

**Impact case study (REF3b)**

<p><b>Institution:</b> UNIVERSITY OF LIVERPOOL</p>
<p><b>Unit of Assessment:</b> UOA4 - Psychology, Psychiatry and Neuroscience</p>
<p><b>Title of case study:</b> Providing Evidence Based Solutions in Criminal Justice and Critical Incidents</p>
<p><b>1. Summary of the impact</b></p> <p>Psychologists at the University of Liverpool (UoL) have made an internationally significant impact on law enforcement and associated agencies, and the emergency and security services with regards to evidence based approaches to critical and major investigations, specifically with regards to developing: (i) educational and pedagogic practices in training senior personnel; (ii) professional standards and guidelines in planning, response and recovery and (iii) evidence based decision support tools to assist in work force planning, efficiency savings and providing a clear evidence base for managing risk. These contributions span several diverse areas including criminal investigation, disaster management, public order policing, child protection and terrorism.</p>
<p><b>2. Underpinning research</b></p> <p>Based on the insight that any contributions made by psychologists to the Criminal Justice Sector must have an empirical basis, Canter (Professor of Psychology, appointed 1994 – currently Emeritus) created a new sub-discipline at the UoL, internationally recognised as ‘Investigative Psychology’. By reference to multivariate models of human behaviour [4] work was conducted on a variety of violent and sexual offences and resulted in the proliferation of a new, evidence based approach to linking crime scene actions to background characteristics (‘criminal profiling’).</p> <p>Alison (Professor of Forensic &amp; Investigative Psychology 1998 – present) extended this focus to explore evidence-based approaches on the use of scenario-based team training. Public inquiries frequently highlight poor decision making as contributing toward disastrous consequences in critical and major incidents. Immersive learning is key in planning for, responding to and recovery from critical and major incidents [3]. Accordingly, Alison assisted in the development of HYDRA and 10,000 volts – two immersive learning technologies now used in six countries to train and debrief multi agency teams (law enforcement agencies and emergency responders) tasked with dealing with critical and major incidents. These technologies have been utilised to conduct a series of research that examines critical incident decision making, with findings being fed back into training to ensure it is evidence led. Findings indicate that various individual, situational and organisational factors can derail decision processes, including uncertainty, risk [11], accountability [12], time pressure and lack of experience [2].</p> <p>Through FBI funding Alison et al. have also conducted a series of research, based on coding of police interviews with terrorist suspects, to identify ‘what works’ in reducing counter-interrogation tactics (CITs). Findings indicate that rapport based interviewing strategies are effective in reducing CITs [1], which has led to the development of the Observing Rapport Based Interviewing Techniques (ORBIT) tool. ORBIT is now being used to conduct national UK counterterrorism training. Additionally, research into records of offender background and behaviour has been conducted that examines pathways to both radicalisation [5] and escalation of child sexual abuse behaviours from non-contact to contact offending [6]. Findings of these two strands of research have led to the development of risk assessment tools to aid with preventing radicalisation (PREVENT), and assisting police to prioritise resources in the investigation of child sex offenders (KIRAT), both of which are used nationally.</p> <p>Based on the identification of problems in escalation of crowd violence during large scale public events, Stott (Reader in Social Psychology 2000 - 2012) conducted a series of ethnographic research to identify the causes of this escalation. Findings indicate that social identity feeds directly into the behaviour of crowds, which has led to a series of recommendations about the management of crowds at football matches and political demonstrations across Europe [9,10].</p>

McGuire (Professor of Psychological Sciences, 1995 – present) has designed one of the first structured UK *Pathfinder* programmes (*Think First*), which draws upon findings of research into ‘what works’ in offender rehabilitation programmes and has been disseminated nationally. McGuire has conducted systematic reviews [7,8] in order to ensure that the pathfinder programme remains research led.

### 3. References to the research

1. **Alison L**, Alison E, **Eintib S**, Noone G, & **Christiansen P**. (In Press). Why Tough Tactics Fail and Rapport Gets Results: Observing Rapport-Based Interpersonal Techniques (ORBIT) to Generate Useful Information From Terrorists. *Psychology, Public Policy, and Law*. Impact Factor: 2.711
2. **Alison L**, Doran B, Long M, **Power N**, & Humphrey, A. (2013). The effects of subjective time pressure and individual differences on hypotheses generation and action prioritization in police investigations. *Journal of Experimental Psychology, Applied*, 19(1), 83-93. Impact Factor: 2.115
3. **Alison L**, Van Den Heuvel C, **Waring S**, **Crego J**, **Power N**, Long A, and O’Hara T. (2013). Immersive Simulated Learning Environments (ISLEs) for researching critical incidents: A knowledge synthesis of the literature and experiences of studying high risk strategic decision making. *Journal of Cognitive Engineering and Decision Making*, 20. DoI. 10.1177/1555343412468113
4. **Canter D**. (2004). Offender profiling and investigative psychology. *Journal of investigative Psychology and Offender Profiling*, 1, 1-15: Impact Factor: 0.848
5. **Cole J**, Cole B, Alison E, and **Alison L** (2010) Free radicals: Stopping extremists before they start. *Jane's Intelligence Review*, 22,18-21
6. Long M, **Alison L**, & McManus MA. (2013). Child pornography and likelihood of contact abuse: A comparison between contact child sexual offenders and noncontact offenders. *Sex Abuse*, 25(4), 370-395 Impact Factor: 2.420
7. **Stott C**, Adang O, Livingstone A, & Schreiber M. (2008). Tackling football hooliganism: A quantitative study of public order, policing and crowd psychology. *Psychology, Public Policy, & Law*, 14(2), 115-141. Citations: 12 Impact Factor: 2.711
8. **Stott C**, Hoggett J, & Pearson G. (2012). ‘Keeping the peace’: Social identity, procedural justice and the policing of football crowds. *British Journal of Criminology*, 52(2), 381-399. Impact Factor: 1.556
9. Van den Heuvel C, **Alison L**, & **Crego J**. (2012). How uncertainty and accountability can derail strategic ‘save life’ decisions in counter-terrorism simulations: A descriptive model of choice deferral and omission bias. *Journal of Behavioral Decision Making*, 25(2), 165-187. Impact Factor: 2.161
10. **Waring S**, **Alison L**, Cunningham S, & Whitfield K. (2013). The impact of accountability on motivational goals and the quality of advice provided in crisis negotiations. *Psychology, Public Policy, & Law*, 19(2), 137-150 Impact Factor: 2.711

Alison secured European Commission funding to work with several EU countries on the child protection KIRAT tool (total fund €1.43m).

#### 4. Details of the impact

Research by this group has led to a number of initiatives and the international adoption of methods that have enhanced the performance of emergency, police and penal services. The new discipline of Investigative Psychology (IP) is now widely influential with over 20 countries (e.g. South Africa, India, Israel, USA) either teaching or containing dedicated IP operational units.

Alison's work expanded focus from the study of criminal behaviour to police decision making. Since 1998 he has worked alongside Prof Jonathan Crego (Metropolitan Police) to develop an immersive simulated learning environment, HYDRA [3]. The research arm at the UoL's Centre for Critical and Major Incidents has been uniquely responsible for directing this technology. In total, over 105,000 officers have been trained in one of 72 HYDRA suites throughout Europe and North America since 2008.

Related technology, 10,000 Volts (10kV), allows teams to debrief and record what they perceive as significant. Over 400 post-major-incident debriefs have been conducted (the London bombings, response to the 2004 tsunami). 10kV has informed reviews on rape investigation planning, construction of counter-terrorism command centres, planning 2012 Olympics security; the methodologies formed part of Eileen Munro's recommendations following the murder of Victoria Climbié [12]. ACPO's Terrorism and Applied Matters Committee concluded that the use of Hydra is good practice and that Hydra and 10kV are the way forward for capacity building [17].

It is difficult to calculate the commercial saving that HYDRA/10kV have had on the UK economy. However, MI5 calculate that between 11/09/01 and 30/09/12, 312 individuals were successfully convicted under the Terrorism Act. Given the catastrophic impact that failure to prevent the 7/7 bombings had (£800m loss), HYDRA is considered a key training function in anticipating such threats.

Stott has been central to the development of crowd management policy through the Home Office's working group on football-related violence [14]. This work fed into similar groups in the EU and is present in the 2010 Handbook on International Police Cooperation and Measures to Prevent and Control Violence and Disturbances in Connection with Football Matches with an International Dimension [15]. The HMIC report on the G20 protests draws many key messages from Stott's research [16]. The 2010 ACPO Manual of Guidance also incorporates a series of recommendations based upon his work [17].

More recently, specific evidence-based risk-management tools have been developed in terrorism and child protection. Cole and Alison received funding from the Office for Security and Counter Terrorism and the National Police Improvement Agency to develop a structured decision making tool for identifying individuals vulnerable to recruitment into violent extremism. The resulting 2009 IVP guidance [18] is now widely used in screening for counter radicalisation initiatives. Since 2009, Alison has worked with Kent Police to develop the Kent Internet Risk Assessment Tool (KIRAT), now the UK's national risk management tool for assessing indecent image offences, defined by Child Exploitation and Online Protection Centre (CEOP) as "the most rigorously tested and widely employed risk assessment tool for IIOC cases" and rolled out nationally in March 2012. DCI Matthew Long (whose PhD on KIRAT was supervised by Alison) now advises the Children's Minister and the Prime Minister's office with respect to managing indecent imagery. The success of KIRAT led the European Commission to the recent approval of the Fighting International Internet Paedophilia Project (FIIP), to evaluate the applicability and validity of KIRAT, providing a funding package of £1.1m with UoL and police forces from five countries. Preliminary data indicate that KIRAT has suppressed 20% of IIOC offenders from committing contact offences in Kent: 338 children have been safeguarded from contact abuse since KIRAT was applied across Kent Police in 2009/2012.

In rehabilitation, Ministry of Justice research showed that the *Think First* programme was the most widely used, with the highest throughput of any programme, associated with a reduction of 26.4% in re-offending amongst completers [19]. The UK is perceived internationally as having led the

process of implementing evidence-based practice in criminal justice and this leadership stems from the leading research at UoL. McGuire's materials have been translated into Spanish, Swedish, Turkish, Cantonese, and delivered in correctional services in four Australian states. McGuire gave evidence to the House of Commons Justice Committee for its *Justice Reinvestment* report (2009) [20] and as a CSAAP member was recently (2013) asked to review ministerial policy guidance on *Evidence Based Commissioning*. He has been an invited speaker at a total of 132 events in the UK and 19 other countries, has provided consultation to justice departments in 12 countries; and was 2012 recipient of the Research Award of the International Corrections and Prisons Association.

### 5. Sources to corroborate the impact

Each source listed below provides evidence for the corresponding numbered claim made in section 4 (details of the impact).

11. HYDRA and 10,000 Volts: A Report on the Investigation by Cambridgeshire Constabulary into the Murders of Jessica Chapman and Holly Wells at Soham on 4 August 2002: Summary of Conclusions and Recommendation.  
<http://www.hmic.gov.uk/media/investigation-by-cambridgeshire-constabulary-20040530.pdf>
12. The Munro Review of Child Protection: Final Report (see para 4.35).  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/175391/Munro-Review.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/175391/Munro-Review.pdf)
13. Parliamentary question asked by Mr Watson and answered by Mr McNulty on 9 July 2007.  
<http://www.publications.parliament.uk/pa/cm200607/cmhansrd/cm070709/text/70709w0032.htm>
14. A European study of the interaction between police and crowd of foreign nationals considered to pose a risk to the public order. Stott, C. J. & Adang, O (2003) Policing Football in the European Union: Understanding and Managing risk. Second preliminary report of the European study of crowd police relations. ESRC Final Report, 2004.
15. European Union Council Resolution concerning international police cooperation to prevent disturbances at football matches dated 3<sup>rd</sup> June 2010. Official Journal of the European Union. 2010/C 165/01. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2010:165:0001:0021:EN:PDF> (The handbook is in an annex to the resolution).
16. Adapting to Protest. (2009). Her Majesty's Inspectorate of Constabulary.  
<http://www.hmic.gov.uk/media/adapting-to-protest-20090705.pdf>
17. Manual of Guidance on Keeping the Peace. (2010). ACPO.  
<http://www.acpo.police.uk/documents/uniformed/2010/201010UNKTP01.pdf>
18. Identifying Vulnerable People: "PREVENT, police and schools"  
<http://www.acpo.police.uk/documents/TAM/2010/201007TAMPVE01.pdf>
19. Hollis, V. (2007). Reconviction Analysis of Interim Accredited Programmes Software (IAPS) data. London: Research Development Statistics, National Offender Management Service. This provides independent evidence of the impact of programmes including Think First on "actual" as compared to "predicted" reconviction rates at two year follow-up.  
[http://books.google.co.uk/books/about/Reconviction\\_Analysis\\_of\\_Programme\\_Data.html?id=ku90kgEACAAJ&redir\\_esc=y](http://books.google.co.uk/books/about/Reconviction_Analysis_of_Programme_Data.html?id=ku90kgEACAAJ&redir_esc=y)
20. Cutting Crime: the case for justice reinvestment. (2009). House of Commons Justice Committee.  
<http://www.publications.parliament.uk/pa/cm200910/cmselect/cmjust/94/94i.pdf>