

An international multidisciplinary workshop

*“Hitting the Target?”*

# How New Capabilities Are Shaping Contemporary International Intervention

cii - The Centre for International Intervention, School of Politics

12 - 13 July 2012

PROGRAMME



*There Is Nothing Like A Drone*, Image courtesy by Carl Gopalkrishnan, Perth, Western Australia

# Hitting the Target

## About us

### cii – The Centre for International Intervention, School of Politics “Making Sense of International Intervention”

cii – the Centre for International Intervention at the University of Surrey – is a new initiative designed to provide critical scrutiny of the range of interventions used in international relations today. These include developmental projects situated within peace building/ state building operations in conflict-affected and “fragile” states, military intervention and humanitarian assistance in situations of extreme crisis, and ‘softer’ forms of intervention such as mediation and diplomacy. cii’s purpose is to develop an in-depth, solid, understanding of how interveners conceptualise, rationalise, and operationalize their interventions, of the response from recipient communities, and of the consequences for both. It undertakes this task with the aim of enhancing both academic and practical understanding of intervention.

cii provides a forum for the exchange of ideas, research, and data to enable local and international stakeholders from diverse fields and backgrounds to “make sense of international intervention” in line with the above perspective. It achieves this by carrying out innovative multi-disciplinary research into theoretical and practical dimensions of international intervention, developing strong collaborative links with other institutions involved in the study and practice of intervention, and organising workshops and conferences aimed at feeding back insights to relevant bodies and to inform future research in the area. This is done by producing briefs for different audiences including academics, policy-makers, the military, NGOs, and the corporate sector.

[www.surrey.ac.uk/cii](http://www.surrey.ac.uk/cii)

## Our sponsor



### The Institute of Advanced Studies

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*“You can’t say that civilization don’t advance, however, for in every war they kill you in a new way.” Will Rogers*

We are delighted to welcome you to this workshop, hosted by cii – the Centre for International Intervention – at the University of Surrey. How can behavioural and social scientists help engineers and physical scientists understand and address the implications of new technologies for the people who use them and the people who are affected by them? What responsibility, if any, do the inventors and developers of technology have for the social and ethical consequences of its use? How does our society ensure that policy and legal frameworks remain abreast of new capabilities, rather than lagging behind them?

These questions could no doubt be asked of any area of technological innovation. This workshop looks specifically at the capabilities provided by technological advances in the area of so-called “precision strikes”, whether they be from conventional weaponry or unmanned aerial systems (UAS), now colloquialised as “drones”. It examines the political, military, behavioural, legal, and ethical implications of these new capabilities and asks whether - and if so how - these are reshaping approaches to international intervention. What exactly do these new capabilities amount to? Do they constitute a new Revolution in Military Affairs (RMA) and what implications do they have for the way wars are perceived and fought? Do they give foreign policy makers a significantly different range of options to choose from and how is the risk/reward calculus affected? What are the constraints from international law, is the law observed, and is there international consensus about this? What effect does the remoteness of UAS have both on those who operate the system and those who live in communities “on the receiving end”? Is the risk of collateral damage adequately understood and mitigated? Is due weight accorded to the counting and recording of casualties? Are accountability mechanisms clear? Can the new technology be used to minimise harm and improve civilian protection, and under what circumstances?

These and other challenging questions will form the subject matter of our workshop. Our keynote speakers and our panellists will present their ideas to stimulate debate. An invited panel will consider similar issues but from the perspective of technological advances in other areas, and an innovative poster display will help convey the subject matter of the workshop to a wider audience. We will certainly have a lively and enjoyable two days and we intend that from this should flow ideas for collaborative research programmes across disciplines, geographies, and the academic/practitioner divide. We would like to thank the Institute of Advanced Studies for its sponsorship of the event; we also thank you for your participation and we hope you enjoy the workshop.

## Organising Committee

*Professor Sir Mike Aaronson  
Dr Tom Dyson*

*Dr Wali Aslam  
Dr Regina Rauxloh*

*With thanks to Mirela Dumic for her assistance and support.*

# Hitting the Target

## Programme

Day 1: 12 July 2012 University of Surrey, Guildford

School of Management (Room 32MS01)

0815 – 0900 Registration and Coffee (MS Foyer)

0900 – 0915 Welcome from Professor Sir Mike Aaronson, cii Co-Director and the Vice Chancellor Professor Sir Christopher Snowden

0915 – 1015 Keynote

**The political and strategic consequences for NATO of the evolution in the way wars are perceived and fought**, Jamie Shea, NATO

Chair: Mike Aaronson

1015 – 1045 Coffee (MS Foyer)

1045-1215 **PANEL 1**

**Theorising the Drivers and Consequences of Precision-Strike Capabilities**

Anna Maria Brudenell: *Influencing leadership behaviour*

Tom Dyson: *Europe's selective emulation of the RMA: Explaining convergence and differentiation*

Caglar Kurc: *How military technology became a tool for justification for military interventions*

Paul Schulte: *What we do if we are never going to do this again: Western counterinsurgency choices after Iraq and Afghanistan*

Chair: Ciaran Gillespie

1215 – 1330 Lunch

1330 – 1500 **PANEL 2**

**The Psychological and Cognitive Implications of Precision-Strike Capabilities**

Margaret Cooper: *The principle of proportionality in the law of armed conflict: Fuzzy logic – a methodology for information overload*

Adrian Banks and Mandeep Dhani: *Applying psychological models to military decision making*

John Davis: *Simulation of network enabled weapons and SPEAR strike capabilities*

Nicola Power: *Call of duty (for psychological research): Modern warfare, the human operation and the intervened upon*

Chair: Lou Perrotta

1500 – 1530 Coffee (MS Foyer)

1530 – 1700 **PANEL 3**

**Precision Strikes, Protecting Civilians, and Counting the Cost**

Wali Aslam and Ciaran Gillespie: *US drone strikes in Pakistan and political appropriation of casualties in threat construction*

Jacob Beswick and Elizabeth Minor: *Casualty recording as an evaluative capability*

Gregory McNeal: *The US practice of collateral damage estimation and mitigation*

Chris Woods: *Covert drone strikes and the fiction of zero civilian casualties*

Chair: Jack Holland

1700 – 1800 Reception and Poster Exhibition (MS Foyer)

1800 – 2230 Dinner (Kingham's Restaurant, Shere village). Transport organised.

## Day 2: 13 July 2012 University of Surrey, Guildford

### Oak Suite

0830 – 0930 Keynote

**Preventive military action and the politics of US norm revisionism**, Jason Ralph, University of Leeds  
Chair: Roberta Guerrina

0930 – 1000 Coffee

1000 – 1130 **PANEL 4**

### **The Legality of the Use of Drones in International Law**

Adam Bodnar and Irmina Pacho: *Potential application of the European Convention for Human Rights to the use of drones in conflict zones by armies of the Council of Europe's states*

Anthony Gillespie: *How can we develop legal and autonomous unmanned aircraft?*

Ulf Haeussler: *The utility of legal frameworks for regulating the use of drones*

William Henderson: *Character, gravity and scale: When does intervention become the crime of aggression?*

Chair: Regina Rauxloh

1130 – 1200 Coffee

1200 – 1300 **ROUNDTABLE**

### **Social and Ethical Dimensions of New Technology**

David Carey (University of Surrey) – *Everyday applications and perspectives from nanotechnology*

David Frohlich (University of Surrey) - *Understanding the relationship between producing and using digital technology*

Bryn James (Defence Science and Technical Laboratory) – *The uses of technology in defence*

Udesh Naidoo (Frimley Park Hospital) – *Advances in technology and medical intervention*

Chair: Phil Powrie

1300 – 1345 Lunch

1345 – 1515 **PANEL 5**

### **The Tactical, Operational and Strategic Potential of Precision-Strike Capabilities**

Stuart Gordon: *"Predators for Peace": Drones, civilian protection, and the humanitarian community*

Armin Krishnan: *Precision strikes against high value targets: Assassination and foreign policy*

Tobias Ruettershoff: *Terrorising terrorists: The targeted killing of terrorists on foreign soil – legal and political aspects*

Conway Waddington: *The moral questions of point and click killing*

Chair: Chris Woods

1515 – 1545 Coffee

1545 – 1645 Keynote

*Reflections on the issues raised by the workshop*, Geoff Loane, ICRC

Chair: Theofanis Exadaktylos

1645 – 1700 Closing remarks - Mike Aaronson

# Hitting the Target

## Abstracts - Keynotes

**Jamie Shea, Deputy Assistant Secretary-General, NATO**

**The political and strategic consequences for NATO of the evolution in the way wars are perceived and fought**

Unmanned warfare devices may change the way wars are perceived and fought. Conflicts may no longer be man-to-man battles and may become more and more robotized ('robotic warfare'). The level and nature of casualties and damages during warfare could be dramatically different if it becomes possible to wage a war and to conduct hostilities almost without any human intervention. Most likely, technological innovation will soon prompt the need for the laws of war to adjust to such new realities. Throughout history, every new method of warfare or any new weapon has led to new regulations. Without an evolution of the legal framework, there will be a real hiatus between the laws of war and the reality of conflict. Forty-five nations are now building, buying and using military robots. The US army possesses 7,000 unmanned aerial systems and 12,000 unmanned ground vehicles. First generation military robots are generally operated under direct human control (drones), but robotic military systems tend toward increased autonomy. There are many different types of unmanned or robotic warfare devices. They can be used to support fields operations, to gather information, to undertake specific reconnaissance or surveillance operations, or to take pictures of the battlefields. Some are utilized to kill and can be equipped with lethal weapons. Robots can be fully autonomous or semi-autonomous and can be operated by remote control functions (wireless modem or internet-controlled by a human). They are therefore extremely attractive for terrorist plotters. What are the political and strategic consequences for NATO of this evolution?

*Jamie Shea is NATO Deputy Assistant Secretary General for Emerging Security Challenges. He has been working with NATO since 1980. Positions included Director of Policy Planning in the Private Office of the Secretary General, Deputy Assistant Secretary General for External Relations, Public Diplomacy Division, Director of Information and Press, Spokesman of NATO and Deputy Director of Information and Press, Deputy Head and Senior Planning Officer at the Policy Planning and Multilateral Affairs Section of the Political Directorate as well as Assistant to the Secretary General of NATO for Special Projects. Jamie Shea is involved with several prominent academic institutions and acts amongst others as professor of the Collège d'Europe, Bruges, Visiting Lecturer in the Practice of Diplomacy, University of Sussex, Associate Professor of International Relations at the American University, Washington DC, where he also holds the position of Director of the Brussels Overseas Study Programme, and lectures at the Brussels School of International Studies at the University of Kent. He also is a regular lecturer and conference speaker on NATO and European security affairs and on public diplomacy and political communication and lobbying. He holds a D.Phil. in Modern History from Oxford University (Lincoln College), 1981. Amongst his many associations and memberships, Jamie Shea is Member of the Advisory Board, Security and Defence Programmes at Chatham House, Member of the Policy Council at the World Economic Forum in Geneva and Founder and Member of the Board, Security and Defence Agenda Brussels.*

**Jason Ralph, Professor of International Relations, University of Leeds**

**Preventive military action and the politics of US norm revisionism**

Since 2002 the US has sought to revise the criteria by which states can lawfully resort to force in self-defence. Rather than claim a new right to preventive self-defence, US officials have claimed that international society should accept a more flexible definition of imminence so that there is great scope for using force within the existing norm. Indeed some US officials argue that a new norm to this effect has already crystallised. This paper explores the domestic and international politics of US norm-revisionism and focuses specifically on what US-backed preventive military action might mean for British foreign policymakers.

*Jason Ralph is Professor of International Relations at the University of Leeds and author of *Defending the Society of States. Why America Opposes the International Criminal Court and its Vision of World Society* (OUP 2007). He is currently British Academy Mid-Career Fellow working on US national security policy and the “special relationship” with the UK.*

#### **Geoff Loane, Head Of Mission, ICRC Mission in the UK**

**At its conclusion Geoff Loane will reflect on the issues raised by the workshop.**

*Geoff Loane is Head of Mission for the International Committee of the Red Cross (ICRC) in London where he manages relations with the UK government and other stakeholders involved in humanitarian work in armed conflict. Prior to this posting, he was Head of the ICRC Regional Delegation for United States and Canada for five years. In this capacity, he oversaw ICRC visits to the detention facility in Guantanamo Bay, Cuba and was responsible for working relationships with the Governments of the United States and Canada. He also interfaced with the national Red Cross societies and served as ICRC’s representative to the public at large in both countries. Mr. Loane has also worked in the Balkans and the Middle East, and spent more than a decade in the Horn of Africa during the major conflicts there.*

# Hitting the Target

## Abstracts - Panels

**Wali Aslam and Ciaran Gillespie, School of Politics, University of Surrey, UK**  
**US drone strikes in Pakistan and political appropriation of casualties in threat construction**

This paper looks at how the casualties of American drone strikes in Pakistan have been politically appropriated by two actors in order to socially construct a perception of threat. On one side it conducts a discourse analysis of the speeches and statements of an actor opposing these strikes: Imran Khan, the leader of Pakistan Justice Party. On the other hand it looks at the statements of those supporting these strikes that include United States political and military-intelligence officials, among others. The paper argues that threat construction is a social process that involves different sides appropriating the bodies of the drone casualties and using that materiality to shape a reality through their discourse. That process involves an active participation by political elites and a receptive audience. Once constructed this way, the threats then go on to play an integral role in shaping the political strategies of each side.

**Adrian Banks and Mandeep Dhmi, School of Psychology, University of Surrey, UK**  
**Applying psychological models to military decision making**

Decision scientists ask normative, descriptive and prescriptive questions: How should rational people make decisions? How do people actually make decisions? And, can we help people be more rational? Psychological models provide different answers to these questions. One class of models requires the integration of all relevant information and emphasizes that exhaustive and complex computation is required in order to make a rational decision. A second class of models suggests that, in certain situations, ignoring some information is not only simpler but also more effective. A third class of models focuses more on the expertise of the decision maker and the way in which previous experience informs the decisions that are made. In this paper, we describe how these different models of decision making may be applied to the defence and security sectors and explore how these models predict military decision making may change as a result of new military capabilities.

**Jacob Beswick and Elizabeth Minor, Every Casualty Programme, Oxford Research Group, London**  
**Casualty recording as an evaluative capability**

This paper explores the challenge of assessing the fulfilment of the core purpose of humanitarian intervention with military force - the protection of civilians. In the first point of the paper, we address the issue of how the efficacy of new weapons is frequently described in terms of theoretical capabilities or by unverifiable and opaque generalizations about their effects. This point will be illustrated with extracts from official reports and news sources, with particular focus on Libya.

In the second part of the paper, we posit that military intervention's fulfilment should be evaluated by its consequences. Such evaluations are best carried out through casualty recording, defined as the transparent and systematic process of capturing and analyzing incident-level information surrounding attacks. Unlike existing pronouncements on the efficacy of humanitarian intervention, such an approach enables an evidence-base open to scrutiny, as well as a more accurate indication of the consequences of a given intervention. To substantiate the points made in this section, examples from our programme's original research into existing casualty recording practice will be presented.

In the final portion of the paper, we elaborate the ways in which casualty recording brings the consequences for civilians to the centre of evaluations of military operations. In substantiating this point, we touch on the role casualty recording plays in informing accountability and the assessment of tactics by conflict parties.

# Hitting the Target

## Abstracts - Panels

**Adam Bodnar**, Legal Department, Warsaw University, Poland and **Irmina Pacho**, Helsinki Foundation for Human Rights, Poland

**Potential application of the European Convention for Human Rights to the use of drones in conflict zones by armies of Council of Europe's states**

Among approximately 50 countries that possess unmanned drones and remotely piloted aircraft there are also member-states of the Council of Europe. This includes, inter alia, Great Britain that has already equipped its drones in lethal payload or Poland that is working on construction of a Polish type of remotely piloted aircraft. However, following the extensive use of drones by Israel in Gaza or United States in Afghanistan, Pakistan or Yemen, their use has become very controversial and they have raised serious moral, policy and legal concerns. Legal controversies focus mainly on the issue of targeted killing anywhere in the world, including countries that are far away from any war zone or battlefield, without charge or trial; also on the failure to present transparent rules of when, where and against whom drone strikes can be authorized. Additionally, the procedure of putting a name on a kill list remains secret and the exact civilian death toll is yet not known. Finally, concerns at the highest authority level focus on the question to what extent human rights applies to drones, if at all.

In the paper we would like to present the analysis of the potential application of the European Convention of Human Rights to the use of drones in conflict zones, since the technology is fast developing and European countries have their troops e.g. in Afghanistan and Iraq. It is worth considering whether targeted killing complies with Art. 6 (right to fair trial), Art. 2 (right to life) or even Art. 10 (access to public information on the scale of drone use) of the ECHR. The paper will explore in particular the ECHR 2011 judgment *Al-Skeini and Others v. UK* (application no 55721/01) where the Court constituted the UK jurisdiction under Art. 1 ECHR in respect of civilians killed during British occupation in Iraq.

**Anna Maria Brudenell**, Department of Management and Security, Cranfield Defence and Security, UK

**Influencing leadership behaviour**

There is no commonly accepted methodology for planning conventional strategic attack, nor assessing its effectiveness. Notwithstanding the extensive debate concerning the targeting of enemy leaders, extant theory in this area is rudimentary. Improved doctrine should support more effective engagement, allowing strategic success to be obtained swiftly and at little cost. The paper will propose a methodology based on the concept of value (or axiological) targeting. The process develops John Warden's ideas of influencing the strategic leadership; Joe Strange's concept of the Centre of Gravity, and Wijninga and Szafranski's theory of axiological targeting. A more structured approach, using this concept, should allow strategic planners to focus violent and non-violent (or kinetic or non-kinetic) aspects of state power to change the behaviour of the enemy leadership. Changing behaviour in this context means, for example, that he surrenders, withdraws forces from a territory, undertakes negotiations, or similar beneficial strategic outcome. The approach offers the tantalising possibility of measuring effectiveness directly through observing changes in the leadership's behaviour. Focussing effort more directly at the enemy leadership should enable conflicts to be resolved both more effectively and more efficiently.

**David Carey**, Advanced Technology Institute, University of Surrey, UK

**Social and ethical dimensions of new technologies: Everyday applications and perspectives from nanotechnology**

Nanotechnology is a word that has entered into common use and many everyday objects such as laptops and mobile phones employ nanotechnology. In this paper I will introduce examples of where nanotechnology is making a difference and what we can look forward to in the near future. I will also discuss research which examines the public perception of 'nano' in relation to the risks and benefits found

# Hitting the Target

## Abstracts - Panels

with new nanomaterials in technology, the uses in nanomedicine for cancer drugs as well as in the cosmetics and food industries.

**Margaret Cooper, School of Law, University of Surrey, UK**

### **The principle of proportionality in the law of armed conflict: Fuzzy logic- a methodology for information overload**

The principle of proportionality remains a pillar of the law of armed conflict. Recognized in the Geneva Conventions and subsequent protocols, it is additionally taught in the training of military forces. It states that in any armed attack, large or small, only a reasonable level of civilians be exposed to the risk of death or injury.

What are the immediate problems? Due to the effects of globalization upon politics and economics this principle is increasingly subjected to legal challenges and difficulties in application. Traditional warfare controlled by sovereign states is increasingly replaced by non-state actors. Additionally, due to advances in technology, strategists and planners are subjected to information overload; whereas the technological knowledge is increasing, the fiscal ability to fund warfare is decreasing. As a result, the legal framework of international law itself is under stress.

Other factors contribute to this contemporary uncertainty in the law of armed conflict. Hard boundaries between discreet disciplines are disappearing. Law and computer technology, space law, and the interactions of GPS systems and the WWW, form networks which both support and challenge military and civilian stakeholders.

Where to find solutions? In legal theory, the principle can be sustained without damage to its integrity. In application, the principle faces annihilation due to the factors outlined above. One solution could be the introduction of fuzzy logic methodologies, specifically Computing With Words which can deal with information vagueness and overloading through the precisiation of natural languages in far more fineness of detail than the classic bivalent (0-1) logics.

Facing such challenges, can the principle of proportionality survive, indeed does it deserve to survive; or does the newest arrival in the theatres of asymmetrical global warfare, cyber-warfare, signal the demise of this ethically grounded principle? Simply, are the major decisions being taken out of the domains of sovereign states into the hands of "free-riding" actors?

**John Davis, Department of Electrical Engineering and Electronics, University of Liverpool, UK**  
**Simulation of network enabled weapons and SPEAR strike capabilities**

At the University of Liverpool the multiple flight simulator capabilities possessed are being exploited to further research the area of Network Enabled Capabilities and SPEAR. Multiple levels of operation are being modelled including flight simulation of fast-jet ground-attack aircraft, unmanned aerial vehicles for reconnaissance and visual targeting, remote tasking and re-tasking of airborne weapons. Key research is being carried out on the cognitive ergonomic design of a Remote Operator Station which links all assets together for control by a human operator.

With increasing seeker performance, guidance algorithm complexity and the development of Network Enabled Weapons come a host of questions about how best to visually display data to an individual operating the system. Air launched weapons in carriage have a constantly updated Launch Acceptability Region to instruct the pilot whether a target lies within the acceptable range and position for intercept. A continuously calculated Re-task Acceptability Region (RAR) is generated to assist the operator in their re-

tasking duties.

Furthermore, the shape of a RAR is dynamic; it changes over time and with weapon type. The representation of RAR is overlaid onto a tactical map in the remote operator station and shows the operator clear information about the re-tasking abilities of the asset under control. This paper discusses the issues surrounding human interface design of remote operator stations for Network Enabled Weapons.

**Tom Dyson, School of Politics, University of Surrey, UK**

### **Europe's selective emulation of the RMA: Explaining convergence and differentiation**

The post-Cold War defence reforms of the West European Great Powers (Britain, France, and Germany) have been characterised by a partial and selective emulation of the US-led Revolution in Military Affairs (RMA). However, significant differentiation exists in the substance and pace of European emulation. Such differentiation has very important implications for the capacity of European states to 'burden-share' within NATO and for the ability of the EU to undertake autonomous stand-off precision-strike operations through its Common Security and Defence Policy (CSDP). This paper will analyse the reforms which have taken place to the force structures, military doctrines, and capabilities of the West European Great Powers and assess the relative capacity of these states to undertake networked, rapid, and decisive operations (RDO). It finds that while Britain and France have been regional pacesetters in emulation of the RMA, the German Bundeswehr has fallen behind on all three aspects of emulation: force structures; military capabilities and military doctrine.

The paper will seek to explain these patterns of convergence and divergence through the use of Neoclassical Realist theory. It argues that systemic variables – notably the balance of power (Waltz) and threat (Walt) – are driving convergence between all three states in the instruments and art of warfare. However, domestic variables, notably the autonomy of the core executive in defence policy, play an important intervening role in determining the scope and pace of convergence. The paper finds that the high-level of 'executive autonomy' in the UK and France has permitted adherence to the dictates of systemic imperatives and military best-practice. However, low executive autonomy in Germany has incentivised policy leaders to manage the temporality of convergence with the dictates of the contemporary security and operational environment.

**Anthony Gillespie, Defence Science and Technology Laboratory, Ministry of Defence, UK**

### **How can we develop legal and autonomous unmanned aircraft?**

The technologies for autonomous air systems are developing rapidly and the ethics and legality of their use is widely debated. It can be confidently predicted that it will be possible for single UAVs or small "swarms" to be given a task such as searching for a specific vehicle type and, when identified, destroy it. This paper will look at the technologies needed for, and limitation on, their legal use by UK forces.

Current use of weapon-carrying UAVs always needs a human decision-maker in the loop. This is to satisfy the international Laws of Armed Conflict (LOAC), but is often the basis for assumptions that all critical decisions must be made by a human. The presentation will cover work where the four LOAC tenets of: military necessity; humanity; distinction; and proportionality; are taken as a set of capability requirements. These are analysed using system engineering techniques to produce a set of autonomous UAS requirements and sub-system requirements for autonomous decision-making systems.

It is concluded that there needs to be a change in emphasis of current research and development programmes to ensure that future autonomous air systems meet UK legal criteria before release into service.

# Hitting the Target

## Abstracts - Panels

**Stuart Gordon, Department of International Development, London School of Economics, UK**  
**“Predators for Peace”: Drones, Civilian Protection, and the Humanitarian Community**

Drones increasingly occupy a central role in US foreign policy and military strategies. Whereas even as recently as the 2003 invasion of Iraq, drones were a rarity on the battlefield, and then often limited to covert special forces operations, today the Pentagon is able to deploy a fleet of some 19,000 and routinely integrates them in a bewildering variety of conventional operations. In the first 3 years of office as President, Barak Obama unleashed the largest unmanned aerial offensive in the history of war; authorising over 300 covert drone strikes, five times more than his predecessor, George W. Bush, throughout his 8 years in office. US drones have been at the forefront of surveillance and/or targeted killing missions in Iran, Iraq, Afghanistan, Pakistan, Yemen, Syria, Somalia and Libya and provided key aerial surveillance over Osama bin Laden’s compound in Abbottabad, Pakistan. They have killed more than 3,000 designated ‘terrorists’ and Human Rights organisations have argued that in the process these attacks have also resulted in the deaths of over 800 civilians. The academic and humanitarian communities have tended to view the importance of these technologies in terms of their impact on the willingness of states to resort to war – reducing the risks to combat troops and lowering the potential political costs of military - as well as legal issues related decisions to employ lethal force beyond the battlefield, the accountability of drone operators, the transparency of decision making and the numbers of civilian deaths. This paper takes this as starting position before exploring why the civilian sphere is likely to see a massive increase in drone usage and how this could impact on humanitarian actors; potentially opening up a dramatic range of new risks and opportunities. Whilst UAV’s can and already have been used to conduct a range of assessments during humanitarian crises and have real potential as an instrument in civilian protection strategies some commentators, such as retired U.S. Ambassador Jack Chow, have argued that these technologies have a much broader potential to ‘revolutionize how humanitarian aid is delivered worldwide’ pointing to a future in which ‘waves of aid drones might quickly deliver a peaceful ‘first strike’ capacity of food and medicines to disaster areas.’ This is likely to impact on ways in which emergency humanitarian assistance is instrumentalised by states whilst non state actors may also adopt armed ‘off the shelf’ drones to present potentially serious, and difficult to mitigate security threats to the humanitarian community as a whole.

**Ulf Haeussler, Institute for National Strategic Studies, National Defense University, USA**  
**The Utility of Legal Frameworks for Regulating the Use of Drones**

In Spring 2011, the Taipei Times reported that the People’s Republic of China (PRC) has embarked on an expanding UAV program that, under the PRC policy regarding the “three evils”, might soon include targeted killing of “separatist” leaders from Xinjiang, Tibet, and Taiwan. In his book regarding U.S. vulnerabilities in cyberspace, Joel Brenner, a former U.S. official, discusses a scenario centred on PRC anti-access and area denial efforts employing cyber capabilities to prevent U.S. warships and military aircraft from supporting Taiwan. These observations reflect growing concerns that the U.S. and its allies may be about to lose their advantage regarding military capabilities.

At the same time, the policies and legal frameworks designed to limit the development and/or use of advanced military capabilities continue to focus on Western liberal democracies. The legitimacy of U.S./NATO interventions using such capabilities is routinely questioned. Opposition against targeted killing as a method of warfare is strongest with regard to the U.S., Israel, and NATO’s ISAF mission. However “surgical” air power is applied, criticism seems to be the reflex if it is so applied (primarily) by Western nations: for instance during NATO’s Operation Unified Protector.

There seems to be a pattern whereby “innovative” interpretations of international law, in particular in the field of human rights, aim to mitigate the competitive advantage still enjoyed by the U.S. and its allies. The approach to cyber capabilities, although different, seems to confirm this assumption. Warnings against a “militarization of cyberspace”, often coupled with assertions that the law of armed conflict does not apply

therein, seem aimed at protecting smaller States and non-governmental hackers who might be longed-for proxies for cyber warfare against the U.S. and its allies. My paper will argue that military capabilities and the frameworks for their use develop apart, and that some frameworks are increasingly unrealistic.

**William Henderson, Department of Law, Economics, Accountancy & Risk, Glasgow Caledonian University, UK**

**Character, gravity, and scale: When does intervention become the crime of aggression?**

The 2010 Review Conference of the Rome Statute of the International Criminal Court (ICC) adopted a definition of the crime of aggression for incorporation into the treaty. Article 8 states that the crime of aggression means the planning, preparation, initiation, or execution, by a person in a position effectively to exercise control over or to direct the political or military action of a State, of an act of aggression which, by its character, gravity, and scale, constitutes a manifest violation of the Charter of the United Nations. The adopted definition also declares a list of specific acts constituting aggression.

The consequences of this amendment entering into force (at some point after 1st January 2017 and the necessary minimum requirements being met by States Parties in terms of a decision and ratifications) will be significant for military intervention. The paper will analyse the issues related to the threshold introduced by this definition in the context of varying degrees of intervention. Issues of, inter alia, precision strikes, blockades, ground forces and support for armed groups will be analysed in relation to where the threshold rests and what is meant by the character, gravity and scale necessary to meet the definition of the crime.

**Armin Krishnan, College of Liberal Arts, University of Texas at El Paso, USA**

**Precision strikes against high value targets: Assassination and foreign policy**

New precision-strike capabilities in conjunction with advanced intelligence capabilities enable modern armed forces to successfully attack specific individuals over great distances and with low risk. The targeted killing of enemy leaders or other key individuals through military precision strikes could become a viable option and a reasonable alternative to a full-scale military intervention or risky covert action by intelligence services and Special Forces. Some NATO countries already operate armed UAVs, stealth drones, micro- and nano-drones, which are relatively cheap and still provide a powerful capability to find and target key individuals. Such approaches to warfare could be considered to be more discriminating and proportionate than classical airstrikes. This raises the moral question of whether assassination should be part of NATO's foreign policy and military strategy.

This paper argues that despite the obvious advantages of offering a cheap solution in terms of financial and human cost, assassination, also in its high-tech version, is unlikely to achieve strategic objectives and could result in many unintended consequences, as the use of such capabilities have shown in Pakistan, Afghanistan, and to some extent in Libya. Drone-assassinations are unlikely to be decisive in warfare and are unlikely to be effective in achieving foreign objectives, even if they can be carried out covertly, as adversaries will simply respond to the challenge organizationally. They will decentralize, will protect leaders better, and will have robust succession planning. In the end, the utility of these new precision-strike capabilities on an operational and strategic level could turn out to be far smaller than it may seem at the moment.

**Caglar Kurc, Department of Political Science and Public Administration, Middle East Technical University, Turkey**

**How military technology became a tool for justification for military interventions**

Since wars in Afghanistan and Iraq, when Western democracies decide to wage a war or military intervention, one of the most repeated political discourses to justify the decision is that the war is not waged against the people (civilians) of the target state but against the repressive regimes and/or terrorists.

# Hitting the Target

## Abstracts - Panels

Such discourse is certainly a response to increasing sensibility of public within the liberal democracies to human suffering and increasing anti-militarist stance as well as casualty aversion in Western militaries. It is an attempt to use the public's sensibilities towards the justification of war and establish a just basis for the operation while demonising and dehumanising the agents of repressive regimes.

What is critical about such discourse is that its existence is highly dependent on new weapon technologies and how those technologies are represented to the public opinion. In the end, one cannot claim that the war is for the future well-being of people while carpet-bombing them. The justification of war is based on the assumption that civilians and targets can be separated and attacks can be conducted without harming civilians. This is supported by video footages of missiles hitting "the right targets", media attention on "smart weapons" and TV-shows that praise for the high tech weapons that only hit "bad guys", but not innocent civilians. On the other hand, the reality of war is that civilians suffer, despite the increased precision. Yet, the discourse persists. Therefore, the aim of this paper is to question how political discourse intermingles with military technology; how representations of military technology is used for the justifications for war and despite the evidence, why such discourse continues to exist.

**Gregory McNeal, School of Law, Pepperdine University, USA**  
**The US practice of collateral damage estimation and mitigation**

This paper explains how the U.S. military implements its International Humanitarian Law obligation to mitigate and prevent harm to civilians. Specifically, this paper explains in rich detail, based on field interviews, the process the U.S. military follows to estimate and mitigate the impact of conventional weapons on collateral persons and objects in most military operations involving air-to-surface weapons and artillery.

In recent years, an entire body of academic literature and policy commentary has been based on an incomplete understanding of how the U.S. conducts military operations. The literature is incomplete because U.S. practices are shrouded in secrecy and largely inaccessible. As a result commentators have lacked a descriptive foundation to analyze and critique U.S. operations. Their writings have focused on easily-describable issues such as whether a target was a lawful military objective, and then typically shift attention to the question of proportionality balancing and collateral damage. These commentators skip an important aspect of actual practice - the scientifically grounded mitigation steps followed by U.S. armed forces. Those mitigation steps are designed to ensure a less than 10% probability of collateral damage resulting from any pre-planned operation. This paper's description differs from the general and incomplete approach currently found in scholarship and more accurately describes the reality of modern operations. In those operations U.S. armed forces follow rigorous steps prior to engaging in any proportionality balancing.

This paper is intentionally descriptive and explanatory; it makes a contribution to theory by providing a qualitative empirical account that explains for the first time in scholarly literature the process of collateral damage estimation and mitigation as practiced by the U.S. military. While this paper will be especially useful for those seeking to understand how collateral damage is estimated in targeted killing operations, the paper's relevance is not limited to the context of targeted killings.

**Nicola Power, Department of Electrical Engineering and Electronics, University of Liverpool, UK**  
**Call of duty (for psychological research): Modern warfare, the human operator and the intervened upon**

This paper will outline how the modern battlefield has implications on the laws of war (LOW) and highlight two differences in today's asymmetric combat arena which drastically alter modern warfare. Firstly, the revolution in military affairs (RMA) has produced advanced unmanned weapons systems (UWS) which place serious pressures on LOW principles governing just reasons for entering conflict (jus ad bellum) and

just methods engaged during fighting (*jus in bello*). Critics argue that UWS can make reasons for going to war more favourable and methods of fighting more extreme by: (i) appearing risk-free; (ii) creating an unfair advantage; (iii) skewing *in bello* judgements of human operators; and (iv) blurring issues of moral accountability. This paper acknowledges and responds to these criticisms yet also highlights the need for research to aid the ability of the human operator to make just and moral decisions to aid their inevitable use in future conflict.

Secondly, this paper will explore how international conflict is increasingly based upon humanitarian grounds as attacks are targeted within and around civilian communities. In such circumstances UWS must be used within strict rules of engagement to avoid their potential negative psychological impact in terms of: (i) fostering anti-intervention sentiment; (ii) preventing the strategic advantage of population-centric warfare; and (iii) facilitating the environment for terrorist support. The changing nature of modern warfare, the technological advances in the use of unmanned systems and the formation of a coalition of global soldiers have created an environment which is poorly understood in terms of their psychological impact on both operators and the intervened upon. This is an issue that demands resolution in light of the inevitable proliferation of such weapons.

**Tobias Ruettershoff, School of Global Studies, University of Sussex, UK**

**Terrorising terrorists. The targeted killing of terrorists on foreign soil: Legal and political aspects**

In the paper, I take a look at the practice of targeted killing in counter-terrorism campaigns and assess their legality and legitimacy as well as their effectiveness. Terrorist organisations such as Al-Qaeda are private, non-state actors but they operate from a state's territory, raising the question of *jus ad bellum*. Moreover, it has to be determined whether targeted killing of terrorists can be considered as an armed conflict to apply International Humanitarian Law (IHL), discussing the *Jus in Bello* of targeted killing. In a second step, the legitimacy of targeted killing is analysed, i.e. whether this method of countering terrorists can be considered as a just and appropriate means. I employ Fritz Scharpf's method of input and output legitimacy, to discuss whether this method is acceptable and effective.

My central argument is that the use of targeted killing is a tool of warfare that is highly questionable in legal and political terms but can be viable if strong restraints are applied. When the scale of violence reaches a certain level or when terrorists operate from states which are either unwilling or incapable of cooperating in law-enforcement, military force can be used. From the *Jus in Bello* perspective, IHL is applicable to the fight against terrorism because it constitutes a non-international armed conflict. Within the narrow confines of IHL, targeted killing of terrorists can be legal under certain restrictions.

In terms of input legitimacy, strong arguments for and against targeted killing exist. There are indeed some drawbacks to the policy of targeted killing, but the positive impacts of targeted killing outweigh those negative aspects, particularly as it can serve as an effective deterrent. Similarly, the output-legitimacy of targeted killing is also contradictory, but descriptive evidence gathered by the author shows that targeted killing may be effective, particularly in Palestine.

**Paul Schulte, Department of War Studies, Kings College, University of London, UK**

**What we do if we are never going to do this again: Western counterinsurgency choices after Iraq and Afghanistan**

Lessons from the occupation of Iraq are painful and disputed, and the Afghan campaign remains severely unpromising, even though COIN doctrine has been rediscovered and refined. Large footprint, nation – building, interventions will consequently be even less attractive to Western governments, who will seek more practicable forms of war. Starting from Zambardi's concept of Coin's "Impossible Trilemma", (force

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protection, distinction between enemy combatants and neutral or hostile non-combatants, and the physical elimination of insurgents), this paper examines key political, demographic and technological trends and the problematic choices they indicate for future Western practice in Small Wars, including indirect upstream interventions, greater selectivity of engagements, reduction of public attention, and both lowered ambition and revised emphases within campaigns.

**Niaz Shah, Law School, University of Hull, UK**

### **Drone attacks in Pakistan: De-shaping International Intervention**

This paper aims to examine the legality and impact of US drone attacks in the tribal areas of Pakistan. We argue that drone attacks, without the consent of Pakistan, are against the Charter of the United Nations which provides legal ways of intervention. We further argue that even if Pakistani authorities have given a tacit consent to drone attacks, they still violate the law of armed conflict and international human rights law. Evidence suggests that very often civilians were killed and property destroyed in access of 'concrete and direct military advantage', i.e. violating the customary principle of proportionality. The American CIA, a civilian organ of the state, targets individuals away from the battlefield who they regard either as terrorists or supporters of terrorism. The CIA has virtually become a judge, a jury, and an executioner violating international human rights law. We assess the impact of drone attacks and argue that they not only violate international law, but are also counterproductive and thus are not shaping but de-shaping the contemporary international intervention.

**Conway Waddington, Department of Philosophy, University of Johannesburg, South Africa**

### **The moral questions of point and click killing**

Enhanced precision strike capabilities coupled with an array of technological means of peeling back the fog of war allow for unprecedented possibilities of rapid and decisive intervention. NATO's Operation 'Unified Protector' in Libya has replaced Operation 'Deliberate Force' from the Bosnian conflict as the poster-child for surgical solutions to meeting the Responsibility to Protect. However, a multitude of practical, legal, and moral questions grow increasingly urgent as technology continues to define (Western) approaches to intervention.

A vital area of investigation centres on precisely the dangers of allowing the expansion and refinement of these technological capabilities to outstrip the policy and rationale that necessitated the development of such tools in the first place. Put simply, policy enablers are becoming policy formulators; to the potential detriment of other cogs in the humanitarian engine, particularly with regards to post-conflict activities. Rigorous evaluation of this phenomenon and its consequences is vital, but is challenged by a myriad of variables which confuse the matter. Taking for instance, drone-launched precision munitions: focus has been brought to important issues ranging from collateral damage and improper targeting, stand alongside equally important questions about the psychological burdens placed on those operating those weapons systems; all the while a sort of blind faith in technological improvement appears to await the arrival of a 'magic bullet' which will resolve all such concerns, and presumably also negate the other challenges pertaining to effective intervention.

In this paper, I propose a thought experiment involving the fictional development of just such a 'magic bullet', with perfect qualities insofar as accuracy, response time, logistical profile, and operational qualities are concerned. The point here is to cut through those variables that contribute so tellingly to discussion on precision strike-based intervention, and allow clear insight into important aspects of the consequences of such strikes.

**Chris Woods, Bureau of Investigative Journalism, London**  
**Covert drone strikes and the fiction of zero civilian casualties**

Research by the Bureau of Investigative Journalism indicates that some 2400 - 3100 people have died in CIA covert drone strikes in Pakistan. The Pentagon's JSOC has also carried out a small number of drone strikes in Somalia since 2011. In Yemen, separate covert drone fleets are operated by the CIA and JSOC. As many as 80 individual US strikes may so far have taken place there, accounting for hundreds of mainly militant deaths.

The dominant claim in Washington is that these drones are 'the most precise weapon ever invented' (a senior US counter terrorism official to this author, August 2011). The CIA has, for example, asserted that no non-combatants were killed in Pakistan strikes from May 2010 until at least September 2011, and possibly to the present date.

Yet the narrative appears flawed. The Bureau understands from its research that some 479-811 civilians have died in Pakistan drone strikes since 2004. Whilst the proportion of civilian deaths has declined significantly since 2010 as a result of more precise targeting rules, credible reports of civilian deaths persist. To date the Bureau has identified by name some 160 militants killed in the strikes - and more than 310 civilians.

Accountability also appears dysfunctional. On occasions when civilians are credibly reported killed, there is no public knowledge of internal inquiries having taken place. There is also evidence that specific tactics are now evolving which take advantage of an absence of accountability, for example the deliberate targeting of rescuers after an initial strike.

Significant levels of public unrest towards drone strikes have been reported in both Yemen and Pakistan, not only in affected regions but in Islamabad and Sana'a. The efficacy of drones in confronting Al Qaeda and its allies may be undermined, in the long term, by profound public hostility towards the platform in affected nations.

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## Poster Exhibition

### **Romancing the Drone: Using painting as reflective discourse to creatively respond to new capabilities**

**Carl Gopalkrishnan, Independent artist, Perth, Western Australia**

My contribution to the workshop is based on my visual art practice as a painter. For the past several years, I have focused my art on uncovering the hidden narratives that drive political decisions. It has been the response of a creative individual living in a time of extreme change, and trying to make some sense of the consequences of many of those decisions since 9/11. I have provided the workshop with five prints of different paintings which map this journey. The images have particular relevance to the human and behavioural consequences of such developments. The five paintings come from two of my painting series - *The Assassination of Judy Garland (2008-2011)* and *The Resurrection of the Tin Man* (current work in progress). The first explores American political identities using various metaphors including Broadway and Hollywood musicals and medieval French epic poetry (chansons de geste). Several such paintings explore the US military's relationship to drones and robotics which connect to the workshop themes. It is my hope that my art can serve as a focus of interaction to engage the humanity of workshop participants beyond their different levels of expertise. Each painting, in this context, has the potential to become an access point between delegates from different backgrounds. As a visual artist, I have worked to avoid protest art or clinical reproductions of technical processes; and to explore a wider context of human influence that I propose is implicit, but not absent, from legal, political and academic discourse on political and military conflict. These include emotions, culture, history, mythology, psychology and archetypal relationships transformed by new technologies and circumstances into new forms.

The purpose of my art is to learn, and in the process I have had to question many of the assumptions I held close. One such example is the argument about attacks on the rule of law. Using a reflective process I was made more aware of the importance of the terms of reference we use to describe events, actions and feelings around actual and potential capabilities. The meaning of words, and the pace of political and personal change, has altered so much as to make me reflect on the infallibility of our reasoning skills in this new environment. The loss of old meanings and the inability to legally describe or assess new capabilities is an area where jurisprudence and the arts could cooperate to create new words, logic and conceptual spaces that can conceive of new capabilities that do not yet exist. As has been shown by weapons and robotics developers who recruit ideas from science fiction conventions or Hollywood script writers developing counter-terrorism scenarios; new technology requires imagination to open up its potential capability. Similarly, suppressing creative thought because of a fear of its capacity to unleash destructive capabilities can turn into deep regret when we require a creative defence. This past decade has been an era where creativity and self-expression has been under attack from extreme doctrines from all quarters. Through engagement with my art, I hope I can encourage the workshop participants to consider creative thought processes as just another tool when investigating alternate responses to the challenge of new capabilities.

[www.carlgopal.com](http://www.carlgopal.com)

*Carl Gopalkrishnan is a UK born visual artist based in Western Australia. A self-taught painter, he completed his BA in History with First Class Honours in Sociology from Murdoch University. He works in other fields while developing new paintings as a creative response to social, political, and technological change. His images have been published in international magazines and journals of poetry, politics and culture.*

## **Drone strike photographs by Noor Behram**

Noor Behram was born in 1972 in North Waziristan Agency (NWA). He has been working as a journalist in print media since 2000 in NWA. He started working in electronic media covering conflict zone of Waziristan and FATA for Al-Jazeera in 2007. For the last three years apart from his assignment with AJ, he has been taking pictures and footages of civilian drone victims with emphasis on women and children being killed and injured in drone strikes. He has been able to cover over 60 strikes since 2007.

*The School of Politics would like to thank Reprieve for their assistance in helping them to obtain access to Noor Behram's photography.*

[www.reprieve.org.uk](http://www.reprieve.org.uk)

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## Participants

<p><b>Prof Sir Mike Aaronson</b> School of Politics University of Surrey United Kingdom</p>	<p><b>Dr Wali Aslam</b> School of Politics University of Surrey United Kingdom</p>	<p><b>Dr Adrian Banks</b> School of Psychology University of Surrey United Kingdom</p>
<p><b>Mr Jacob Beswick</b> Oxford Research Group United Kingdom</p>	<p><b>Mr Adam Bodnar</b> Helsinki Foundation for Human Rights Poland</p>	<p><b>Dr Anna Maria Brudnell</b> Cranfield Defence and Security United Kingdom</p>
<p><b>Dr David Carey</b> Advanced Technology Institute, University of Surrey United Kingdom</p>	<p><b>Dr Laura Chappell</b> School of Politics University of Surrey United Kingdom</p>	<p><b>Ms Margaret Cooper</b> School of Law University of Surrey United Kingdom</p>
<p><b>Mr John Kenneth Davis</b> University of Liverpool United Kingdom</p>	<p><b>Dr Tom Dyson</b> School of Politics University of Surrey United Kingdom</p>	<p><b>Mr Peter Edelenbos</b> Ministry of Defence Netherlands</p>
<p><b>Dr Theofanis Exadaktylos</b> School of Politics University of Surrey United Kingdom</p>	<p><b>Prof David Frohlich</b> Digital World Research Centre University of Surrey United Kingdom</p>	<p><b>Mr Christopher Fuller</b> University of Southampton United Kingdom</p>
<p><b>Mr Ciaran Gillespie</b> School of Politics, University of Surrey United Kingdom</p>	<p><b>Prof Anthony Gillespie</b> Ministry of Defence United Kingdom</p>	<p><b>Dr Stuart Gordon</b> LSE United Kingdom</p>
<p><b>Dr Roberta Guerrina</b> School of Politics, University of Surrey United Kingdom</p>	<p><b>Mr Ulf Haeussler</b> Federal Ministry of Defense Germany</p>	<p><b>Mr William Henderson</b> Glasgow Caledonian University United Kingdom</p>
<p><b>Prof Bryn James</b> Defence Science and Technical Laboratory United Kingdom</p>	<p><b>Dr Armin Krishnan</b> University of Texas at El Paso United States</p>	<p><b>Mr Caglar Kurc</b> Middle East Technical University Turkey</p>
<p><b>Mr Geoff Loane</b> ICRC Mission in the UK United Kingdom</p>	<p><b>Prof Gregory McNeal</b> Pepperdine University United States</p>	<p><b>Ms Elizabeth Minor</b> Oxford Research Group United Kingdom</p>
<p><b>Dr Udesh Naidoo</b> Frimley Park Hospital United Kingdom</p>	<p><b>Mrs Irmira Pacho</b> Helsinki Foundation for Human Rights Poland</p>	<p><b>Dr Lou Perotta</b> Independent consultant United Kingdom</p>
<p><b>Miss Nicola Power</b> University of Liverpool United Kingdom</p>	<p><b>Prof Phil Powrie</b> Faculty of Arts and Human Sciences University of Surrey United Kingdom</p>	<p><b>Prof Jason Ralph</b> University of Leeds United Kingdom</p>

<p><b>Dr Regina Rauxloh</b> School of Law University of Surrey United Kingdom</p>	<p><b>Mr Tobias Ruettershoff</b> University of Sussex United Kingdom</p>	<p><b>Prof Robbie Sabel</b> Hebrew University Israel</p>
<p><b>Mr Paul Schulte</b> Carnegie Endowment/Kings College United Kingdom</p>	<p><b>Dr Niaz Shah</b> University of Hull United Kingdom</p>	<p><b>Dr Jamie Shea</b> NATO</p>
<p><b>Dr Marcel van Loon</b> DIVI Netherlands</p>	<p><b>Dr Elspeth Van Veeren</b> University of Sussex United Kingdom</p>	<p><b>Mr Conway Waddington</b> University of Johannesburg South Africa</p>
<p><b>Mr Chris Woods</b> Bureau of Investigative Journalism London United Kingdom</p>	<p><b>Miss Katharine Wright</b> School of Politics University of Surrey United Kingdom</p>	<p><b>Mr Carl Gopalkrishnan</b> Independent artist, Perth Western Australia</p>





**Front cover image**

*There Is Nothing Like A Drone* by Carl Gopalkrishnan, Western Australia

Acrylic paint, photo-stencil, screen print, 22K gold leaf on stretched canvas (2011), 76 x 100cm.

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