Destruction of industrial base and reparations;
• Loss of territory (at least partial);
• Political dependence on victorious powers;
• Rapid demilitarisation with either cuts in military personnel or ban on independent armed forces;
• Brain-drain and loss of technological competitiveness.

Rastorguyev formulates defeat of society as an information system in algorithmic terms as following:

Steady loss of information system capacity, loss of societal structures and elements; degradation of system to the degree when it becomes harmless to the victorious power;

Society is engaged in activities in the interest of victorious power that were unnatural previously. In other words, society as a defeated information system is responding to encoding information pre-programmed by the victor (like a computer might run a malware programme instead of a legitimate one);
Defeated information systems gradually become a functioning part of the superior system acting according to the algorithm of the victor.¹⁷

Considering that outcomes of conventional war and information war are the same, ie. forcing the victor’s will on the target population, the latter is more economical and therefore could be waged permanently without much of the expense associated with traditional kinetic energy. Rastorguyev agrees with Ovchinski that Western computer modelling techniques of potential social developments are, in fact, tools of information warfare.¹⁸

The battlespace then is the mass media space conducted through active and convincing language. Society can lose the war in the mass media space when it abandons its own language and culture ie; dies as an independent information system. So, what can such an ‘infected’ societal system do if it is re-programmed for self-destruction? Rastorguyev indicates that the only tactic to survive information warfare is in ‘irrational behaviour’ as a recovery strategy. In practical terms such irrational behaviour of defeated societies is in causing permanent upheaval: ‘Irrational behaviour is chaos, aimless riot, it is terrorism’. Considering that superior information systems depend on their digital economies, the most efficient terrorist attack should aim at data centres and first of all at digital banking platforms. Disrupting a major bank by hitting its data centre with …microwave radiation weapon can cause a systemic crisis of entire financial system of developed countries by destroying public confidence in contemporary technology of monetary market.

However, the most effective offensive information warfare tactic, according to Rastorguyev, is triggering self-destructive programmes (algorithms) within any given information system. This requires a number of steps:

- Reconnaissance and mapping of mechanisms that activate already existing societal ‘programmes’;
- Identifying self-destruction programme(s);
- Developing a particular information weapon system suitable for the target;
- Deployment of the information weapon system on the target.

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¹⁸ Ovchinski, A., 1997, Informatsionno-psiikhologicheskaya sfera protivodejstviya organizovannoy prestupnosti. Informatsionnoye obschestvo, No.1, p 69
Rastorguyev considers his information warfare strategy to be a universal algorithm in perpetual current war of civilisations where the West in general and the USA in particular are waging war against the rest of mankind for access to limited natural resources on the planet. Information warfare therefore is ‘...always exclusively offensive and only offense can win the war’.

Rastorguyev’s elaborated information warfare theory is widely referred in Russia as a key foundation work, especially due to the extensive mathematical modelling supporting his arguments. His book Information War was recommended for publishing by the Security Committee of the State Duma of the Russian Federation and the Military technology department of the Russian Engineering Academy as ‘...the most competent and comprehensive work on this subject’. In return, Rastorguyev considered it

...his duty to express gratitude to the staff of the Security Council of the Russian Federation, the Public Relations Centre of the Federal Security Service of Russia and the Security Committee of the State Duma of the Russian Federation...

for their contributions and feedback on his earlier work.

The new edition of the Russian Doctrine of Information Security, signed by President Putin in December 2016, retained key assumptions from 2000 edition and provided additional legal and material foundations for information ‘counter-measures’ that were justified by increasing foreign ‘offensive operations’ against the Russian Federation.\(^1\) It also reflected experience from its ongoing campaign in Ukraine and envisaged improvement of the Russian Armed Forces’ capacity for information warfare through perfection of:

...systems that ensure information security of the RF Armed Forces, other troops, military formations and agencies, including forces and means of information warfare..., through regular training and exercises (Doctrine, IV, 21 b).

**Ukrainian Conflict As A Test Case Of Russian Information Warfare Tactics**

Putin’s attempted annexation of Crimea in 2014 became a test ground of newly developed Russian information warfare and new generation warfare tactics, and allows us to recreate methodology, evolving application and preliminary results.

\(^1\) [https://kremlin.ru/acts/bank/41460](https://kremlin.ru/acts/bank/41460).
The deceptive and distractive tactics of the ‘little green men’ successfully prevented the Ukrainian armed forces resisting the military invasion and takeover of the peninsula, prompted the Crimean population to largely submit to the annexation, and sufficiently deceived the international community into *de-facto* acceptance of a *fait accompli*. General Philip Breedlove addressed the NATO summit in Wales (September 2014) saying that ‘Russia is waging the most amazing information warfare blitzkrieg we have ever seen in the history of information warfare’. Interestingly, Putin’s spokesman Dmitriy Peskov admitted in March 2016 that Russia is in ‘…a state of information war with Anglo-Saxons…’ and the Western media.\(^\text{20}\) According to a 2017 British intelligence parliamentary report Russia continued conducting ‘…information warfare on a massive scale…’ in Ukraine while denying it and pretending to be a party to peaceful settlement within the Minsk process.\(^\text{21}\) So, how did the Russian military perform according to their own standards and methodology? Applying Rastorguyev’s model of information warfare would suggest that the Kremlin successfully pre-planned and executed five out of six stages that meant to achieve destruction of the Ukrainian state and its territorial partition in one form or another.\(^\text{22}\) 


\(^{21}\) https://b1cba9b3-a-5e6631fd-s-sites.googlegroups.com/a/independent.gov.uk/isc_files/2016-2017_ISC_AR.pdf?.

successfully introduced casus belli for invading Ukraine starting in Crimea by portraying post-Yanukovych government in Kyiv as a US-sponsored right-wing junta persecuting Russian speaking population in Eastern Ukraine.  

Between 70 and 90% of the Ukrainian Security forces and military personnel in Crimea defected to the Russian side, following their Commander-in-Chief and Minister of Defence who fled to Crimea and then Rostov. The Ukrainian army and security services were massively demoralised by infiltration from Moscow in previous years, after the Kremlin forced President Yanukovych to nominate Russian citizens in key security and defence posts.

Stage six meant to complete division of Ukraine into a pro-Russian, industrialised Novorosiya and predominately de-industrialised the rest of Ukraine, but the plan stalled everywhere else outside of Crimea. As former acting Ukrainian president Oleksandr Turchynov pointed out, Russian military invasion in Donbas was repelled in early 2014 not by the regular Ukrainian army, but civilian volunteers who took up arms and opposed Russian ‘hybrid forces’ taking advantage of post-Maidan security vacuum.

The Ukrainian National Security and Defence Council secretary said in 2018:

> Putin miscalculated. He thought he had destroyed the Ukrainian army, special services, the economy. But he did not think that a volunteer movement would be created in Ukraine, when lawyers, teachers, students from the Maidan will go to the front line. The creation of a voluntary movement at that time was a key moment that frustrated Putin’s plans. It was the volunteers who kept Putin away and saved the situation, since they gave the army the time to recover, to buy bullet-proof vests, helmets, weapons.

As British military adviser in Ukraine, Glen Grant, pointed out, the Ukrainian Army’s success in containing Russian aggression in Donbas owns more to the bravery of its soldiers and commanders at the tactical level, than the actions of the Ukrainian General Staff.

In Rastorguyev’s terms, Ukrainian volunteers ‘rioted’ against the self-destructive information system imposed by Moscow on the Ukrainian state during President Yanukovych years. Once ‘…Info war blitzkrieg…’ proved to be

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insufficient in the mainland Ukraine, the Kremlin escalated the conflict with more conventional warfare tactics, conducted via DNR/LNR proxies in Donbas, and supported by Russian regular troops, ‘complimenting’ information warfare. Accordingly, the Kremlin had to complement its initial strategy to deceive, distract and destroy Ukraine as a state, by constant denial of its actions in Donbas, presenting itself as a neutral party to the so-called Minsk process of peace-negotiations. Ultimately the Russian information campaign in Ukraine could be judged only partially successful if victory is confirmed when ‘...defeated information systems gradually become a functioning part of the superior system acting according to the algorithm of the victor...’.

While the Crimea could potentially become part of Russian society long-term, Donbas is likely destined to become another frozen conflict zone under a UN led peace-keeping mission. When it comes to the Ukrainian society as ‘...self-learning information system...’ it has become much more unified in the face of Russian aggression and therefore remained undefeated by ‘...the new generation...’ warfare. Unless attacked by conventional armed forces on a massive scale, Ukraine is strategically lost to Russia in the immediate future. Ukrainian legislation refers to Crimea and parts of Donbas as ‘...temporary occupied territories...’ and Russia as the ‘...aggressor state....’, insuring bitter anti-Russian sentiment in Ukraine for generations to come.

A Russia-backed rebel observing Ukrainian army positions though firing port at his position near Donetsk, Eastern Ukraine, May 17, 2015. Photo: Mstyslav Chernov, Creative Commons Attribution-Share Alike 4.0 International license, Wikimedia
Conclusions

Russian information warfare theory and doctrine emerged from the ruins of the USSR as a defensive tactic against a perceived Western (largely US) clandestine war on the Commonwealth of Independent States (CIS) countries. As soon as President Putin managed to rebuild confidence of the Russian military through successful campaigns in the North Caucasus, including Georgia (2008), Russian Information warfare doctrine was upgraded to the offensive form that was tested in Ukraine (2014), Syria (2015) and the USA during the 2016 presidential elections. The Syrian campaign also crystallised the new ratio of non-kinetic and kinetic elements of the military intervention as 4:1 with four being allocated to the Information warfare, including psychological operations, cyber warfare and propaganda. Partially successful, Russian ‘new generation warfare’ was complemented with ‘political war’ tactics, continuously denied in the international public discourse.

President Putin’s announcement of a new range of nuclear super-weapons in March 2018 should be considered as part of evolving information warfare and escalated confrontation with the US. Moscow’s calculations that Russia cannot lose the war with the West (in Peskov definition with ‘Anglo-Saxons’) as long as it is undeclared and plausibly denied, could lead to miscalculation and escalate the confrontation dubbed as Cold War 2.0. Looking at the success and failure of the Russian information warfare theory and application from its own point of view will help to predict its likely evolution both in doctrinal terms and on a tactical level. The key conclusion is that, in Russian military thinking, information warfare must be always offensive and therefore acquires a perpetual character (both in cyber-physical and psychological domains).

Such conclusion is supported by grim assessments of likely Russian strategy in Ukraine where President Putin finds himself:

…hopelessly entangled in his own web of deceit and appears to be stuck fast in eastern Ukraine, unable to either advance or retreat. He may no longer be able to win the war, but he dare not risk peace….27

Lieutenant General Ben Hodges, former commander of US European Command’s Army component from late 2014 through 2017, predicts the Kremlin’s objectives in Ukraine as partition and isolation:

"The next phase will probably be land and sea operations that would eventually secure maybe even Mariupol but continue to take the Ukrainian coastline and connect Crimea back up to Russia along the Sea of Azov. It’s not going to happen in the next six months, but this is the direction they’re taking until they completely own the Black Sea and they’ve isolated Ukraine."
Grave Concentration in France and Belgium: 100 Years on

Victoria Martin, Defence Innovation and Research, looks at the concentration process of war graves from the First World War in the context of the 21st Century.
In 2009, a new Commonwealth War Grave Commission cemetery (CWGC) was constructed in Fromelles, France. This cemetery was built to house the newly recovered remains following the excavation of a World War One mass grave, and was the first new cemetery to be built in fifty years.\(^1\) Cemeteries such as this litter the landscape of the old Western Front in France and Belgium, however in the years following the First World War their creation was new and controversial. Many of these cemeteries were created to hold war graves which had been relocated from elsewhere in France and Belgium, through a process called ‘concentration’. By studying the surviving archive records, we can gain insight into this work, why it happened and how it was completed.

**British War Dead Before The Great War**

While we now expect the remains of soldiers killed during conflict to be cared for; this is a relatively new phenomenon. During the 19th century, there was minimal commemoration of British war dead, either in Britain or abroad. In the Crimean War, most British soldiers were buried in unmarked mass graves on or near the battlefield. The bodies of officers may have been removed and buried elsewhere, but otherwise their remains would be buried with their men. Some unofficial regimental cemeteries were established, but following the end of the conflict they quickly fell into disrepair.

This began to change during the Second Anglo Boer War, with individual graves and memorials appearing, alongside the mass graves seen previously. The British government was involved in the marking of graves for the first time, providing steel crosses for some graves, however there were still few formal military cemeteries and a lack of cemetery maintenance.\(^2\) Simultaneously, the British public became more aware and concerned about the final resting place of British soldiers. This increased awareness of war graves was influenced by a number of contributing factors, including an increased appreciation of the military, the growth of and pride in the British Empire, and the general change seen in burial practice across Europe towards the end of the 19th century, which saw improved burial locations and grave marking. Combined with other influences, this meant that by the time war broke out in Europe in 1914, attitudes were changing, and treatment of the war dead could not be ignored.

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Changing Attitudes During The First World War

The recording of British graves started in 1914 but was not undertaken by the military or the British government. Instead, it was the Red Cross Mobile Unit, a volunteer unit formed to search the French countryside for the missing and wounded, that started to record graves. It was not until 1915 that the Mobile Unit became the Graves Registration Commission (GRC) and was brought under the control of the British Army. The GRC quickly brought in two significant policies that would shape the future of British and Commonwealth war graves into what we see today; the first was an agreement with France for land granted in perpetuity for cemetery construction, and the second was a ban on the exhumation of soldier’s graves during the war. Private exhumations had been taking place sporadically since the start of the war, but this practice was only available for the wealthy and for the families of servicemen and women in Britain and Europe. Publicly, the ban was implemented to address concerns over the hygiene of handling and transporting bodies, and to enforce the principle of equality. Unofficially, it may have been caused by the predicted cost of transporting all war dead back to their country of origin and the potential negative impact on the population of seeing thousands of war dead being returned home.

Together this created two of the basic principles that we see in all CWGC cemeteries; that every soldier would have a permanent memorial or grave, and that all soldiers would be treated equally in death, regardless of rank or social position. It was the first time that all British and Imperial war dead would have a marked, individual grave near the site of their death, a practice that would be followed by the British government until the 1980s.

In February 1916, the GRC became the Directorate of Graves Registration and Enquiries (DGRE). The DGRE were to continue the grave registration work of the GRC in France and Belgium. By this time, semi-official cemeteries were being created, mainly near casualty clearing stations or other medical units. Burials near the front line were haphazard and often rushed, with no way of permanently marking them. Chaplains would keep records of front-line burials they conducted, but as they moved on, it was easy for this information to be lost. The DGRE were responsible for verifying reports of war graves, recording their location and marking them with a cross when possible.

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By 1917, it had become clear that with the volume of graves and cemeteries being created, an organisation would be needed to manage and maintain these after the war. This led to the creation of the Imperial War Graves Commission (IWGC). The role of the IWGC was to care for the graves of Imperial soldiers killed during the fighting, and obtain land for the construction and maintenance of permanent cemeteries and memorials. The IWGC agreed that all cemeteries would follow the same format and abide to the same basic principles. Namely, that each soldier would have a headstone of uniform dimensions; the each regiment would have its own patterned headstone; each headstone would include rank, name, regiment and date of death; each cemetery would have a cross and a large memorial stone; each cemetery would have some kind of shelter; cemeteries would be planted with flowers and shrubs; each cemetery would be fenced in; and each cemetery would contain a register of burials.\(^7\)

It should not be underestimated how ground-breaking this move to state-funded commemoration was. That each soldier should be commemorated equally, regardless of sex, rank, nationality or social status was completely novel. That the state would be willing to pay for this illustrates how important it must have been to society at the time.

\(^7\) Crane, D., 2013, Empires of the Dead; how one man’s vision led to the creation of WWI’s war graves Harper Col., UK
Clearing the Battlefields, And the Concentration Of Human Remains

By the time of the armistice in 1918, graves were scattered across France and Belgium. Burials varied from marked and registered graves in established cemeteries, through to heavily decomposed human remains exposed in previously inaccessible areas of the battlefield. Some cemeteries had been heavily damaged by fighting, with grave markers being destroyed and burials becoming lost. During the war, it had been agreed that small cemeteries and isolated graves would be relocated into bigger cemeteries, along with any unburied remains. This work, referred to as concentration, fell to the DGRE and was to start immediately.8

The Problems Faced By the DGRE

While it was agreed that the work of concentration would start straight away, there were various obstacles that interfered with this procedure. First, it was agreed that all men undertaking the work had to be volunteers, but due to the difficult nature of the work, would receive a higher than average wage. While the idea was to only employ men who were committed to the work, it may have had the opposite effect of attracting men simply for the high wage. Some soldiers returning to the UK following the end of the war struggled to find work, so the offer of well-paid employment must have seemed attractive. Despite this, recruiting staff was challenging because there was a lack of supervisory staff as well as a lack of suitable accommodation and transport. Additionally, the landscape was covered with debris from the fighting, such as barbed wire and artillery shells, which quickly became overgrown by vegetation, which significantly slowed the progress of battlefield clearance and recovery.

Work started in the Spring of 1919, but the Instructions As To Concentration Of Isolated Graves And Groups In Cemeteries, were not issued until May 1919.9 Prior to this, exhumation parties appear to have been working without clear instruction, causing differences in the standard of work between burial parties, and there appear to have been multiple errors and mistakes made during this time.

According to the written instructions, the DGRE unit would be given a 500-yard square area, based on a square of a trench map, to be searched. The area would be searched and cleared, with any potential graves or areas of human

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8 IWGC, 1918, Minutes from the 6th meeting of the IWGC 19th November 1918 [Meeting minutes]. Commonwealth War Graves Commission Archives. Section 7B, France and Belgium. 268, WG 1294/3 pt.1, Exhumation – France and Belgium – General file. Maidenhead

remains being marked. Staff were instructed to look for rifles, stakes or other equipment that may have been used to mark an improvised grave as well as crosses; when British or Imperial servicemen were buried by the Germans, they would often be marked by a stake inscribed with an ‘E’. Exhumation parties also knew to look for any small pieces of bone which may have been brought to the surface by rodent activity, or any remains which may have been partially exposed. Finally, they were also given guidance on identifying the discolouration of grass, earth or water which could indicate the presence of human remains.

Once the area had been searched and marked, exhumation began. If remains were found, they would be uncovered and removed; the remains were placed on a canvas sheet and would be examined in detail for anything which might have suggested the identity of the deceased. This included identity discs, personal effects or paperwork, but other details would also be recorded such as the shade of khaki in the military uniform, and any badges or numerals.

**Identification**

The thorough examination of the body was crucial to gather any information that might inform on the identity of the individual. This was often problematic as the bodies being exhumed were months or years old, and would be in varying stages of decomposition. The rate of decomposition was subject to a number of environmental and human factors. Geology and soil type played a significant role, with bodies in chalk soils such as those of Northern France decomposing more quickly than those seen in the clay soils found in Flanders. Water content impacted decomposition, as water-logged environments such as those seen on the flooded battlefields would restrict tissue breakdown. Additionally, grave depth was relevant as shallow graves or bodies left unburied would decompose more quickly, and be more likely to suffer from rodent activity and disturbance from shellfire, than burials at a lower depth.\(^\text{10}\) Ploughing, agricultural work and reconstruction work could also disrupt or destroy remains. This meant some remains would be skeletonised and easy to examine, but others would be far from this with soft tissue still present, making it a particularly gruesome and unpleasant task.

The main hope from examination would be the recovery of the identity disc, however this was often difficult. For the first year of the war, soldiers only had one identity disc which would be removed when they were killed and buried.\(^\text{11}\)

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\(^\text{11}\) Robertshaw, A. & Kenyon, D., 2008, *Digging the Trenches; the archaeology of the Western Front*, Barnsley: Pen & Sword Military.
In 1915 these were replaced with a new double identity disc, with one being removed from the body at death and the other staying with the body. However, these were made from a compressed fibre, which would deteriorate when buried, so could be illegible or destroyed by the time a body was recovered. Some soldiers chose not to wear their identity discs around their necks, but would instead attach them to their braces or uniforms, which caused them to be missed. On other occasions, identity discs could be lost in the chest cavity of decomposing remains.

After the examination, the body would be wrapped in canvas and sent with any personal effects to the nearest DGRE cemetery open for concentrated graves at the time. The officer overseeing the exhumation would complete a label, which would be attached to the body, containing information including the map reference of where the body was found, if a cross had been present, name, rank,
unit, any personal effects, and if it had been recovered from a grave or not, and therefore if a committal service was required. If multiple remains were found in one grave, or were buried next to each other, this would be marked on the label for each set of remains and the bodies would be reburied in consecutive graves in the new cemetery.

When the remains reached the cemetery, the label would be examined and compared to any personal effects present. Personal effects were then removed from the body and the details on the label would be copied out onto an official form, known as a concentration record. In the cemeteries, cemetery parties were instructed to dig long trenches at least four foot and six inches in depth that would hold 20 bodies. Bodies would be placed in this trench and would each be given two foot of grave space. The trench would be filled and the graves covered, with a committal taking place if required. A stake with the details of the deceased, or a battlefield cross if present, would be placed at the head of the grave, and would eventually be replaced by a cross.

Completed concentration records would be sent back to the DGRE Headquarters, who were responsible for checking and verifying information received. This included the use of official and unofficial documents such as chaplains’ records, burial reports and letters to provide or confirm the identification of a grave.13

This work of recovery and reburial continued until September 1921, when it was decided that the work of concentration should stop, and all grave and cemetery work would be passed to the IWGC. During these two years, the DGRE had searched the battlefields of France and Belgium multiple times and concentrated approximately 204,000 human remains.14 The use of physical examination combined with analysis of written records demonstrates the importance given to identifying the deceased, and the commitment of the state to care for their war dead.

Today, the desire to recover and identify Commonwealth soldiers from France and Belgium remains. The excavations at Pheasant Wood, Fromelles, which resulted in the recovery and reburial of 250 soldiers, illustrates this continued interest. The remains of soldiers from both sides continue to be recovered during construction, archaeological and agricultural work, and Commonwealth

soldiers are reburied with a full military funeral in either a historically relevant or geographically convenient cemetery. The techniques used to establish identification have changed, with a strong dependence on DNA analysis as well as contemporary records, but identifying the dead is as important now as it was a hundred years ago.

**Searching The Landscape**

While we understand the process followed by exhumation parties, there is no clear information on how they worked through the landscape of the Western Front. Thankfully, the original concentration records have survived in the archives of the CWGC. By using these records and surviving trench maps, more insight can be gained on the work of the DGRE. In this case, a sample of graves from Hooge Crater Cemetery is used as an example.
It is possible to plot the map references given for body location combined with recovery dates to understand progress across the landscape. At Hooge Crater, concentration took place over seven or eight months in 1919. Concentration records tell us that the exhumation parties worked across the landscape, starting from just outside the city of Ieper (Ypres) and then moving east. They appeared to cover a section of land before moving over to an adjacent area. There was clear progression over the landscape, with minimal overlap between sections, demonstrating that search areas were not being chosen at random.

We can also see the high number of bodies recovered from some areas and the presence of clusters of remains. There are locations with over 20 sets of human remains in an area of less than 500 square yards. As well as clusters of graves, the records also show the concentration of small cemeteries; we can see that when graves were moved into a new cemetery, these bodies were kept together and buried next to each other.
The records also indicate a potential seasonal variation. Bodies recovered in March and April appear to have a higher identification rate than those found in August. This could be due to the hotter weather in August making the work more unpleasant, and therefore exhumation groups were not examining bodies as thoroughly as they would normally.

Finally, records support the claims that areas were searched on multiple occasions. However, graves from the same location, but found months or years apart, were not always transferred to the same cemetery. For example, the concentration records show that bodies recovered from an area searched in April and May of 1919 were transferred to Hooge Crater Cemetery. When the area was searched in October 1920 and additional bodies were recovered, these were sent to Vichte Military Cemetery for reburial, as this was likely to be the closest cemetery open for concentrated graves at the time.

**Conclusion**

The First World War saw the creation of state-sponsored war graves and war cemeteries on a scale never seen before. With grave registration being started by a voluntary organisation, it quickly came under the control of the British Army, reflecting the importance of burial within society. For the first time, all war dead would receive equal treatment in death and commemoration, which was a new and radical concept. With the end of the conflict, great resources were committed to the location and identification of the war dead, with staff of the DGRE going to considerable lengths to establish identifications in incredibly difficult circumstances. The processes involved in concentration were recorded and these records continue to provide insight into this work, which has received minimal attention previously.

The work started a hundred years ago continues to the present day, and while techniques have changed, the desire to provide a named grave for every individual discovered is still strong.

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The morning sun at the Menin Gate in Ypres. British and Belgian soldiers, and school children from both nations gathered for a special Armistice Day Last Post ceremony in the presence of Royalty at the Menin Gate in Ypres Monday 11 November 2013. Photo: Sergeant Adrian Harlen, Crown Copyright
Peter Stone OBE, Cultural Property Protection & Peace at Newcastle University, outlines the steps the new Cultural Property Protection (CPP) unit needs to take in order to mitigate the damage to cultural property during armed conflict.
The UK has recently taken major steps regarding the protection of cultural property during armed conflict.¹ In 2017 it ratified the 1954 Hague Convention on the Protection of Cultural Property in the Event of Armed Conflict, and its Protocols of 1954 and 1999, and passed the Cultural Property (Armed Conflicts) Act. This followed the 2016 announcement of the creation of a new, it is hoped tri-Service, Cultural Property Protection (CPP) unit to become operational in 2020/21.² The latter was prompted by a 2013 BAR article that identified the four times the Armed Forces need, rank and responsibility relevant, interaction with the heritage community regarding CPP (long-term; immediately pre-deployment; during conflict; and following combat during stabilisation).³ While this breakdown, originally written to focus the attention of the heritage community, is overly simplistic, especially within the context of military planning, it can easily be adapted to complement NATO’s more complex six-phase crisis management processes.⁴ The importance of CPP to the military has also been highlighted in a number of recent military-orientated publications.⁵

None of the above anticipates that armed conflict will suddenly stop having a detrimental impact on cultural property. In war, places and things get damaged and destroyed; non-combatants get killed. Most accept these as unfortunate but inevitable ‘collateral’ consequences of conflict. It should also be acknowledged that the major causes globally of destruction of cultural property are not

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¹ As defined in the 1954 Hague Convention http://portal.unesco.org/en/ev.php-ID=13637&URL_DO=DO_TOPIC&URL_SECTION=201.html If drafted today, the Convention would almost certainly use the more common, over-arching, term ‘cultural heritage’ rather than ‘cultural property’ - a more limited legal-based term (as, for example, in the 1972 Convention on the Protection of the World’s Cultural and Natural Heritage). However, the legal terminology of the Convention refers to ‘property’ and this article therefore uses cultural property to mean the tangible evidence of the past and, more unusually, confines the term ‘cultural heritage’ to refer to the intangible evidence of the past. This article only deals with the protection of cultural property.
⁴ See Rush, L. nd. Cultural Property Protection as a Force Multiplier, NATO Science for Peace and Security Programme, pp.35-8;
associated directly with armed conflict: urban expansion, increase in land under cultivation, and the development of agricultural-related technologies are all endemic pressures that together probably comprise the greatest threat to cultural property. However, armed conflict provides additional, extreme situations where significant, high profile, damage can, and does, occur. If the UK (or any country) is to take its responsibility to CPP seriously, as is implied for the UK given the activity noted above, efforts must be taken to mitigate these additional risks associated directly with armed conflict where relevant. This requires action to be taken in peacetime in preparation for conflict, and will need continuing senior military support and facilitation.

The Importance Of CPP To The Military

Cultural property (now more commonly referred to as cultural heritage) is the tangible evidence of the past that helps to provide communities with a sense of place, identity, and belonging: it gives people a reason for living. It is frequently an early casualty, and has recently become a particular target, in conflict. Intangible cultural heritage, held in songs, stories, traditions, is kept alive by and ‘in’ people. While no-one should prioritise CPP over the protection of people, the two are inextricably interwoven and can be targeted together: Where they burn books they will too in the end burn people. The protection of cultural property and intangible cultural heritage can also help communities re-establish themselves after conflict.

This article concentrates on the protection of cultural property which is important to the military for six reasons (here grossly over-simplified):

1. As noted above, cultural property (and intangible cultural heritage) provide communities with a sense of place, identity, and belonging. Take these away and communities can easily become fractured and less easy to support or work with during armed conflict or occupation.
2. CPP is a military responsibility under International Humanitarian Law and International Human Rights Law
3. Cultural property is frequently used for political ends during armed conflict and the military need to be aware of how such use might impact the battlespace
4. Failure to protect cultural property can lead to financial gain for opposing forces through its sale
5. Cultural property is a key element of cultural tourism that, in many parts of the world, post-conflict states may rely on for economic stability

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6 From the 1821 play Almansor by Heinrich Heine.
6. CPP may, through soft-power and as a force-multiplier, act as a positive contribution to mission success.7

Given these reasons, it is axiomatic that the military should take CPP as a serious responsibility.

The Seven Risks
It is suggested here that there are seven specific risks to cultural property during armed conflict:

1. it is not regarded as important enough to include in pre-conflict planning
2. through pillage/’spoils of war’
3. through lack of military awareness
4. as the result of collateral damage
5. through looting
6. through ’enforced neglect’
7. as the result of specific targeting.

By taking proactive action with respect to these, the overall risk to cultural property should be reduced significantly without distracting from (indeed perhaps contributing to) the overall mission objectives. Some of this activity will fall to the new CPP unit; but much will also depend on a force-wide acknowledgement of the importance and potential value of CPP to mission success.

Failure To Include CPP In Pre-Conflict Planning
During the Second World War CPP was seen clearly as part of the responsibility of the combatants and the Allies, and some elements of Axis forces, took this responsibility seriously.8 Unfortunately, little was done after the war to continue the work of these conscript-soldiers, and by 2003 few military forces retained anything other than a superficial expertise in, or commitment to, CPP as demonstrated depressingly by the massive loss of cultural property in Iraq. Culture, let alone CPP had played no part in the political planning of the 2003

invasion.\textsuperscript{9} As all in uniform know, for something to happen during conflict, a designated military unit needs to be given the specific responsibility. Without such allocation of responsibility, CPP becomes far more unlikely and the opportunity to use CPP as a force-multiplier lost.\textsuperscript{10}

**Pillage/’Spoils Of War’**

History is littered with examples of victorious armies pillaging the cultural property of the enemy they have just defeated as the ‘spoils of war’. Historically, many armies were paid in this way. However, for the past 2,500 years, military writers, from Sun Tzu in 6th Century BC China,\textsuperscript{11} to von Clausewitz in nineteenth century Europe,\textsuperscript{12} have argued that this is exactly the wrong thing to do. Not least as destruction and removal of a vanquished enemy’s cultural property, frequently makes occupied communities less easy to control and can provide, at least partial, justification for the next conflict. The irrationality of such action,

\begin{itemize}
\item \textsuperscript{9} Ricks, T, 2006, Fiasco: the American military adventure in Iraq, London, Penguin.
\item \textsuperscript{10} The Coalition response to the looting of the National Museum of Iraq in 2003 was, in the first instance, reactive: see Bogdanos, M, (with Patrick, W.) 2005. Thieves of Baghdad, New York and London, Bloomsbury.
\item \textsuperscript{11} Sun Tzu, 1998 edn., The Art of War, translated by T Cleary, Boston and London, Shambhala.
\item \textsuperscript{12} von Clausewitz, C, 1997 edn., On War, Wordsworth Editions, Ware.
\end{itemize}
and the responsibility of combatants to avoid such damage if possible and for
the victors to ensure the return of any cultural property removed in this way,
was established in the post-Napoleonic settlements in Europe, and later codified
as a military responsibility in the *1863 Lieber Code* during the American Civil
War. 13 Nevertheless, souvenir and ‘trophy collection’ is still a characteristic of
troops, and civilians, returning from conflict. While most countries now insist
on stringent searches of the baggage of all of those returning from theatre, such
personal pillage still exists and can have a serious impact on military relations
with local communities, and can provide negative international media coverage.
All deployed personnel need to be reminded of their obligations not to remove
CP from theatre and checks and searches of all returning personnel must be
mandatory.

**Lack of Military Awareness**
The loss of the relationship between the Armed Forces and heritage community
after 1945 led to a lowering of awareness by the former of their potential,
unintended, detrimental impact on cultural property. In Iraq, significant, and
totally avoidable, damage was done to the below-ground archaeology at the
Tentative World Heritage site of Babylon. 14 The positioning of a sniper unit in a
minaret in Samara resulted in significant deterioration in relations with the local
community and military casualties. 15 Both, and sadly many other similar, events
could have been avoided had the relationship between the heritage community
and military been maintained. An important task for the new CPP Unit must be to
partially fill this void and help rekindle this relationship.

**Collateral Damage**
A generally accepted ‘known’ is that cultural property is damaged and destroyed
through collateral damage. While this may well be the case on occasion it need
not be the norm. For most conflicts in the Middle East since 2003 the Blue Shield
has produced lists of cultural property that should be protected if possible. 16

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13 Miles, M, 2011, ‘Still in the aftermath of Waterloo: a brief history of decisions about
restitution’, in P.G. Stone (ed.) Cultural heritage, ethics and the military: Woodbridge:
Boydell, pp.29-42.
14 Curtis, J. 2004, Report on Meeting at Babylon 11th-13th December 2004. Available at:
15 Corn, G, 2005, “Snipers in the minaret-what is the rule?” The law of war and the protection
16 The Blue Shield is the international NGO created to advise UNESCO on CPP. See www.
theblueshield.org.
The drawing-up of these lists is fraught with complications, but they have been used by the military to augment existing no-strike lists. This was perceived as a great success by NATO during its 2011 air campaign in Libya. In particular, protection of the Roman farm at Ras Almargeb, where forces loyal to President Gadhafi, presumably hoping that NATO would take damage to cultural property into consideration, had parked a six-vehicle mobile radar unit next to the site, was seen as a significant success. The site was on the list of cultural places submitted to NATO and had been added to the no-strike list. As a result, NATO forces were able to plan the precise destruction of the military targets with very minimal shrapnel damage the Roman building. The very positive international media coverage of the operation led NATO to commission an internal report, published in December 2012, which recommended that NATO should … create a cultural property protection policy… As yet, this has not materialised, but a NATO-affiliated Centre of Excellence is under consideration that will include CPP, and a Bi-Strategic Command Directive for CPP is being drafted for Allied Command Transformation in Virginia for approval.

Looting
Looting of cultural property is an endemic problem in many countries across the world and is frequently controlled by established criminal networks. These gangs are well-funded and well-organised and thrive during conflict when normal constraints are removed. In addition, during conflict, looting by the local population tends to increase. This is a complex issue although there are some tentative general observations that can be drawn from recent conflicts.

First, and in particular relating to the looting of archaeological sites, much looting is carried out by local people who have lost their normal livelihoods, often, as in Iraq following 2003, as the result of the removal of their primary customer - the government. Farmers who cannot sell, or in some situations even grow, their normal produce turn, where the option is available, to harvesting antiquities instead - usually selling them to local criminal dealers for a fraction of their final value. Such looting is facilitated as the loss of normal government means that site guards are unpaid and therefore often absent. These are known problems that could be addressed at the planning stage of an operation.

Second, looting of museums, libraries, archives, and galleries is an extremely complex activity. During the 2003 looting of the National Museum in Iraq there were a number of very different activities going on at the same time including: the search for information about family members and others who had disappeared under the Saddam Hussein regime (as a government building the museum was seen as a potential source of such information); the looting of computers, electrical appliances, furniture, and other items; the removal by some of artefacts, either as genuine acts of safekeeping or ‘in the heat of the moment’, that were returned later; opportunist looting; and professional looting. None of this can be condoned, but to combat looting its complex nature needs to be understood in order to plan to police it.

At the bottom line, however, is an increasingly clear relationship between looting and the funding of those involved in the fighting. The looting of cultural property has been a definite income stream for the so-called ISIS which acts as a major international criminal enterprise in the same way as the Mafia. While much has been written of the value of this trade, no-one, other than ISIS, has any firm idea as to its actual financial worth. What can be said with some confidence is that the trade is a, probably significantly, smaller part of ISIS income than the sale of oil and gas, and less than the income derived from hostage taking and general taxation. Nevertheless, it is an income that provide funds to purchase weapons and ammunition, and deployed forces need to appreciate the importance of actively combatting the phenomenon.

**Enforced Neglect**

By its very nature cultural property is a fragile fragment of the past that needs constant, careful attention and conservation. During armed conflict normal life is put on hold for obvious reasons. Cultural property staff may not be able to visit sites or get to their institutions. The routine maintenance, management, conservation, and preservation of cultural property is all too frequently interrupted. Historic sites and buildings need constant maintenance and without it can rapidly fall into ruin. Delicate museum objects, archives, and books, all need to be kept in precise environmental conditions that are frequently interrupted by conflict. Others require treatment by chemicals that are often impossible to obtain during conflict or under sanctions. All contribute to the deterioration of cultural property. The raising of awareness of this risk and facilitation of access to sites, museums and other cultural institutions, as well as access to critical chemicals and materials, will be another role for the new CPP Unit.

**The Result of Specific Targeting**

The appalling, deliberate, and calculated destruction of cultural property by the self-proclaimed ISIS provoked a reaction of horror amongst the media and general public across the rest of the world. ISIS, and other such extremists, destroy cultural property for numerous reasons, but three are perhaps key. First, some truly believe it is their religious duty to destroy all remains of the past that they

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regard as idolatrous. While this may be an extremely difficult belief for many to comprehend, it should not be forgotten that very similar destruction took place across Europe during the Reformation - in Spain Islamic sites were targeted, reused, or destroyed and Arabic books burnt. This is not meant in any way to legitimize what is happening today or see it as anything other than an appalling crime against our common heritage. However, it should not be forgotten that specific targeting is not a new phenomenon; to treat it as a particular trait of extreme Islam simplifies a complex situation and fans general mistrust through misrepresentation. Second, the destruction of cultural property is an important double-edged propaganda tool. On one hand it is used to upset, ridicule, and emasculate the international community who deplore the destruction, but who are powerless to protect cultural property; on the other it is deployed as a recruitment tool, encouraging those young people disillusioned by the decadent ‘Western’ norm to flock to the ISIS cause. Third, not everything is destroyed and, as noted above, income from the sale of looted antiquities helps propagate the conflict.

Little can be done when sites and cultural institutions fall under the control of extreme groups during conflict. However, national and international law is increasingly being used following conflict to prosecute and convict the perpetrators of such crimes.\footnote{Eg. for the shelling of Dubrovnik http://www.icty.org/x/cases/miodrag_jokic/cis/en/cis_jokic_en.pdf; for destruction of cultural property in Timbuktu https://www.icc-cpi.int/mali/al-mahdi.}

A clear role for the military is collecting evidence in-theatre for use in such prosecutions as a contribution to efforts to show such crimes will be punished.

**Mitigating the Risks and Adding Operational Value**

Political and military awareness of the importance of CPP has grown significantly since 2003. A number of UN Security Council resolutions highlight the importance of CPP,\footnote{Eg. 1483 (2003); 2199 (2015); 2347 (2017); and 2368 (2017).} and regular military conferences that address CPP have been instigated, including the European *Coping with Culture*\footnote{www.innerefuehrung.bundeswehr.de.} and the UK’s *Culture in Conflict*.\footnote{https://www.cranfield.ac.uk/events/symposia/sskw.}

On a more practical level the UK now joins Austria, the Netherlands and others by (re-)creating a CPP unit, amongst which Italy’s Carabinieri Command for the Protection of Cultural Property sets the highest standard.\footnote{Rush, L. & Millington, L.B., 2015, *The Carabinieri Command for the Protection of Cultural Property Saving the World’s Heritage*. Woodbridge: Boydell.} These units are where the relationship between the military and heritage community can be re-established.
to mutual benefit and where the mission-related importance of CPP is nurtured. Acting as a bridge, the Blue Shield has trained, amongst others, the UK’s 77 Brigade and Defence Cultural Specialists Unit, and added CPP elements to the 2018 USAF Blue Flag and NATO’s Trident Jaguar exercises. However, while the Blue Shield can help, the real burden of responsibility for implementing effective CPP lies with the Armed Forces. In order to reap the military benefits of CPP, its value needs to permeate military education, training, and all functions across operational activity.
Peter Stone OBE, is the UNESCO Chair-holder in Cultural Property Protection & Peace at Newcastle University, UK. He is the Vice President of Blue Shield International, and Chair of the UK National Committee of the Blue Shield. In 2003 he was archaeological advisor to the UK MoD during the invasion of Iraq.
Captain Neil Verrall, a human domain specialist and Specialist Reserve Officer (SRO) with Specialist Group Military Intelligence (SGMI) seeks to highlight some of the prime movers that will shape, influence and impact human behaviour in the not too distant future, if not already to some degree; and which military thinking, training, research, planning and capability must consider and address for future operations.
It could be argued that popular interest in psychology and behavioural science has become mainstream. The beliefs, attitudes, emotions and behaviour of people are now part of regular discourse in many aspects of human life - social, political, economic, work, welfare, health, sport and popular culture. The contemporary ‘watershed’ moment for this will always be open to debate, but it is suggested here that it entered wider social consciousness with the reality television show *Big Brother* in 2000, which was the catalyst for an entire genre of television programmes. Books such as *Freakonomics*¹ (published in 2005) stimulated interest in the field of behavioural economics, which in turn spawned a genre of popular readership in psychology with books on topics such as nudge theory,² heuristics and biases,³ irrationality,⁴ consumer psychology,⁵ online persuasion⁶ and even the odd Black Swan.⁷

An improved understanding of human behaviour is increasingly central to policy makers whereby policy is written as *plans for action* that seek to guide future decisions. The level of understanding of human motivation and behaviour has progressively changed from one that viewed humans as rational actors, who employ critical thinking to make decisions based on plain facts and outcomes, to a view that recognises humans as a complex organism that makes decisions whilst being influenced by impulse, emotion, experience and uncertainty on a conscious and sub-conscious level. Which is to say that the human brain is designed for efficiency and not for optimisation; therefore, efficiency allows one to operate and make sense of daily events and activities, but it is not perfect, and can often seem irrational and unpredictable, i.e. ‘*why would someone do that?’*

**Fighting Power and The Vagaries of Human Nature**

Within a military context the concept of ‘*know thy enemy*’ has been a key requirement for military success; often stated by respected military generals and leaders throughout history; for example, the warrior-scholar GFR Henderson⁸

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refers to Hannibal’s biographer who quotes Hannibal as saying that:

> It is to be ignorant and blind in the science of commanding armies, to think that a general has anything more important to do than to apply himself to learning the inclinations and character of his adversary.

This insight is part of what UK Defence Doctrine (JDP0-01\(^9\)) refers to as the human component of fighting power, which asserts that:

> Fighting power may be enhanced by applying scientific expertise relating to the social, psychological and behavioural aspects of human behaviour. Understanding group dynamics and people’s motivations supports assessments of likely behaviour in complex situations (p.26)... when assessing the situation our commanders must understand the context in which they are applying fighting power (p.27).

In order to support fighting power JDP0-01 identifies several areas that require socio-cultural and socio-technical understanding in order to address ...the vagaries of human nature...(p.27) that shape the likelihood of success on operations:

- The character of the situation.
- The environment.
- The opponent.
- Allies, partners and other agencies.
- Culture and history.

All that said, lessons from history have consistently shown that understanding the enemy and/or local populations has been poor or non-existent at times; the most modern lesson being the 2016 Iraq inquiry (aka The Chilcot Report).\(^{10}\) The contemporary and future requirement not only requires a knowledge of the enemy (RED forces), but also our coalition friendly forces (BLUE), our indigenous partner forces (GREEN) and the indigenous/regional populations (WHITE), which is broadly accomplished by Target Audience Analysis (TAA), human terrain analysis, social network analysis, information environment analysis, and other related techniques.

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It is also worth noting that conceptual military thinking is not dormant in this futures-looking area, and the Developments, Concepts and Doctrine Centre (DCDC) have produced several useful documents that have attempted to understand the future environments in which military force and/or capability will be brought to bear,\(^{11}\)\(^{12}\)\(^{13}\) although this current paper attempts to delve deeper into the human and behavioural implications.

**Populations**
There are two dominant issues when one considers future global population - growth and movement.

**Growth:** According to the United Nations World Population Prospects\(^ {14}\) the global population will have grown to over 8.5 billion by 2030. The popular statistician Hans Rosling predicted that global population growth will plateau at approximately 11 billion. The rationale being that people may be living longer

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\(^{11}\) DCDC. (2010), *Future Character of Conflict*. Shrivenham: DCDC.
\(^{12}\) DCDC. (2014), *Global Strategic Trends – Out to 2045*. Shrivenham: DCDC.
\(^{13}\) DCDC. (2015), *Future Operating Environment 2035*. Shrivenham: DCDC.
due to better medicine, health and lower child mortality, but they are also having less children; therefore, as successive generations age their numbers will slow due to lower child rates. This is already being evidenced in developed nations through analysis of changes in their population pyramids, demonstrating changes in internal distributions for specific national populations, such as ‘youth bulges’; and many of these pyramids are set to change in the coming years/decades as their pre-reproductive (0-14), reproductive (15-44), and post-reproductive (45 and up) categories grow and shrink due to population changes. The implication is that wherever the military find themselves operating in the future it is likely to be a busy place.

**Movement:** People are moving around more now than in any time in history. This includes voluntary migration as well as forced migration. Migration research has tended to look at the push and pull factors that influence the decision to migrate, which is often a balance between cost versus benefit, and risk versus reward. It is fair to suggest that push factors tend to be in reaction to events (e.g. social and cultural upheaval, economic depression, persecution, war and conflict or environmental change), whereas pull factors tend to be volitional based on opportunity (paid work, welfare support, more open society or education). Naturally, the decision to migrate is a complex interaction of political, social, environmental and economic factors that has been described as the *complexity of mixed migration motivations*, and research into the psychology of migration suggests motives such as exploration, social mobility and life enhancement, escaping, and financial betterment.

The majority of the published peer-reviewed research on immigrants/migrants and immigration/migration relate to the reaction of, and impact upon, the target country and its various communities towards immigrants, as well as immigrant acculturation once they reach their destination. This was evident from the reactions to the migration events in the Mediterranean Sea in 2015, which led the Economic and Social Research Council to fund the Mediterranean Migration Research Programme.


Additionally, findings from the National Geographic’s Genographic Project suggest that big migratory events in human history have been strongly influenced by shifts in climate. Furthermore, the project predicts that current climate events such as desertification and rising sea levels will force millions (if not hundreds of millions) of ‘climate refugees’ to move. Not only that but there is a general trend in developing nations to move from rural areas to urban cities. This movement from the rural to urban is also supported by the UN World Population Prospects who predict that over 60% of the world’s population will be living in cities (and mega-cities). However, migration is not a one-way phenomenon and research\(^{18}\) has identified that factors such as disillusionment, disappointment, and a shifting cultural identity influence peoples’ decisions to return to their country of origin (if they can).

Finally, policies, strategies and Tactics, Techniques and Procedures (TTPs) need to make sure that they do not create or facilitate unintended consequences such as smuggling; and one must bear in mind that the conditions and motivations that drive people to migrate (whether voluntary or forced) are powerful, and the beliefs, attitudes and behaviours that are associated with migration need to be carefully considered as they will range from the positive and prosocial (joy, enthusiasm), to the negative and antisocial (fear, anger, desperation, criminal). Therefore, for strategic planning assumptions it would not be unfair to suggest a scenario where the deployed force finds itself in an urban megacity of 15-30 million inhabitants, who are comprised of multiple cultural demographic variables and who are thinking, communicating and behaving in a myriad of ways, not only in the physical space but also in the internet-enabled online and cyber domain. Therefore, it looks as though Krulak’s ‘Three Block War’\(^{19}\) concept may need a dust down and wider consideration.

**Social and Political Landscape**

Modern Western liberal democracies tend to be socially flatter and less hierarchical than they were historically, resulting in a society that is less reverential of authority. These societies also tend to possess wider access to education, including social and political awareness, as well as being digitally connected via the internet, which provides them with a platform for giving,

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receiving and sharing opinion and discourse. This emboldens ‘the people’ with unprecedented empowerment and confidence to engage with, and challenge, perceived authority. In essence, societies become hierarchically flatter and louder. This frightens hard-line leaders, dictators and despots, which is why a clamp down on the internet is evident in countries across the Middle East, Asia and Africa where an open, fair and transparent democratic process is a threat to political leaders. However, as the ability to be online becomes ubiquitous and the ways of receiving it ever more varied, controlling governments will struggle to maintain control without resorting to pressure and violence - this was evident with the Arab Spring in 2010. Typically, governments are one step behind technological and societal change, and we are likely to see increasing dissent, particularly in autocratic and/or developing nations, as education, awareness and connectivity become a force multiplier for socio-political change.

Unfortunately, as well as providing people with a platform for giving, receiving and sharing opinion and discourse, the internet has created a climate where people are increasingly unsure of what to believe as truth and fact.\(^\text{20}\) This has given rise to neologisms such as ‘post-truth’, ‘alternative facts’ and ‘fake news’; therefore, people are struggling to cope with information overload and cognitive uncertainty, which has driven them to rely on individual interpretation of what they feel to be true or wish to be true rather than spend endless cognitive effort trying to establish the objective truth. This feeling rather than knowing approach is rationalised as being more authentic than the often-bland opinions of experts, especially if the expert opinion challenges or contradicts one’s pre-existing beliefs. It is felt that this form of post-modern neo-scepticism will play out for many years, especially as the global population grows from seven billion to 11 billion, with one million people a day becoming connected to the internet every day for the foreseeable future.

Regardless if it is a cause or product of a flatter and louder society, one of the issues is a growing mistrust of politicians, ‘elites’, prosaic experts and the traditional media, which has allowed a fragmented and alternative media space to emerge. This, along with being globally connected via the internet, acts as an echo chamber of confirmation bias and group polarisation for people of like-minded socio-political and socio-cultural persuasions (i.e. homogeneity); for example, alternative media platforms such as Breitbart, InfoWars, Huffington Post, Wikileaks and the Drudge Report to name but a few. This has also given rise to popular anti-establishment conspiracy theory sites, such as QAnon, which has gained speed of followership in the USA since late 2017.

Individual Identity

One issue that is taxing politicians and policy makers is understanding what people want politically and socially. We live in an unparalleled time in history where populations in liberal democracies possess unrivalled freedom and choice; however, this has so far not led to Utopia. It appears that the more choice and freedom one has, the more vexed and confused one becomes.

Individual identity has become a topic of great debate. Although ‘identity politics’ is not a new term, its current use reflects the increasing fractionation of demographic categories within society (e.g. race, gender, sexuality, religion, ethnicity), leading some to ask where this will logically end because as sub-categories continue to grow then policy becomes about increasingly narrow group interests at the expense of broader political movements.21 This is a complex issue because various fractionations could appear to be supporting others, competing

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with others or even contradicting others; for example, personal views on national identity (nationalist and isolationist) may conflict with sexual identity (diverse and inclusive), which may also compete with economic identity (free markets), and conflict with social identity (support state schools and the NHS) - in other words, the ‘complex me’. This plays havoc with theories of homogeneity such as ‘homophily’\(^{22}\) (whereby people are more likely to associate with those similar to themselves) because the increased fractionation of individual identity means that ‘belonging’ could be a multitude of concepts and categories that is of personal relevance to the individual, as evidenced by the LGB community who are now the LGBTQIAPP+ community.

A useful theory in social psychology that may help to understand this phenomenon better is Identity Fusion Theory,\(^{23}\) which seeks to understand and explain the interplay between personal self (individual) and the social self. Previous social psychological theories tended to emphasise the role and impact of the social collective at the expense of the individual, however, Identity Fusion Theory suggests that the individual is as important to identity as the social, and that both identities can operate together. Furthermore, the theory suggests that the composite strength of both aspects produces stronger bonds with the social group to which one identifies, therefore, seeing others as ‘family’ as opposed to just ‘other group members’. Because of these stronger ties to group members, research has shown that highly fused individuals are more likely to endorse or commit more extreme attitudes or behaviours. This finding has important implications when trying to understand and counter adversarial groups and violent extremist organisations.

Finally, an interesting implication for these social and individual issues is how they will translate for societies that have not had the privilege of decades or centuries of openness and opportunity. According to Freedom House\(^{24}\) this equates to 25% of the world (49 countries) who are classified as not free, and 35% (69 countries) who are classified as partly free. After all, if free and open societies still have to deal with the psychological implications of social and technological change, then how will societies that have been previously closed react when given more freedom or when they take freedom by force? This postulation is important

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for the military, because these will tend to be the environments the military deploy into because instability and conflict may be the result of change.

**Technology**

Another neologism often cited in Defence is that of ‘disruptive technologies’, which broadly means how a new technology leaps ahead and usurps a previous technology. A good example is the android phone, which has ‘disrupted’ traditional mobile phones, cameras, GPS, laptop PCs, televisions and a host of other technologies, because all of these (and more) are possible on a single android phone. When discussing the human aspects of technological change, it is best to talk of adaptation (how technology changes) and adoption (how and when people start using it). Adoption is of particular interest because the speed of adoption (how quickly people start using it) and the scale of adoption (how many people use it) tends to predict how behaviour will emerge or change. This is evident from the facts and figures often given in the socionomics videos on YouTube.\(^{25}\) which provides insight into human interaction with the internet and how behaviours have both emerged and changed.

Looking at big picture technology the MOD Science and Technology (S&T) Capability Strategy\(^ {26}\) highlights eight multi-use technologies that should inform thinking and investment in science. Three of these are highly related to the issues discussed in this paper - big data, agri-science and robotics and autonomous systems. Additionally, the University of Oxford’s Future of Humanity Institute attempts to ask big picture questions and shed light on crucial considerations that might shape humanity’s long-term future; many of these are technology oriented.

A large interconnected area worth dipping into involves the interplay between ubiquitous connectivity, the internet of things (IoT), and behavioural analytics. All three of these possess both opportunities and challenges for supporting the human component of fighting power. Among a steadily growing global population it is estimated that one million people a day (every day) connect to the internet for the first time, mainly in developing countries, and via mobile phones.\(^ {27}\) One would think that digital companies would be content with this, but they are constantly addressing the question of how to ‘connect the last billion’. On top of this is the IoT, which interconnects internet-enabled computing devices

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\(^{25}\) Socionomics 2018 https://www.youtube.com/watch?v=2IcpwISszbQ accessed 31 August 2018.

\(^{26}\) MOD, 2017, MOD Science and Technology Strategy (December 2017).

embedded in everyday objects (e.g. vehicles, fridges, cookers, heating), mobile phones and local-national systems (e.g. street lighting), thereby enabling them to send and receive data for subsequent analysis. Lastly, and thanks to the Chilcot Report and the Butler Review, assumptions are out and improved analytics are in. The need to improve our information and intelligence analyses also means extending this to our understanding and analyses of human behaviour; that needs to be in context and up-to-date. This is necessary to achieving military objectives, be they kinetic or non-kinetic, as they will be involved in the full-spectrum targeting process to estimate the probability of success as well as consideration of unintended consequences.

These three issues possess a double-edged sword for the human component of fighting power. On one edge the ability to access this data greatly improves our ability to find, understand, collect, monitor, assess and evaluate adversaries and target audiences; and by being able to do this we out-think, out-decide and out-act our opponent(s). On the other edge, we could be open to the same ‘data leakage’, which gives a smarter, technically-astute adversary the ability to ‘out-know’ us.

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The trick, therefore, is to use such opportunities as a tailwind rather than suffer it as a headwind, and this is where information manoeuvre, information advantage and agility come into play.

**Half-time Precis**
The prime movers discussed above suggest juxtaposition for human behaviour. On one hand individuals and societies have voiced growing distrust and anger about hegemonic institutions and systems, shouting a desire for change; however, they are also voicing apprehension and concern about the uncertainty that change will bring – because the voices are numerous and disparate, and not unified or organised. Therefore, emerging human behaviour may not just be about the fusion of individual, social, political, technological and geographical factors, but also typified by confusion of cause-and effect factors, as well as push-and-pull factors. Consequently, social and individual factors are increasingly seen as shifting sands of beliefs, motivations and behaviours.

Humans fight for many reasons and it is hoped that the four prime movers above start to explain how human-centric issues related to change, uncertainty, competition and struggle, which can lead to instability and conflict; especially when behaviour is a reaction to events forced upon one rather than volitional and a matter of choice. The prime movers also shape the environments that the military will be faced with, and which have been varyingly described as volatile, uncertain, complex and ambiguous or as congested, cluttered, contested, connected and constrained, and also as crowded, complex and coastal. So, what do these prime movers and their behavioural implications mean for military capability?

**Challenges for Military Capability**
If the human component of fighting power is to remain vital to military performance, then we must recognise and address the challenges (as well as maximise the opportunities). Here follow three key challenges that the military must address:

**Challenge One: The issue of granularity and fidelity:**
As highlighted by the prime movers above, the socio-political world order has

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30 DCDC, (2010), Future Character of Conflict, Shrivenham: DCDC.
shifted, so has digital technology - these have undoubtedly influenced human behaviour. This means that the current capabilities for conducting Target Audience Analysis (TAA), human terrain analysis, social network analysis and information environment analysis are already behind the curve; just as the military had begun to get its head around these issues after operations in Iraq and Afghanistan. The growing requirement for wider inclusion and deeper analyses of socio-individual factors (as espoused by Identity Fusion Theory and identity politics) means that TAA and human terrain analysis are too cumbersome as techniques, as they do not currently possess the fidelity and finesse to accommodate future insights into target audiences and their behavioural antecedents and mechanisms. Given this observation it could also be argued that relevant doctrine is also out of date, for example, JDP-04 Understanding\textsuperscript{32} and Joint Doctrine Note 4/13 Culture and Human Terrain,\textsuperscript{33} which may both require a rescrub given the discussions in this article. Therefore, the level of

\textsuperscript{32} DCDC, (2010), Joint Doctrine Publication 04 – Understanding.
\textsuperscript{33} DCDC, (2013), Joint Doctrine Note 4/13 Culture and Human Terrain
granularity required to reduce the vagaries of human nature, thereby improving and increasing fighting power, is now greater than ever.

**Challenge Two: The paucity of research and development funding:**
The need for human-centric understanding and capability can be linked to three areas mentioned in the MOD’s Single Department Plan.34

- Defend and contribute to the security and resilience of the UK and Overseas Territories against state and non-state threats,
- Conduct overseas defence activity, and
- Project our global influence.

One of the largest challenges to Defence achieving these aspirations is the woefully small amount of research funding to support them. The MOD Chief Scientific Advisor’s non-nuclear research budget, as owned by the directorate of Defence Science and Technology, is approximately £380 million per annum, and shrinking every year. Within this budget approximately 97-99% is spent on hardware, ie. platforms and systems across space, air, land, above water, underwater, cyber and Information and Communications Technology (ICT); which suggests that 1-3% is spent on dedicated human-centric interests, such as Influence and Non-Kinetic Effects or Future Workforce and Human Performance. Even if the smatterings of other ‘human stuff’ were accounted for within the other 21 non-human-centric research programmes managed by the Defence Science and Technology Laboratory, it would still only account for approximately 5% of annual funding. This highlights a glaring mismatch between words and deeds whereby ‘people’ issues are identified as one of eleven strategic S&T capabilities within the MOD’s S&T Capability Strategy, and where an improved understanding of socio-cultural and socio-technical behaviour of adversaries, potential adversaries and a range of target audiences is central to overseas defence activity and the projection of influence.

**Challenge Three: ‘Safe to fail’ opportunities:**
Opportunities to test and train the human component of fighting power exist, e.g. exercises, table-top exercises and wargames. However, the human-centric issues have not historically been a primary area of focus and they often lack sufficient pre-event preparation in terms of scenario development, in both quality and quantity. This has meant that activities such as TAA, cultural understanding and information environment analysis have been woefully poor or non-existent on

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34 MOD, (2018), MOD Single Department Plan (updated 23 May 2018)
exercises. Therefore, if one seeks to achieve information manoeuvre or information advantage in the real world then one must design and test such requirements in safe to fail opportunities. The two key challenges for accomplishing this are:

- Appropriate funding and time to allow for the design and development of human-centric information;
- The employment of Suitably Qualified and Experienced Person (SQEP) Subject Matter Experts (SME) to help create such content.

In essence, this means getting the right people in to create the content, and giving them enough time and money to do a good job.

Another issue is the ability to allow staff to fail rather than contrived success in order to justify the spending. Participating staff (at all levels) are generally unwilling to take risks and subsequently learn from failure because of the potential implications for staff annual reporting. Personnel must be empowered, if not encouraged, to try, and if they fail then to understand why they failed and how to improve. Surely it is time to get back to training and exercises as learning opportunities and not as programmatic and financial box ticking events? One appreciates that these opinions might be accused of being naïve and lacking the strategic insight of MOD as a bureaucratic government organisation, but one also feels one step away from being told It can't be done, and that's just the way things are, which would be a sorry state of affairs for all concerned.

According to UK Defence Doctrine (JDP 0-01) one of the aims of the conceptual component of fighting power is to ...provide the intellectual basis for our armed forces... (p.28). On this matter, and the matter of military learning and education, it is worth invoking the spirit of another warrior-scholar, Field Marshall Earl Wavell, who, when writing about the conceptual component of soldiers and soldiering35 (in 1953), which he referred to as ‘Minerva’s Owl’, sent out a clarion call for the British Army to be a school of character as well as learning, whereby daring, initiative and ingenuity must be inculcated within the army’s psyche. Yet Wavell lamented this because he claimed that despite the military merely talking about it, it was seldom taught or exercised – a classic problem of the deeds not matching the words.

One thing is clear, if people don’t have the opportunities to take risk and learn from exercises and other ‘safe to fail’ training environments then they won’t have the confidence to employ them on operations, especially with the increasing prevalence of real-time and retrospective legal action; and if they don’t employ

them on operations then this undermines fighting power and the probability of achieving military objectives and overall success.

Summary
The big trends in humanity are creating a perfect storm for subsequent human behaviour. The complexity of population dynamics, societal changes and individual identity, all of which is enabled through rapid technology advances will bring challenges and opportunities for military capability, which will in turn, possess implications for the human component of fighting power. Perhaps, by investing in, developing, testing and operationalising human-centric research and capabilities that address the socio-cultural and socio-technical aspects of human behaviour, one can start to reduce the ‘vagaries of human nature’ that will be an enduring part of warfare, and which will only get more tangled as we consider the very human issues of uncertainty, competition and struggle that lead to instability and conflict - at whose centre the military will find itself deployed.

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