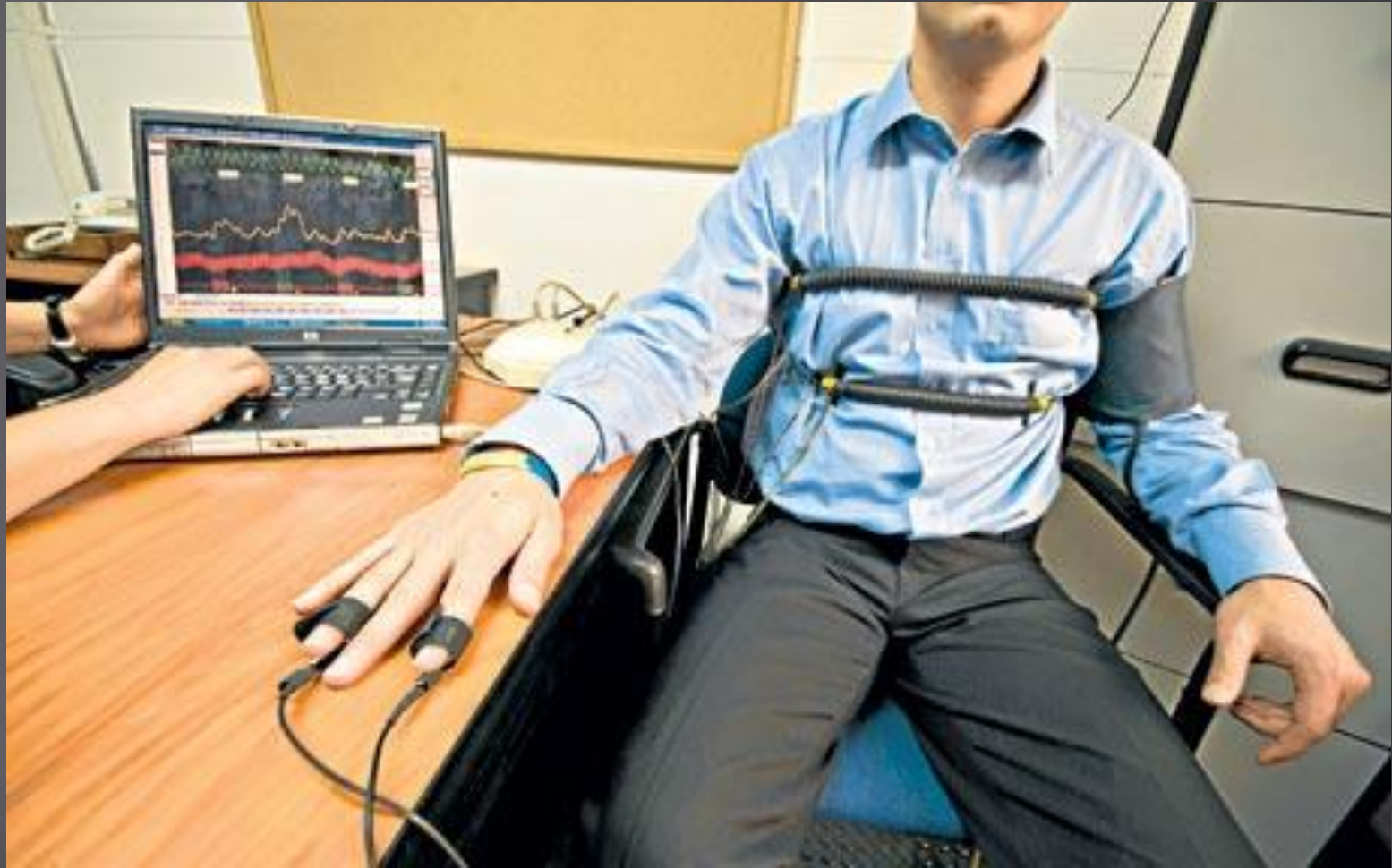


The Utility of Polygraph with Mentally Disordered Sex Offenders

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What is Polygraph?

- ▣ scientific instrument which records and displays psychophysiological arousal associated with lying
- ▣ measures recorded include relative changes to blood pressure, breathing movement activity and electrodermal activity in the palms or hands, and changes in pulse blood volume, with a finger sensor (PLE)
- ▣ Activity sensors to detect countermeasures
- ▣ autonomic responses (activated by the sympathetic ANS) indicative of fear during a series of questions

Truth Verification



Lie Detector Testing?

How does it work?

- ▣ 3 types of questions concerning the matter under investigation: relevant, irrelevant and comparison
- ▣ All questions require a “yes” or “no” response
- ▣ Relevant questions are very specific and tap into the issue of interest
 - *“did you sexually touch your daughter’s breast?”*
 - *“did you ever touch Jane’s vaginal area?”*



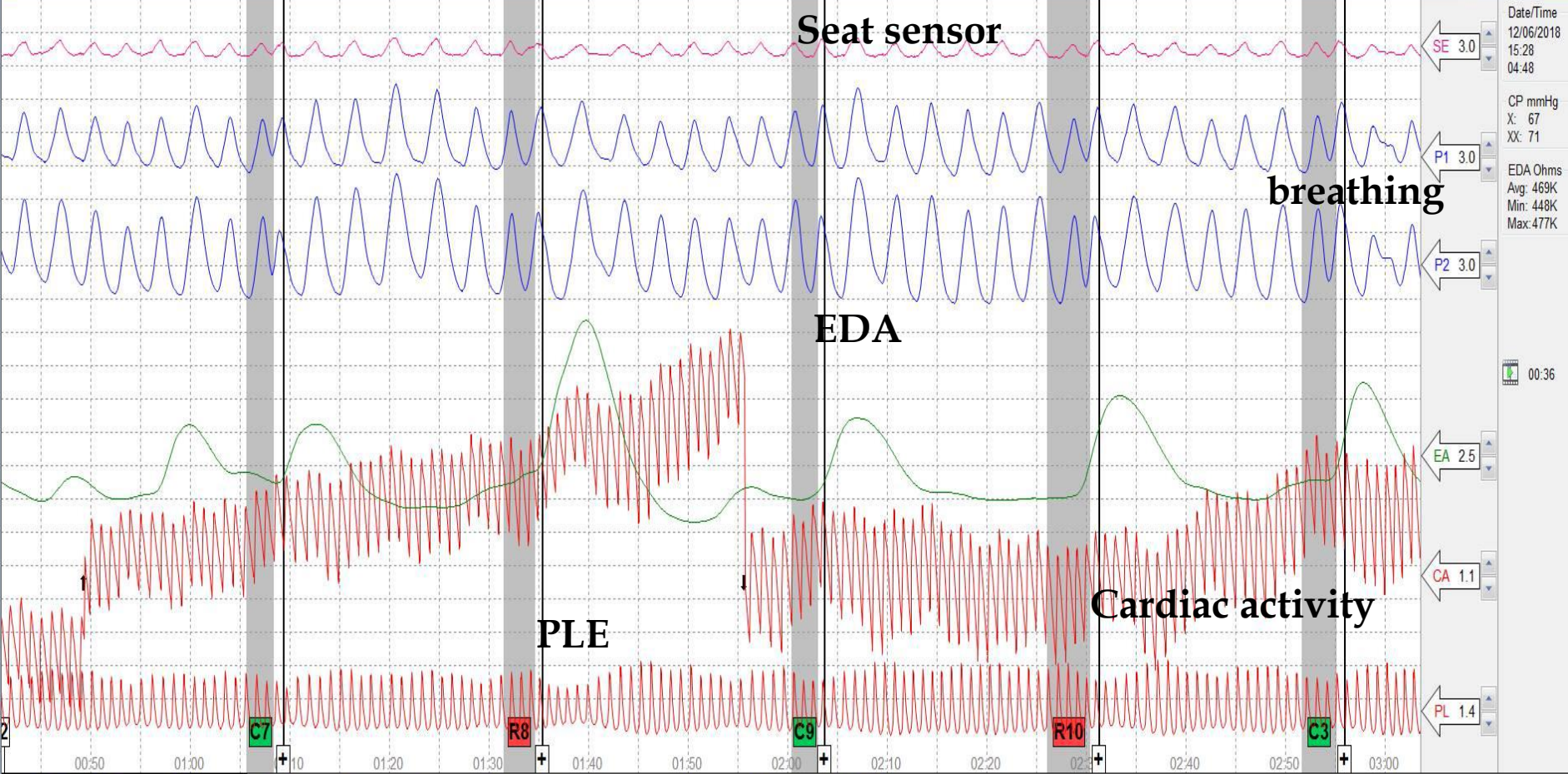
How does it work?

- ▣ Comparison questions are unrelated to the specific incident but emotionally provocative for truthful subjects, and such that both truthful and deceptive subjects are likely to respond 'no' to (PLC)
 - *e.g. "Have you ever lied to create a false impression of yourself?"*
- ▣ DLC directs the examinee to lie about a known behavioural issue that is not related to the relevant issue
 - *e.g. "Have you done anything you wouldn't want your friends or family to know about?"*





[As Recorded] 14 Joe 1 (Series 1, Chart 4 - MGQT) BM23JJ



SR2 (Y) Regarding your index offence, do you intend to answer each question truthfully?



X I1 SR2 C7 R8 C9 R10 C3 R4 C5 R6 XX

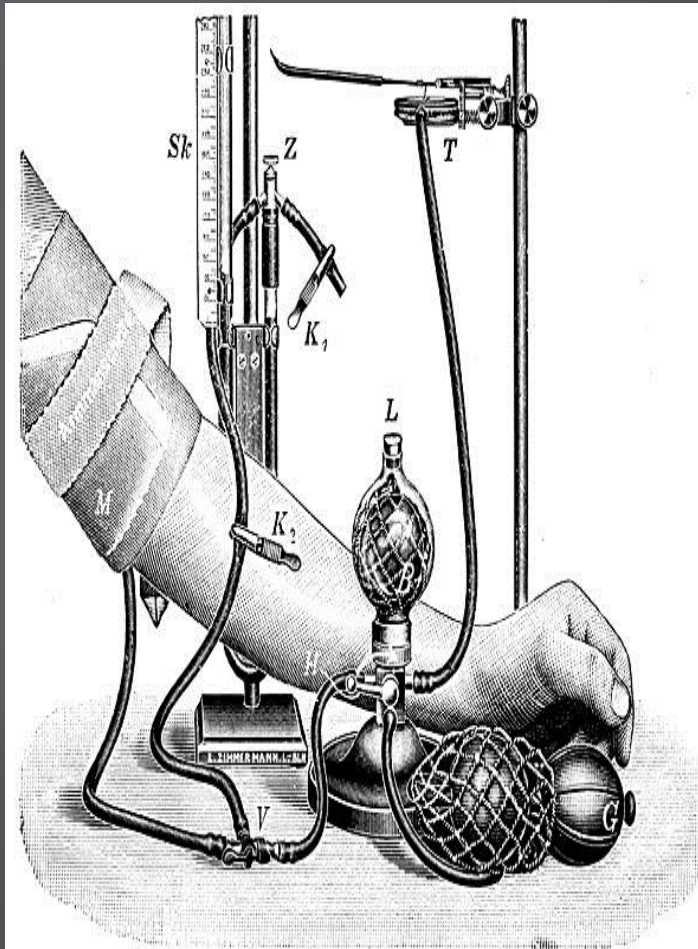
OTH OS EI EE PW WRQ MI TI AI BI WU CA MV T DB C CT SW SNF Y SZ LGH SLP B



Test Structure

- ▣ Pre-Test interview
 - Informed consent
 - Suitability (health)
 - Acquaintance test
 - Structured interview – background, facts relating to issue under investigation
 - Question construction and review
- ▣ Test
 - 10-12 questions, minimum of 3 charts, 3-4 RQ's
 - Chart analysis
- ▣ Post-Test interview

History of Polygraph



- ▣ Aid in detecting deception in criminal cases
- ▣ Employment screening
- ▣ Post-conviction sex offender testing PCSOT
- ▣ more recently domestic violence
- ▣ used in 55 countries worldwide (2018)
- ▣ US v. Frye (1923) - lacked validity
- ▣ Daubert v. Merrell Dow Pharmaceuticals (1993)
- ▣ Offender Management Act (2007)

Offender Management Act 2007 - S30

30 Use in criminal proceedings of evidence from polygraph sessions

(1) Evidence of any matter mentioned in subsection (2) may not be used in any proceedings against a released person for an offence.

(2) The matters so excluded are —

(a) any statement made by the released person while participating in a polygraph session; and

(b) any physiological reactions of the released person while being questioned in the course of a polygraph examination



Theoretical Underpinnings of Polygraph

- ▣ Bogus Pipeline
- ▣ Psychological Set – Saliience
- ▣ Orienting Response Theory
- ▣ Cognitive Dissonance
- ▣ Behavioural Conditioning framework and learning theory

Criticisms of Polygraph

□ Theoretical

- Lack of a valid theory underpinning the effects of polygraph. Without this it lacks construct validity

□ Ethical

- Bogus Pipeline – manipulative. Lead to false positives
- Support by governments in mandating polygraph despite lack of scientific basis
- Interpretations of responses which are not standardised and highly subjective
- Used with an array of groups e.g. DV with little or no evidence of utility
- lack of sufficient peer review of published studies
- Interrogative technique employed to obtain confessions from DI's – increasing likelihood of false confessions
- Damage to therapeutic relationships
- Violation of human rights

Criticisms of Polygraph

Accuracy

- OTA (1983) systematic review suggested laboratory studies accuracy of .832 and field studies of .847
- NRC (2003) reported overall polygraph accuracy of laboratory studies to be .860 (AUC) and .890 (AUC) for field studies
- other studies have reported rates of accuracy between .880 to .980
- Accuracy rates are considered to be overestimated due to selection bias of studies
- Practiced use of countermeasures reduces accuracy
- Variation in examiner skill
- High false positive rates

Criticisms of Polygraph

The background of the slide features three dark silhouettes of human heads in profile, facing left. The first head on the left contains a large yellow question mark. The middle head contains several interlocking yellow gears. The third head on the right contains a glowing yellow lightbulb. The entire background is a light blue and white patterned texture.

▣ Limitations

- ▣ Studies lack adequate controls, RCT's
- ▣ Use of self-report data, both in the pre and post-test interview phases as evidence of accuracy
- ▣ Research needed by those not invested in polygraph
- ▣ Mental Disorder research???

POLYGRAPH EXAMINER

noun.[pol-i-graf ig-zam-in]

Someone who does precision
guesswork based on unreliable
data provided by those of
questionable knowledge.

See also *wizard, magician*

PCSOT Test Types

- ▣ Sexual History Examination (SHE) obtains a fuller and more accurate account of an offender's sexual history, any unidentified paraphilic interests (including deviant sexual fantasies) and offence behaviour
- ▣ Instant Offence test, focusses on the elements of denial (either total or partial denial of an offence)
- ▣ Maintenance Test, focusses upon an offender's compliance with treatment and adherence to conditions mandated by the Court



PCSOT findings- Risk Management

- ▣ Therapists evaluating and/or treating sexual offenders need valid, reliable, information from the sex offender about their past and current sexual behaviours and interest
- ▣ widely acknowledged that past behaviour is the best predictor of future behaviour, and that the frequency of offending, the number of prior victims and the variety of unhealthy behaviours are all empirically linked to the risk of re-offending
- ▣ Increased disclosures - led to better management and supervision of the individual and more appropriate treatment



PCSOT findings- Disclosures

- ▣ increases disclosures of the number of offences, the number of victims, the range of paraphilias, the age of offending onset, and the number of high-risk behaviours, when compared to admissions through clinical interviews and file reviews
- ▣ not uncommon for subjects to disclose information prior to the actual examination
- ▣ 44% of US Sex Offender sample reported they were more truthful with their probation officers following a polygraph (Grubin and Madsen, 2006)
- ▣ polygraph accurately identified truth-telling 92% and deception 82% of the time (Kokish, Levenson & Blasingame, 2005)
- ▣ Increase in cross over offending (age, gender, relationship leads to increase in risk level (Gannon e al, 2008)

PCSOT findings- Accuracy

- ▣ Grubin and Madsen (2006) : reported an overall PCSOT accuracy rate of 85% along with false positives of 15% and false negatives of 16%.
- ▣ Further studies have reported accuracy rates exceeding 90%



Study

- ▣ Mixed methods
- ▣ Polygraph 2004-2018 in high secure Hospital (n=25)
- ▣ SSI polygraph & no-polygraph groups (n=6)

Findings

- 80% made admissions during the pre-test phase of the first polygraph, of which 48% went on to make post admissions (additional high-risk behaviours such as inappropriate sexual fantasises or further undisclosed sexual behaviours)
- more information elicited from the polygraph

Number of disclosures reported pre, during and post polygraph

	Mean (SD)					
	File	Pre-poly	Post-poly	p	Post-hoc P	Effect size (d)
No of Victims	2.12 (2.70)	95.96 (288.53)	95.96 (288.53)	<.001	File - pre-poly <.001 (adj)	1.35
High-Risk Behaviours	11.48 (10.99)	156.44 (309.58)	155.00 (309.97)	<.001	File - pre-poly <.001 (adj) Pre-poly - post poly .002 (adj)	1.50 1.07
No of Paraphilias	7.68 (5.19)	11.72 (5.91)	11.72 (5.93)	.007	File - pre-poly .002 (adj)	1.47
No of inappropriate sexual fantasies	0.72 (0.46)	1.76 (2.83)	1.76 (2.83)	<.001	File - pre-poly <.001 (adj)	1.12
Level of masturbation	0.40 (0.50)	1.16 (2.94)	1.16 (2.94)	.002	File - pre-poly .04 (adj)	.70

Cohen's d effect size: 0.2=small, 0.5=medium, 0.8=large

Pre to post polygraph reporting of sexual behaviour

Increase in masturbation (%)	Use of pornography (%)	Increase in inappropriate Sexual fantasies (%)	Abuse (%)
32%	60%	88%	0%

Sexual behaviours

View/ mast sex arousing images

(newspapers, magazines, books, video, films, TV, computer, DVD,

internet, chat, mobile / text)

Exhibitionism

Public masturbation

Voyeurism

Frottage

Obscene phone calls

Fetishism

Stolen undergarments

Transvestism

Sex beh with same sex (child / adolescence / adult)

Been paid or Paid anyone (gifts / £) for
sexual contact

Cottaging

Striptease clubs / lapdance bars

Inappropriate masturbation fantasies

(e.g. children, rape, bondage)

Incest

Any sexual contact with a ♀/♂ U 16 as an adult

Sexual play with children

Visiting areas where children are for sexual fantasy/contact.

Cruising

Taking photos / images of children

Use of intimidation/ threats/ force for sexual
contact

Bondage

Hurt anyone during a sexual experience Sadism

Use of weapon

Stalking

Bestiality

Necrophilia

Use of intoxicants for sex contact

Touching without permission/ while asleep /
unconscious

Any history of own sexual victimisation

1st, Last, # times



The
Jeremy Kyle
Show

Lie Detector!

SSI - Themes

Main Theme:	Risk	Honesty/ Truthfulness	Impact	Knowledge
Sub-Themes:	<ul style="list-style-type: none"> • Anxiety 	<ul style="list-style-type: none"> • Challenge honesty 	<ul style="list-style-type: none"> • Outcome 	<ul style="list-style-type: none"> • Experience
	<ul style="list-style-type: none"> • Therapeutic Relationship 	<ul style="list-style-type: none"> • Enhance honesty 	<ul style="list-style-type: none"> • Pathway 	<ul style="list-style-type: none"> • Lack of Knowledge
	<ul style="list-style-type: none"> • Risk Reduction 	<ul style="list-style-type: none"> • Choice 	<ul style="list-style-type: none"> • Disclosures 	<ul style="list-style-type: none"> • Accuracy
	<ul style="list-style-type: none"> • Timing 		<ul style="list-style-type: none"> • Future participation 	

Theme 1- Risk

This theme referred to the risk to oneself and liberty, and how it may impact upon therapeutic relationships with professionals involved in their care. It also refers to the timing of a polygraph in the treatment pathway and the possible impact upon risk reduction.

Theme 2- Honesty/Truthfulness

Polygraph is focussed upon truthfulness and seeking the truth. It's suggested that being asked to undertake a polygraph leads to individuals assuming they are considered as untruthful or deceitful. A polygraph can be an explicit challenge to one's honesty and can damage the therapeutic relationship (link to sub-theme therapeutic relationship in the theme of risk). There were also some benefits identified that were considered to aid an honest review of past and present behaviours. The final area of this theme relates to the importance and value of a polygraph being voluntary.

Theme 3- Impact

This theme relates to the impact of the polygraph, in terms of what was recalled of the polygraph for those that undertook it and positive consequences of this. In addition the impact upon the pathway and progression beyond high secure services. There was also an impact identified upon individuals who had a polygraph in terms of the disclosures made and their experience of this.

Theme 4 - Knowledge

The final theme identified relates to pre-existing knowledge of the polygraph prior to taking one, as well as recall of the polygraph itself and the perceived accuracy of the polygraph.



Summary

- ▣ Polygraph enhances disclosures which can inform treatment and in turn reduce risk (inc those where concerns about sexual risk)
- ▣ Disclosures had not been elicited or recorded prior to poly despite treatment
- ▣ Effective with MI & PD
- ▣ Future- extend to other secure settings e.g. MSU

- ▣ If its effective why are we not using polygraph?

“What if there is something deep rooted, something that could come out in there so you are a little bit cagey”

“prove to people they are wrong... I am not a danger to anybody no more”

“ I could put their minds at ease and I suppose my risk would be dropped even lower”

“help share the things that might be in your head... help say them out loud”

“I’m not hiding anything”

“felt like I’d accomplished something... it was just answering questions”

“Why on earth shouldn’t we use it all the time to get the truth out of people... should be used with sex offenders and normal prisoners and normal patients”

“it finds out the truth and makes sure I’m not telling lies”

“I feel that if the polygraph was done at start of when my team started going down that path, I might have taken it”