



COMP6445 – Digital Forensics

Term 3 2019 - Week 5 part 1

15 October 2019

Topics for this lecture

Dealing with disturbing cases and self-care

1. Introduce today's lecture and a word of caution about what we are going to discuss
2. Recognizing distress and self-care
3. Short break to reflect (and time to step out if you want to)
4. Dealing with disturbing cases

CAVEAT

I am not a psychologist and can only speak of my own experience and offer some of the suggestions of those more qualified than me



Practitioner wellbeing

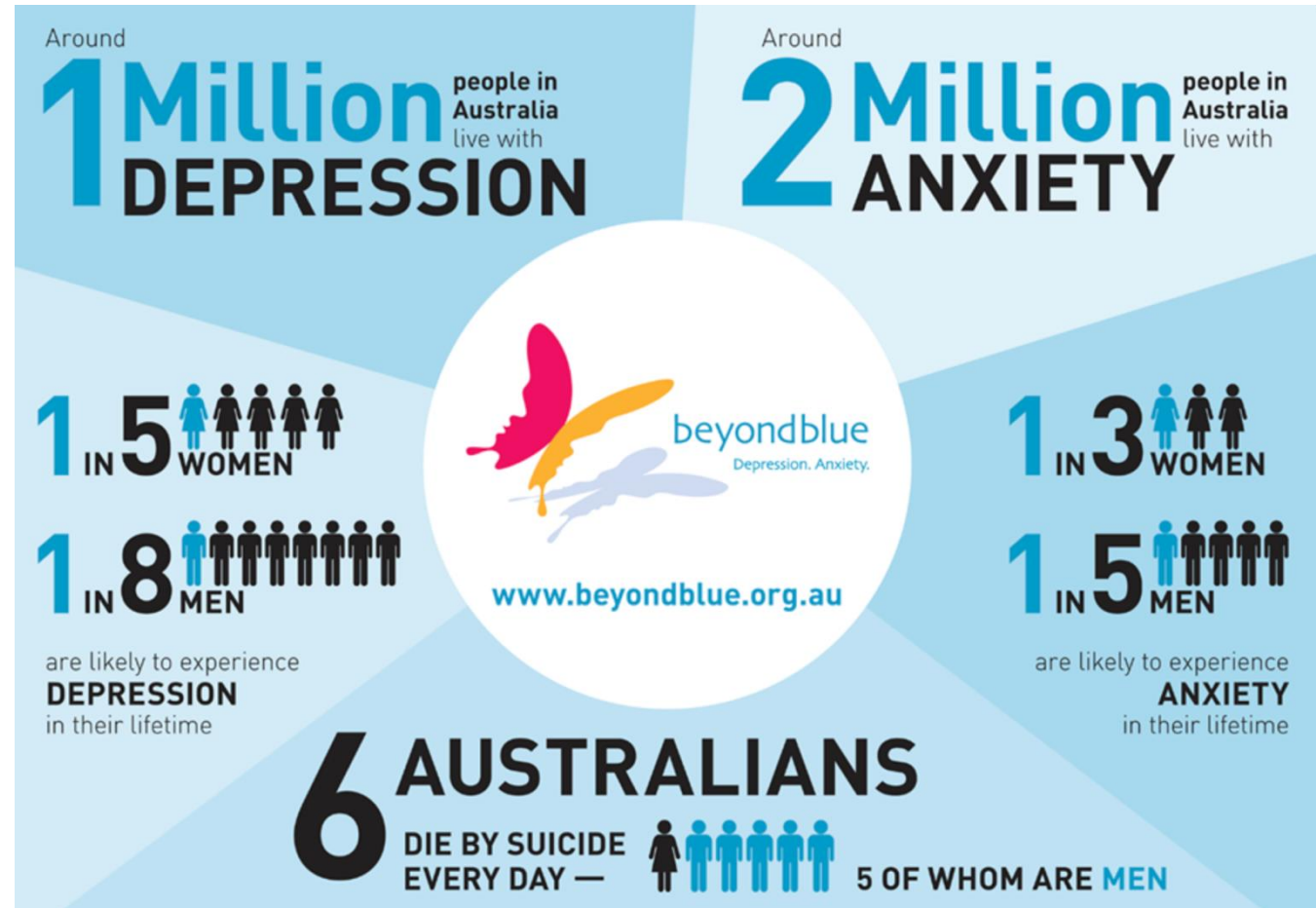
- As a digital forensic practitioner (and expert) you may come across emotionally disturbing material.
 - It might be disturbing because of its content or because it causes you to think about yourself (e.g. a feeling of helplessness) or your loved ones (e.g. what if something happened to them)
- Without appropriate coping strategies, a practitioner can experience trauma. An increasing number of Australian digital forensic practitioners are being diagnosed with PTSD
 - a consistent theme across jurisdictions across Australia and internationally
- Some examples I have come across are and I have found disturbing are:
 - Child pornography and other stories, images or movies of violent sexual abuse;
 - Jihadist material including images or movies of violence e.g. decapitation and war wounds;
 - Cults and the occult;
 - Maternal infanticide;
 - Giving evidence in capital cases or where extra-judicial outcomes are expected
 - for me these have been in China, Saudi Arabia, Vietnam, Malaysia and America.

Why are we talking about this?

- Because in the past we haven't been talking about this
- Too many digital forensic practitioners are suffering mental health issues ranging from anxiety to PTSD
- Its not good enough to say: "*its part of the job – toughen up*"



According to Beyond Blue



According to SafeWork Australia

7,200 AUSTRALIANS
are compensated each year for
work-related **mental health conditions**



\$543 MILLION
is paid in workers' compensation
for work-related mental
health conditions
ANNUALLY



Compensation claims involving
mental health payments are
\$24,500 PER CLAIM
compared to **\$9,000**
for all other claims



Time off work is
15.3 weeks
compared to
5.5 weeks
for all other claims

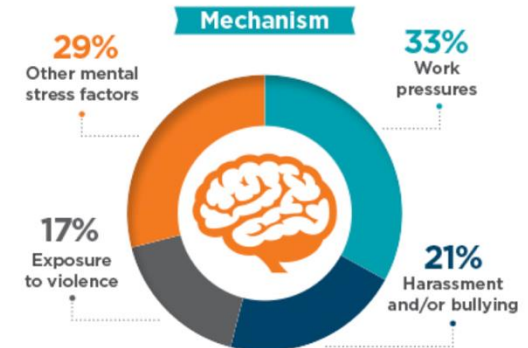
Depression costs
Australian businesses
\$8 billion per annum
in presenteeism and sick leave -
220% higher
than physical sicknesses.

6% of all workers comp claims
are for mental disorders



Types of mental disorders

Work-related stressors



Work-related mental stress is caused
by prolonged and/or repeated
exposure to work related stressors.

Most at risk occupations



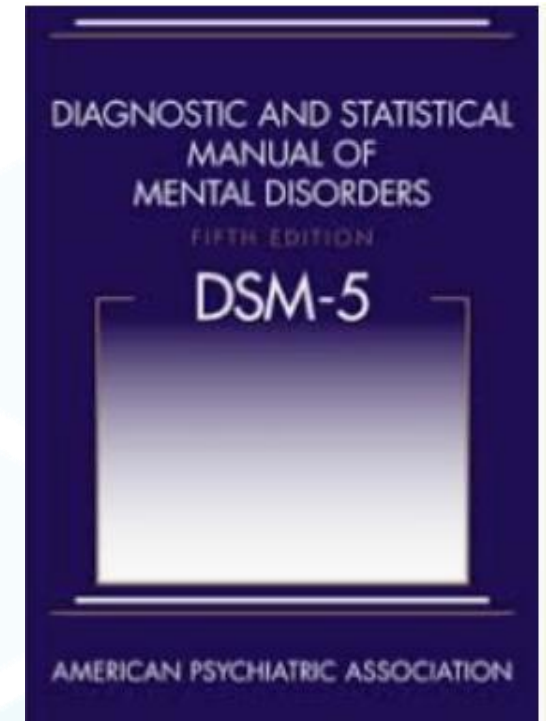
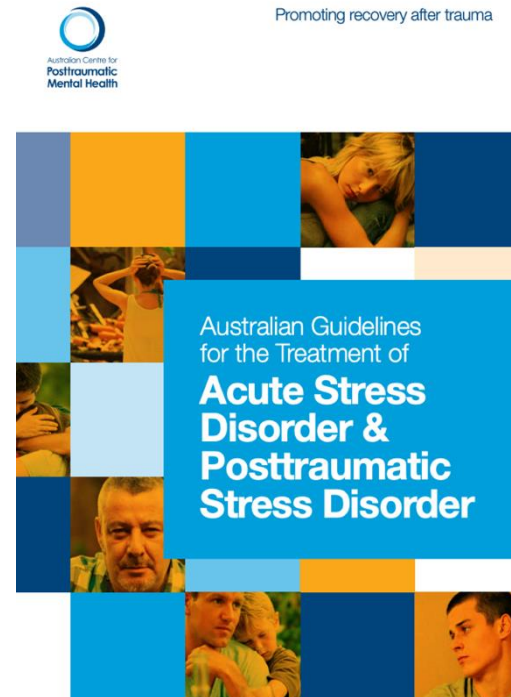
Source: <https://www.safeworkaustralia.gov.au/topic/mental-health>

Some of the topics you might find disturbing...



Diagnosing emotional trauma

- Exposure to a **potentially traumatic event (PTE)**
 - PTE = any threat, actual or perceived, to the life or physical safety of the individual, their loved ones or those around them
 - Direct or indirect
 - Single occasion or repeatedly
- Intentional acts of interpersonal violence and prolonged or repeated events are more likely than natural events or accidents to result in a traumatic response
 - What a digital forensic practitioner might become exposed to fits this description

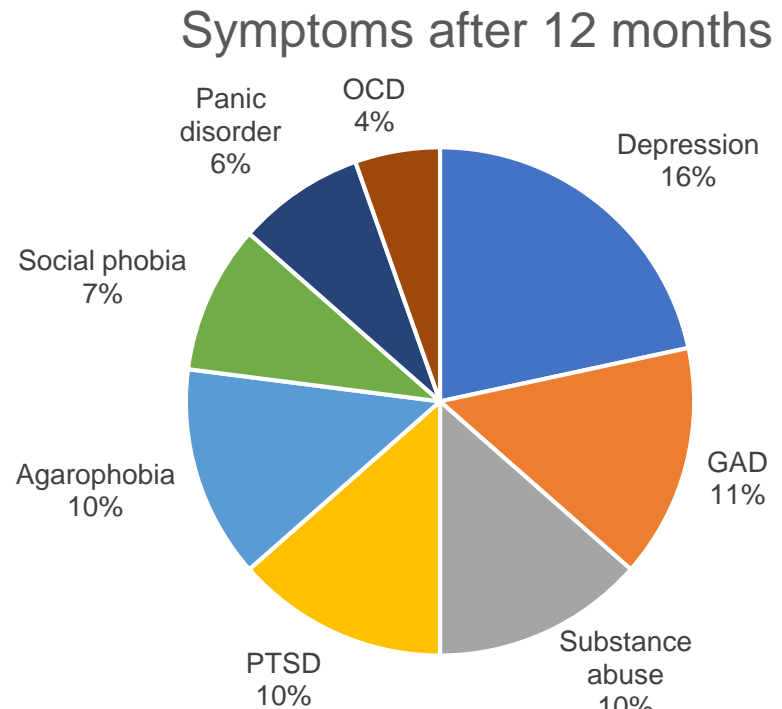


Australian guidelines based on DMS IV (V is the current edition)

Acute stress and PTSD

- A degree of psychological distress is very common in the early aftermath of traumatic exposure and can be considered part of the normal response
- In cases of severe traumatic events, most people may be symptomatic in the initial fortnight after the event
- Traumatized people are likely to experience emotional upset, increased anxiety, and sleep and appetite disturbance. Some will have additional reactions such as fear, sadness, guilt or anger
- When the individual's psychological distress following exposure to a traumatic event persists, and is severe enough to interfere with important areas of psychosocial functioning, it can no longer be considered a normal response to traumatic exposure
- After an individual has been exposed to a traumatic event, he or she may experience significant distress and/or impairment in social, occupational or other important areas of functioning. When this lasts longer than two days, a diagnosis of **acute stress disorder** (ASD) may be considered
- **Posttraumatic stress disorder** (PTSD) has six criteria:
 - The experience itself e.g. fear, helplessness or horror. Unwanted thoughts and physical reactions
 - Re-experiencing, avoidance and numbing, or hyperarousal
 - Clinically significant distress or impairment in social, occupational or other important areas of functioning
 - Arousal symptoms, including reckless and self-destructive behaviour

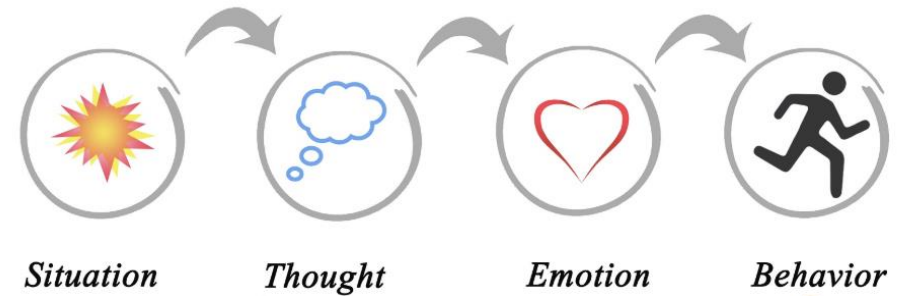
Acute stress and PTSD (cont)



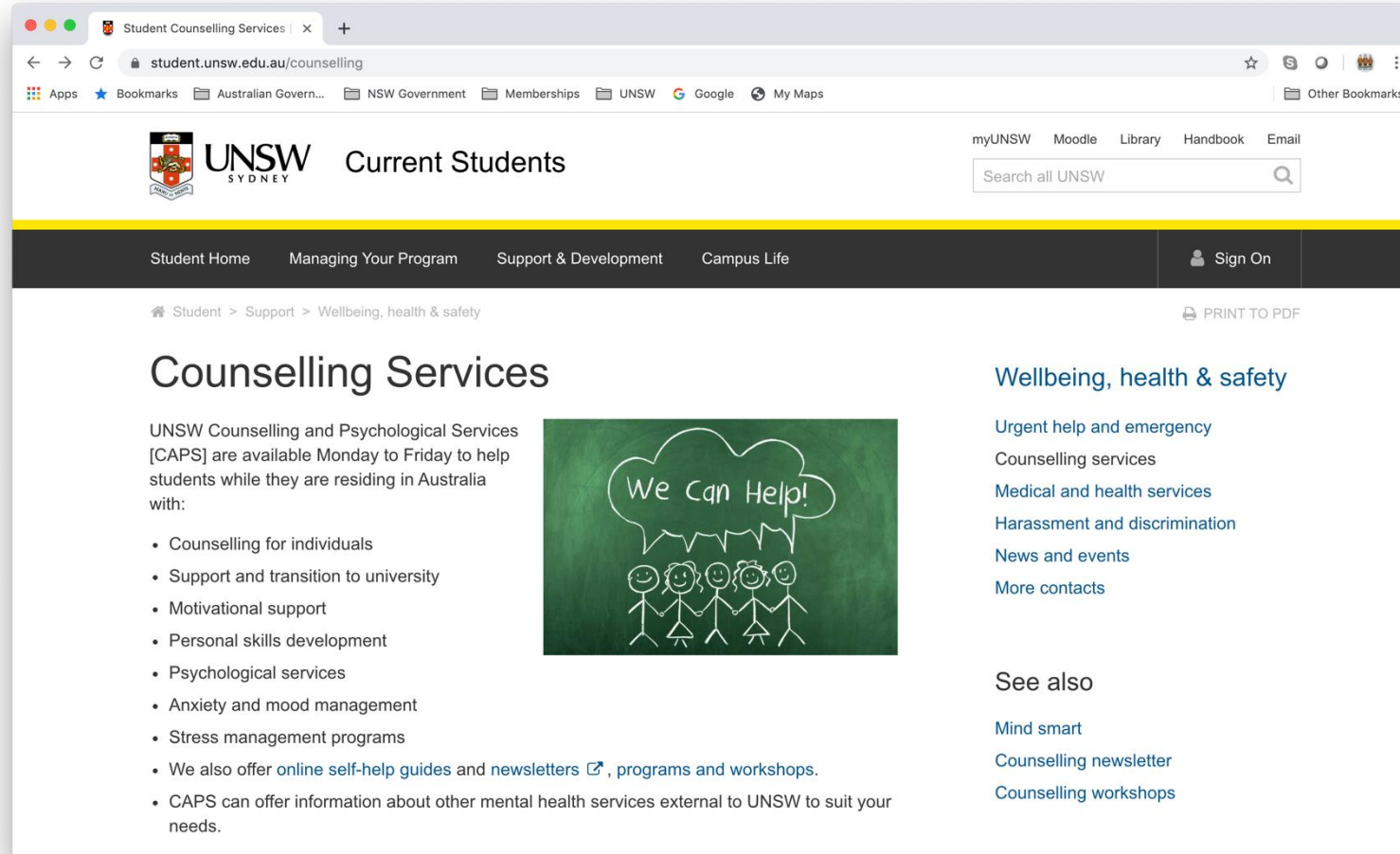
- PTSD is specified as
 - **Acute** when the duration of the symptoms is less than three months
 - **Chronic** if the duration of the symptoms is three months or more
 - **Delayed onset** where the symptoms become apparent 6 months following the event
- **Comorbidity** refers to related issues which also need to be treated
 - E.g. substance abuse, depression, terminal illness, brain or physical injury
 - May be more urgent than treating PTSD

Interventions

- Interventions may be psychological (i.e. exposure and/or cognitive behaviour therapies) and/or pharmacological (i.e. drugs)
 - Better to avoid/manage exposure and to prepare those who will be exposed e.g. emergency services, medical, forensic examiners, etc
- Managing exposure is also an effective mechanism
 - Plan examinations to reduce volume
 - Introduce opportunities to de-stress
 - Monitor reactions (self, team, friends, family and professionals)
- Avoid re-exposure
 - Viewing disturbing materials is likely to re-kindle pre-existing trauma
 - Veterans
 - Victims – some victims drawn to forensic investigation as a means of empowerment



Seeking help



The screenshot shows a web browser window with the URL student.unsw.edu.au/counselling. The page features the UNSW Sydney logo and a navigation bar with links like 'Student Home', 'Managing Your Program', 'Support & Development', and 'Campus Life'. A search bar is also present. The main content area is titled 'Counselling Services' and includes a list of services offered by UNSW Counselling and Psychological Services (CAPS). A central image shows a chalkboard with the text 'We Can Help!' and a drawing of five stick figures holding hands. To the right, there is a sidebar with links for 'Wellbeing, health & safety' and 'See also'.

Counselling Services

UNSW Counselling and Psychological Services [CAPS] are available Monday to Friday to help students while they are residing in Australia with:

- Counselling for individuals
- Support and transition to university
- Motivational support
- Personal skills development
- Psychological services
- Anxiety and mood management
- Stress management programs
- We also offer [online self-help guides and newsletters](#), [programs and workshops](#).
- CAPS can offer information about other mental health services external to UNSW to suit your needs.

Wellbeing, health & safety

- [Urgent help and emergency](#)
- [Counselling services](#)
- [Medical and health services](#)
- [Harassment and discrimination](#)
- [News and events](#)
- [More contacts](#)

See also

- [Mind smart](#)
- [Counselling newsletter](#)
- [Counselling workshops](#)

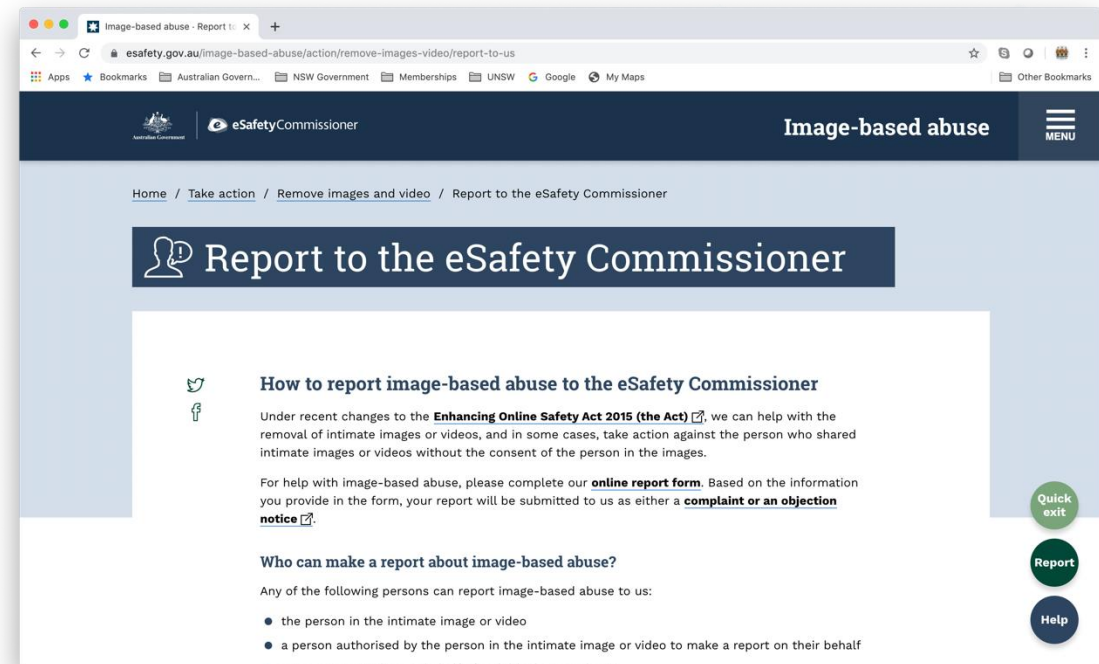
<https://student.unsw.edu.au/counselling> and <https://student.unsw.edu.au/suicide-and-self-harm>

Before we go further, we are going to have a short break

- Take the time to decide whether or not you want to step out for a while
- If you think the topic will disturb you, please step out
- The case material presented will not be examinable
- Recognising anxiety through to PTSD and coping mechanisms will be examinable

Child pornography, violent sexual abuse and jihadist material

- Probably the most researched of the work related stressors confronting digital forensic examiners
- The research until recently has focussed on investigators, prosecutors, judges and those prevent the spread of such material
- Compounded because it is difficult, and may be unethical or illegal, to share with friends and family
- Digital forensic examiners still need to follow laws regarding illegal content
 - Ensure it is legal for you to access the material (e.g. legal exemptions based on employment, Court order, clearances, etc)
 - Understand who can listen – not all counsellors qualify for privilege



Jihadist material

- Asked by then Attorney-General to assist Public Defender
 - Had to be seen to be providing a fair trial
 - Only experts with Top Secret clearance who were not directly employed by a security agency
- Over two weeks my team and I had to examine and review eight hard disk drives of jihadist material relating to an upcoming terrorism trial (aka Pendennis)
 - Pictures and videos of war and horrific injuries
 - Videos of torture and beheadings
 - Instructional material e.g. bomb making
 - A whole lot of other related material e.g. propaganda and religion
- First time such an exercise was contemplated in Australia
 - All team cleared to Secret or Top Secret

- Apart from the material, it quickly became apparent that we were ostracised by close associates who were not privy to the AG's request
 - Became worse as we discovered problems with the investigation (leave what these were to transcripts and wikileaks)
 - Became apparent that we were also being monitored
- Strategies for team care during review
 - Live a work as a team in a hotel room
 - Schedule breaks and activities – physical and leisure
 - Daily discussions with barrister
 - Monitored by trained psychologist
 - Two week holiday immediately afterwards
- Ongoing strategies
 - Engage professional counselling service for monthly individual sessions
 - Annual interviews
 - After care provided by ASIO/Defence



SUBPOENA TO APPEAR

IN THE SUPREME COURT OF
NEW SOUTH WALES
CRIMINAL DIVISION
BEFORE WHEALY J

FILE NO. 2007/1045 SC RM

REGINA

AGAINST

ABDUL RAKIB HASAN AND OTHERS

TO: AJOY GHOSH



You are hereby required to attend, for the purpose of giving evidence before the Supreme Court of New South Wales (Criminal Division) at Sydney West Trial Court, Parramatta.

On 3 September 2008
At 10 a.m. on behalf of the accused.

And that you appear each day until the case is completed or until you are excused by the Court.

If you do not comply with this subpoena you may be arrested.

Given under my hand at Parramatta in the said State this twenty eight day of August in the year two thousand and eight.

REGISTRAR

Leave is granted to serve this subpoena no later than 4.00pm on 5 September 2008

BY ORDER,
PRESIDING JUDGE

- Vindicated years later by Wikileaks (see <https://wikileaks.org/spyfiles4/>)

The Sydney Morning Herald

TECHNOLOGY GOVERNMENT IT

NSW Police use hacking software to spy on computers and smartphones: WikiLeaks data

By [Ben Grubb](#)

Updated September 15, 2014
— 4.35pm, first published at 2.28pm



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NSW Police are using sophisticated hacking software to spy on smartphones and computers during criminal investigations, according to documents published by WikiLeaks on Monday.

[FinFisher](#), also known as FinSpy, is surveillance software sold by German company Gamma International. The software is typically used by intelligence and policing agencies to break into computers and mobiles and can secretly log keystrokes and take screenshots.

It can also remotely capture Skype and instant messenger conversations and take control of computer microphones and web cameras to listen in.

The documents show NSW Police purchased approximately \$2.5 million worth of licences for the software, starting in September 2011. They reveal the agency has held nine licences for FinSpy, FinFly, FinIntrusion, FinSpy Mobile and FinFireWire over the past three years.

Maternal infanticide

- Kathleen Folbigg, accused and found guilty of killing four of her children between 1989 and 1999
 - Initially thought to be SIDS-related (natural deaths)
 - Her trial in 2003 was one of my earliest Legal Aid cases
- Keli Lane, former water polo champion found guilty of child murdering her first baby Tegan in 1996.
 - Kept Tegan's birth (and death) a secret
 - Not charged until 1999
- Rachel Pfitzner, who strangled her 2-year-old son Dean Shillingsworth in 2007 and dumped his body in a duck pond
 - Community rallied around to support family



Secret Recordings Found In Keli Lane Case

Could this be the key to the convicted child killer's release?

Eden Jones

WhimM.com.au MARCH 20, 2019 9:07AM



A file photo of Keli Lane arriving at the Supreme court. Image: News Corp

News Corp Australia

Advertisement

Keli Lane's defence team have said that previously unreleased secret police recordings could hold crucial answers in the convicted child killer's baffling case.

In 2010 a jury found Lane guilty of murdering her two-day-old daughter Tegan after they left Auburn Hospital in Sydney on September 14, 1996.

Capital cases

- Chinese cases in 1999 were my first capital case
 - Happened to be teaching in Beijing College of Law and Politics (via UTS) and didn't know I would be called upon
 - In those days, the Court had to witness the execution
- Other capital case in US
 - Whilst the accused was sentenced to death, I don't know if the executions have been carried out
 - Have been involved in several "Justice Projects" that has seen wrongly accused being freed/pardoned or sentenced for a lesser crime
- Last capital case in Saudi Arabia
 - Asked to assist an international delegation tasked with oversighting a fair trial by international standards for Abdullah al-Asiri who in 2009 attempted to assassinate the Minister of the Interior (Crown Prince Nayef) and his co-accused
 - IED inserted in his rectum which he exploded when paying respects to Nayef during Ramadan
- Think about how you would feel:
 - Knowing your work will result in someone's death
 - Knowing your work will save someone from dying



Chinese hackers reportedly get death sentence

Clare Haney (Computerworld)
04 January, 1999 12:01



Mainland China is continuing its crackdown on alleged Internet-related crimes, reportedly sentencing to death on December 28 two men accused of hacking into a bank computer network and stealing 260,000 renminbi (\$US31,400).

The two men -- Hao Jinglong and his brother Hao Jingwen -- were sentenced to death late last year by the Yangzhou Intermediate Court in Jiangsu province, according to a Reuters report. The pair were accused of breaking into and installing a controlling device in a bank computer terminal in a branch of the Industrial and Commercial Bank of China, the report said. Hao Jinglong was previously an accountant at the Zhenjiang branch of the bank, the report added.

After opening 16 different bank accounts in September, the brothers used the controlling device to electronically transfer 720,000 renminbi in non-existent deposits into the various accounts, the report said. The duo was then able to withdraw 260,000 renminbi from eight different bank branches before their actions were detected and all the money was recovered by the bank, the report added.



Discussion

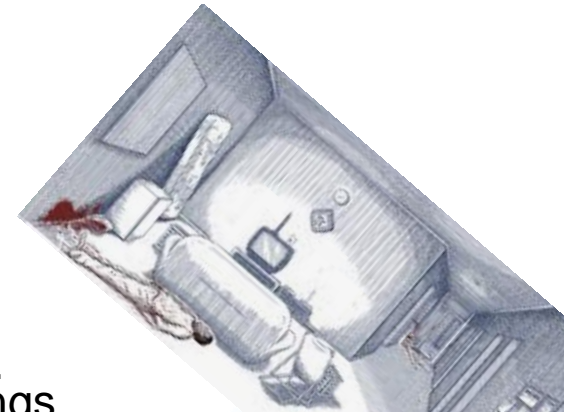
- Discussion based on the two cases included in the pre-reading:
- What aspects did you find disturbing
- Who can you discuss it with
- How would you start a coping discussion with:
 - Your peers
 - Your loved ones
- Anything you feel you would like to explore more

• Sef Gonzales

- Murdered mother, father and sister. Cover up based on business dealings with Philippine criminal gang
- Initially played out in media with outpouring of support for the young “victim”
 - Challenge to set aside pre-conceptions based on media reporting
- Examination of computer discovered evidence of prior attempts to poison mother

• Ram Tiwary

- Student on scholarship
- Murdered flatmates in their apartment, a short walk from campus
- Media attention
- Places were familiar as were some of the people



Short break – 5 mins

And then Week 5 part 2:

- Mac forensics