KPA ’09
Countermeasures
What every examiner should know.

Special thanks to Dr. Charles Honts, Department of Psychology Boise State University, Raymond Nelson of Lafayette Instrument Company, Lt. Walt Goodson of the Texas D.P.S. Polygraph School and Mr. Chuck Slupski of the American International Institute of Polygraph for their contributions to this presentation.
Polygraph Countermeasures

- What must a countermeasure do to beat:
  - A CQT: The countermeasure must reverse the differential reactivity between relevant and control questions so that the comparison questions now evoke stronger physiological responses than do the relevant questions to which the subject is attempting deception.
  - A CKT: The countermeasure must alter the subject’s physiological responding so that the Keys consistently produce smaller physiological response than at least one of the Foils.
  - For both tests, the countermeasure must be applied in a way that is not detectable by the examiner, either through an observation of the subject or the physiological data.
Polygraph Countermeasures

- Definition: Anything that a polygraph subject does in an effort to defeat, or distort the result of, a polygraph examination.
  - General State Countermeasures
  - Spontaneous Countermeasures
  - Specific Point Countermeasures
  - Information
General State Countermeasures

- The General State Countermeasures (GSC) include anything that a subject might do to affect him- or herself throughout the entire test. They include:
  - Drugs
  - Fatigue
  - Anti-perspirant applied to the fingers

- None of the GSCs are likely to be effective against the CQT, although they might be effective against the CKT.
Mental Countermeasures Can be General State CMs

- Include hypnosis, rationalization, mental exercises and dissociation.
  - Hypnosis
    - Attempts to create amnesia
  - Rationalization
    - Self justification to reduce responses
  - Dissociation
    - Mentally isolated from consciousness
Drugs

- Although one poorly designed study found a CM effect for meprobamate on the CKT, other research has shown the following as ineffective against the CKT:
  - Diazepam
  - Meprobamate
  - Ritalin
  - Propranolol
  - Alcohol

- Drug CM studies with the CQT show no effects for:
  - Meprobamate
  - Propranolol (improved true negatives in Gatchel et al 1984)
  - Alcohol
Spontaneous Countermeasures

Definition- Spontaneous CMs are attempts at influencing examination outcome that are conducted without apparent forethought or planning.

- Limited field data on Spontaneous CMs
- Honts and colleagues have examined these in the lab setting.
Examples of Spontaneous Countermeasures

- Honts, Raskin, Kircher & Hodes, 1988 reported the following spontaneous countermeasures:

  **Mental Countermeasures**
  - Relaxation
  - Disassociation
  - Self-deception
  - Imagery
  - Rationalization

  **Physical Countermeasures**
  - Attempts to Control Breathing
  - Biting Tongue
  - Attempts to Control Heart Rate
  - Attempts to Control Physiology
  - Pressing the Toes to the Floor
Spontaneous Countermeasures (continued)

- Honts, Raskin, Kircher & Hodes, 1988 examined the debriefings of subjects from three laboratory studies of the CQT. They found:
  - 60% of the guilty subjects attempted one or more countermeasures
  - None of their innocent subjects reported countermeasures
Spontaneous Countermeasures (continued)

- Otter-Henderson, Honts, & Amato, (2002). Examined the occurrence of spontaneous counter-measures against the RI in an employment screening study. They reported the following:
  - 77.5% of the Guilty subjects attempted one or more countermeasures
  - 30% of the Innocent subjects attempted one or more countermeasures
  - Spontaneous countermeasure use produced no effects of on the physiological data collected
  - In order of frequency (most to least) the following countermeasures were reported:
    - Altered Breathing
    - Mental countermeasures
    - Physical countermeasures
Spontaneous Countermeasures (continued)

- Honts, C. R., Amato, S. & Gordon, A. K. (2001), Polygraph, 30, 1-9, looked for the effects of spontaneous countermeasure by subjects in a large laboratory study of the CQT. They reported:
  - 89.6% of the guilty subjects reported the use of one or more countermeasures
  - 45.8% of the innocent subjects reported the use of one or more countermeasures.
Honts, et al., reported the following countermeasure frequency table:

### Frequency and type of Spontaneous Countermeasure Attempts.

<table>
<thead>
<tr>
<th>Type of Countermeasure</th>
<th>Innocent</th>
<th>Guilty</th>
<th>All Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>44</td>
<td>10</td>
<td>54</td>
</tr>
<tr>
<td>Altered Breathing</td>
<td>24</td>
<td>37</td>
<td>61</td>
</tr>
<tr>
<td>Mental</td>
<td>49</td>
<td>97</td>
<td>146</td>
</tr>
<tr>
<td>Physical</td>
<td>10</td>
<td>10</td>
<td>20</td>
</tr>
</tbody>
</table>

Note, among those subjects reporting countermeasure use, 52.2% (72 of 138) reported attempting more than one countermeasure.
Summary of Spontaneous CMs in Laboratory Testing

- 3 Lab Studies tested effect of Spontaneous CMs
- Findings of all 3 generally consistent.
- Spontaneous CM attempts by guilty subjects are common.
- Spontaneous CMs are **Ineffective**.
  - None of them were successful in producing a false negative outcome (Honts et al studies).
  - Nor were they able to alter the rate of inconclusive outcomes (Honts et al studies).
Honts, et al., examined the impact of CM use on the validity of the CQT

- For guilty subjects there was no effect of the spontaneous use of countermeasures on their numerical scores.
- However, for innocent subjects there was a significant and NEGATIVE relationship between use of countermeasures and their numerical scores $r = -0.43$
  - That is, Innocent subjects who used countermeasures produced more negative scores ($M = -3.91$) than did Innocent subjects who did not attempt countermeasures ($M = 4.55$).
Specific Point Countermeasures

- The Specific Point Countermeasures (SPC) attempt to alter a polygraph test outcome by changing a subject's physiological reactivity at specific places in the test.

- In the first edition of *A Tremor in the Blood*, Lykken claimed that people could easily beat a CQT by biting their tongues or pressing their toes against the floor during the comparison questions. Lykken claimed to have demonstrated this in some classified research for the U. S. Air Force.
Physical SP Countermeasures

- In the early 1980s Honts and his associates began a series of laboratory studies examining the validity of Lykken’s claims about the effectiveness of physical countermeasures.

- These studies all used the laboratory paradigm developed by Raskin and his students at the University of Utah during the 1970s.
PDD Research

- Research on PDD has been conducted in both Laboratory and Field Settings.
- Laboratory Research is valuable because it allows for precise control of experimental variables. It is also possible to study some questions in the laboratory that may be difficult or impossible to study in the field.
- Field Research is important because it allows for research under real world conditions. Unfortunately, it is almost impossible to conduct countermeasure research in field settings.
Honts et al. CM Studies

- Mock-crime lab studies
- All programmed guilty (PG) taught CQT theory and scoring.
- All PG taught how and when to apply CMs
- All PG coached in using CMs unobtrusively but without attaching instrument.
  - Coached (1985a) during mock presentation of similar question series.
  - Coached and given feedback (1985b)
Honts et al., (1985a-coached) examined biting the tongue or pressing the toes during the comparison questions. Only a 4% FN rate.
The Honts et al., Studies

- Honts et al., (1985b coached and given feedback) examined biting the tongue and pressing the toes during the comparison questions. In this study the FN rate was 47%.
Honts et al., (1987-coaching only and feedback) examined biting the tongue and pressing the toes during the comparison questions under higher motivation. FN rate climbed to 70%.
Honts et al., (1994-coached and feedback) examined both physical (PCM) and mental (MCM) countermeasures. PCM produced 37% FN, MCM produced 25% FN.
Countermeasures and the CIT

- Lykken, Ben-Shakkhar and Furedy argue for the superiority of the CIT and have even suggested that the CIT is immune from countermeasures.
- Honts, Devitt, Winbush & Kircher (1996), *Psychophysiology, 33*, 84-92, used mental and physical countermeasures against a CIT-CM coaching provided.
  - Physical CMs reduced decision accuracy from 80% to 10%.
  - Mental CMs reduced decision accuracy from 80% to 40%.
  - Computer algorithm (CAPS, Kircher & Raskin 1988) correctly classified 40% Physical CM group and 80% of the Mental CM group using EDA amp. and RLL.
Results of Honts et al., 1996

CMS and the CIT

<table>
<thead>
<tr>
<th>Category</th>
<th>Lykken Trad</th>
<th>CAPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innocent</td>
<td>90</td>
<td>80</td>
</tr>
<tr>
<td>Guilty</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>Physical</td>
<td>10</td>
<td>40</td>
</tr>
<tr>
<td>Mental</td>
<td>40</td>
<td>80</td>
</tr>
</tbody>
</table>
Countermeasure Information

• A great deal of information available to interested subjects.
  • Maschke, G. W., & Scalabrini, G. J. (2000). The lie behind the lie detector. Available free online at AntiPolygraph.org to everyone.
  • Lots of other material is around, much of it of poor quality.
Some Threats

INTERNET
- Doug Williams
- George W. Maschke & Gino J. Scalabrini

OTHERS
- PassAPolygraph.com
- WikiHow.com
- PolygraphExpert.net
Today is Sunday, May 21, 2006

When are you scheduled for a polygraph test?

Don't even think about taking it until you are properly prepared!

POLICE POLYGRAPH EXPERT DOUG WILLIAMS

With Doug's manual, video/dvd, & personal consultation, you will be properly prepared.

He has the proven expertise and the demonstrated ability to teach you how to

ALWAYS PASS - NO MATTER WHAT - GUARANTEED!
Doug Williams

- USAF (67-69)
- BS degree 1972 in Police Science
- Oklahoma City PD (69-79) Detective Sgt.
- 1972 Grad of Dick Arther’s Nat. Tng. Center
- He states he Conducted 6,000 exams (72-79)? (3-4 daily)
- Testified to congress, talks at colleges and to the media.
Dick Arther’s (2 pneumos) Influence
- Behavior highly indicative of guilt or innocence.
- Go for pretest confessions when possible.
- Inclusive CQs. (Backster invented exclusive CQs)
- Respiration most sensitive and accurate.
- Cardio is second most important. GSR irrelevant.
- Evaluate charts holistically. (Backster invented numerical scoring)
Doug Williams – Pre 1996
Doug Williams – May 2005

Diploma from Dick Arther’s school (1972)
Doug Williams - Today
“THE POLYGRAPH TEST AND THE CVSA (COMPUTER VOICE STRESS ANALYSIS) TEST ARE NOT A LIE DETECTORS. DON’T MAKE THE MISTAKE OF THINKING THAT JUST BECAUSE YOU ARE TELLING THE TRUTH YOU WILL PASS THE POLYGRAPH AND CVSA TESTS! POLYGRAPH AND CVSA TESTS HAVE BRANDED MANY TRUTHFUL PEOPLE AS LIARS! GET MY MANUAL AND PROTECT YOURSELF FROM BEING CALLED A LIAR BY THESE SO-CALLED LIE DETECTOR TESTS!!!”  Doug Williams, Author

“How To Sting The Polygraph”

THE POLYGRAPH TEST IS THE MOST IMPORTANT TEST YOU WILL EVER TAKE! WHY WOULD YOU TAKE IT WITHOUT PREPARING FOR IT FIRST?

“How to Sting the Polygraph” is the first of its kind and the only one ever written by an expert police polygraphist (all the other ones that are available today are...
Searching for the truth about "lie detectors"?

Police polygraph expert Doug Williams will enlighten you!

"The truth is you must be properly prepared if you want to pass!"

"Don't even think about taking a polygraph test without preparing for it first!"

Scientific research proves that over 50% of honest, truthful people will FAIL their tests just because they are nervous!

Don't let that happen to you! I can teach you how to ALWAYS PASS even if you are nervous (or lying) - no matter what... GUARANTEED!
Polygraph.com Sep 2006

Today is September 9, 2006

When are you scheduled to take a polygraph test?

Don’t even think about taking it until you are properly prepared!

Police polygraph expert Doug Williams will get you properly prepared.

He has the proven expertise and demonstrated ability to teach you how to
ALWAYS PASS A POLYGRAPH TEST - GUARANTEED!
Doug Teaches

- 1. Staircase
- 2. Baseline arousal
- 3. Apnea
- 4. High suppression
- 5. Low suppression

![Diagram of Pneumo Reactions]

**EXHIBIT E**

PNEUMO REACTIONS

- Figure No. 1
- Figure No. 2
- Figure No. 3
- Figure No. 4
- Figure No. 5
Exhibit E shows five common pneumo reactions. You must memorize at least one. They are listed in order of most commonly seen, so figure 1 is best.

Simply breathe by the numbers. (1) inhale about 1/3 the normal amount, hold slightly, showing no jagged edges. (2) inhale again, this time about 2/3rds the normal amount, exhale slowly. (3) inhale and exhale the normal amount. (4) inhale again, just a little more air than normal and exhale slowly. Now take two deep breaths and resume your normal breathing.
Doug’s teaching
Baseline Arousal. This pneumo reaction is manipulated by inhaling more than you exhale each time in a series of five small breaths until your last breath, you fill your lungs with slightly more than the normal amount of air, just like you are frightened and gasping for breath. You then take two deep breaths and resume normal breathing.
Doug’s teaching
Figure 1 (2C1) – Figure 2 (2C2)
For those of you who feel inadequate to the task of duplicating a pneumo reaction, the polygraph profession has provided what is known in the trade as a **breathing block**. This reaction is manipulated by simply holding your breath for about seven seconds, a definite no-brainer. Just hold your breath for a few seconds and then resume normal breathing. This is the easiest but it is also the least desirable.
APNEA
Genuine: At Bottom / CM: Elsewhere
- High Panting Suppression. Figure 4 illustrates still another pneumo reaction which is manipulated by simply inhaling a normal amount of air and then taking a series of five to seven shallow breaths with your lungs partially full.
Example High Panting Suppression
“Breathing Outside the Box”
“Breathing Outside the Box”
Low Panting Suppression. Figure 5 is a variation of Figure 4 except that you take five to seven shallow breaths with your lungs almost empty.
Example Effort at Figure 5
A.S. onset on 23C
Stim Test
Attacking the Key (#4)
Too good to be true?
Law of Inequalities – Dr. Gordon Barland

A reaction on a comparison question that’s “too good to be true” is not true. It is probably artificial.

A reaction on a relevant question that’s “too good to be true” is true. It is probably genuine.

DON’T tell examinee it is TGTBT

DON’T show the chart.

DON’T explain what aroused your suspicion.
YOU DECIDE
No Deception Indicated--
Probability of Deception is Less Than .01

Zone/MGQT  Zone/MGQT  Zone/MGQT

Charts Used

<table>
<thead>
<tr>
<th>Charts Used</th>
<th>QIG=</th>
<th>QIC=</th>
<th>Rates: Resp=</th>
<th>Rates: Resp=</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXAMI\CHART1-- MGQTBD3</td>
<td>86</td>
<td>99</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>EXAMI\CHART2-- MGQTBD3</td>
<td>68</td>
<td>98</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>EXAMI\CHART3-- MGQTBD3</td>
<td>88</td>
<td>98</td>
<td>7</td>
<td>7</td>
</tr>
</tbody>
</table>

Spot/Vertical Scores

0.02  3R5  Have you been offered any money to work for a FIS?
0.01  3R8  Have you secretly provided the .. technology to any foreign government?
0.00  3R3  Have you been directed to penetrate the CIA by any foreign intelligence service?

Approximate Signal Weights

Respiration  +0.39
Blood Volume  +0.30
Electrodermal +0.29
CAUTION: a few years ago the polygraph industry came up with a sensor pad that you sit on while taking the test, but don’t worry, it’s a joke. It won’t detect anything if you will be VERY careful, VERY subtle and NEVER tighten more than about half tension. The only way this pad will work is if they inserted it “where the sun don’t shine”. (But if you are really paranoid, I guess you could put a towel or something in your drawers to act as a barrier between the sphincter and the so-called “sensor pad”). Just remember it is almost impossible to be too subtle and it is very easy to over do it, so just take it easy.
Doug: 3 Types of CQs

- Probable Lie (can have time bars)
  - Also called Known Lie
- Irrelevant Qs
- Emotion Provoking Qs (rare)
Doug: Don’t react to initial IRs

You should have no difficulty recognizing these control questions! REMEMBER (If the first two questions are the same or similar to those listed above, they are called introductory question – do not manipulate a reaction to introductory questions.)
SAT CMs

- Examiner may tell you to not answer aloud but to remain silent. Examiner may have you nod or shake head.

- You are to manipulate a reaction to the controls and remain calm on the relevants just like you would if you were answering aloud.
YES Test CMs

- Examiner may ask you to deliberately lie on all the relevants.
- DO NOT manipulate a reaction to ANY of the question when examiner tells you to do this.
Doug’s Nov 2004 advice:

- 1st chart: Sphincter (very subtly) & different respiratory patterns (not a block) on all CQs
- 2d chart: Either resp or sphincter on ONLY ONE CQ (preferably a known lie)
- 3d chart: NO CMs at all
Doug’s May 2005 advice:

- 1st chart: Sphincter (very subtly) & different respiratory patterns (not a block) on all CQs
- 2nd chart: Sphincter only on CQs (preferably know lie CQs)
- 3rd chart: Mental CMs only
Administered in my Polygraph Test Preparation Training Room in Norman, OK.

$1,500

Administered at your location.

$3,000

(plus $1,000 per day travel time & expenses*)

* Travel time outside the greater Oklahoma City metropolitan area is $1,000 per day. For example, conducting a polygraph test training session in which there is one day of travel time each way typically costs $5,000. (Two days travel = $2,000. One day training = $3,000. Total = $5,000)

* Expenses: These consist of first class airline tickets, taxi, hotel, meals & tips.

A retainer is required in advance for anticipated work and expenses.
Training – Doug Williams
Sept 2006

Administered at your location - $5,000 (plus expenses)

(A $3,000 non-refundable retainer is required in advance - the balance of $2,000 is due upon my arrival at your location)
AntiPolygraph.org

- George Maschke 1995

- Excellent polygraph manual with extensive chapter on CMs.

- Very active bulletin board.
"Know thy enemy and know thy self and you will win a hundred battles." -- Sun-tzu, The Art of War.

- George Maschke 2004 – 2007
George Maschke’s Story (according to George Maschke)

- 1983 enlisted as a private in the US Army as an interrogator. Completed the interrogation course at the US Army Intelligence Center, Fort Huachuca, Arizona, and Arabic language training at the Defense Language Institute Foreign Language Center. Served two years as a strategic debriefer in the Arabic language with a Military Intelligence. Rose through the ranks from private (E-1) to sergeant (E-5).

- While overseas, took night courses at the University of Maryland, and in 1987, the Army awarded him a two-year ROTC scholarship to finish his bachelor's degree. Majored in Middle Eastern studies and learned Persian (Farsi) to complement his Arabic. In 1989, he completed his bachelor's degree, received a commission as a second lieutenant in the Army Reserve, and was assigned to the Military Intelligence.

- January 1991, was attached to the FBI's Washington Metropolitan Field Office. Assisted with the World Trade Center bombing. Helped the FBI in the translation of a bomb manual seized from a suspect in the case.

- Helped US Attorney's Office for the Southern District of New York, which was prosecuting the case, translate Arabic documents.
After being released from active duty in the TRADEBOMB case, he completed master's degree before leaving for New York, and continued to work toward a doctorate. In the Army Reserve, was to the J-2 (intelligence) section.

In late 1994, applied to become a Special Agent in the FBI. Took and passed a battery of general exams, and tested in several languages, including Arabic and Persian (Farsi)

On 10 May 1995, the Los Angeles Field Office called him to start work in two weeks as a contract linguist pending agent hire. They schedule a polygraph exam.

On 15 May 1995, he reported to the Los Angeles Field Office for the polygraph exam. Special Agent (SA) Jack Trimarco conducted the pre-employment screening exam

He was told he had shown signs of deception on the questions about unauthorized release of classified information and contacts with foreign intelligence agencies.

Three weeks later he sent a letter to FBI Director Louis Freeh.
Volunteered to become a Technical Reservist to the LAPD Anti-Terrorist Division reviewing Arabic documents. (Technical reservists are volunteers who have a special skill but are not sworn.)

The LAPD scheduled an examination at their headquarters with Ervin L. Youngblood. Accused of employing "countermeasures." LAPD representatives requested he rescind his application as a Technical Reservist.

Around May 1995 his top secret clearance with the Army was due for a periodic review. His clearance had been administratively downgraded to secret pending review, as five years had elapsed since his clearance was granted.

After the FBI polygraph exam, he continued to serve in the Army Reserve in capacities that did not require access to top secret information and was promoted to captain.

In the fall of 1997, he moved overseas to work for an international organization (The Hague, Netherlands).
George Maschke’s Story (continued)

- In January 1999, he had background interview with an Army counterintelligence (CI) agent. States his top secret clearance was being held up because the FBI had reported derogatory information based on the pre-employment polygraph exam.

- In August 1999, security clearance had been upgraded to interim top secret, and he enrolled in the correspondence portion of the U.S. Army's Reserve Component Military Intelligence Officer Advanced Course (MIOAC). This course (at Ft. Huachuca) requires a top secret clearance and must be completed in a timely manner following the correspondence phase.

- Began to speak publicly on polygraph matters. In July 1999 posted under the pseudonym "Captain Jones" on NoPolygraph.com. He began researching polygraphy in earnest.

- In December 1999, wrote an article titled, "The Lying Game: National Security and the Test for Espionage and Sabotage" that was first published on the website of the Federation of American Scientists.
George Maschke’s Story (continued)

- On 18 September 2000, he and Gino Scalabrini co-founded AntiPolygraph.org and published *The Lie Behind the Lie Detector*, a free e-book with chapters on polygraph validity, policy, procedure, and countermeasures. States information on countermeasures is not to help liars beat the system, but to help the truthful.

- 13 December 2000, the Army's Central Clearance Facility moved to revoke his security clearance.

- Unable to complete the Military Intelligence Officer Advanced Course, without a top secret clearance, he was ineligible for promotion from captain to major.

- Twice passed over for promotion, the U.S. Army Reserve notified him he would be discharged as of 1 February 2004.

- Continues to maintain his web site and actively speak out against polygraph.

- In April 2001, spoke before the National Academy of Sciences' Committee to Review the Scientific Evidence on the Polygraph, and I find it gratifying that their final report, *The Polygraph and Lie Detection*. 
Polygraphy is Quackery

"The decision to hire, or not to hire an applicant, should never be based solely on the results of the polygraph examination."
American Polygraph Association

Scientists overwhelmingly agree that polygraph "testing" is junk science. The only "raging debate" pits people who don't yet understand that it's flimflam against the growing number who do.

Our government's stubborn reliance on this pseudoscience poses a clear and present danger: make-believe science yields make-believe security.

This non-profit, public interest website is dedicated to telling the truth about lie detectors that those with vested interests in perpetuating the polygraph don't want you to know.

Did you know it takes less training to give lie detector "tests" than it does to give haircuts? The longest polygraph school (run by the U.S. Government; perhaps its students are slow learners) produces newly minted polygraphers in just 14 weeks -- less than half the time it takes to graduate from a typical barber college. But while barber college graduates can cut hair, polygraph school graduates cannot detect lies.
Gino J. Scalabrini

- Maintains a low profile
- Graduated from Dartmouth College
- Applied for Federal position. Disqualified because of polygraph.
- Affiliated with George Maschke by early 2000.
Influencing Others.

How to Beat a Polygraph Test

THE DIRTY LITTLE SECRET behind the polygraph is that the "test" depends on trickery, not science. The polygraph operator exhorts the examinee to answer all questions truthfully, but secretly assumes that denials to certain questions - called "control" questions - will be less than truthful. One commonly used control question is, "Did you ever lie to get out of trouble?" The polygrapher steers the examinee into a denial, warning that anyone who would lie to get out of trouble is fundamentally untrustworthy. But secretly, it is assumed that everyone - even those truthful about the matter under investigation - has lied to get out of trouble.

The test is scored by comparing physiological reactions to these probable-lie control questions with reactions to relevant (e.g., "Did you do it?") questions. If reactions to the "control" questions are greater, the examinee passes; if reactions to the relevant questions are greater, he/she fails. This simplistic methodology has no grounding in the scientific method and results in many innocent people being wrongly branded as liars.

Polygraph tests also include irrelevant questions like "Is today Friday?" The polygrapher falsely explains that such questions provide a "baseline for truth," because the truth of the examinee's answers will be obvious. But in reality, irrelevant questions are not scored at all and merely serve as buffers between sets of relevant and control questions.

Spies, terrorists, sex offenders, and other criminals who understand the trickery behind the "test" can beat it by covertly augmenting their physiological reactions to the control questions. This can be done by constricting the anal sphincter muscle, biting the side of the tongue, or merely thinking exciting thoughts. Although polygraphers frequently claim they can detect such countermeasures, no polygrapher has ever demonstrated any ability to do so, and peer-reviewed research suggests that they can't. This being the case, why should any reliance be placed on polygraph results? For more information, visit AntiPolygraph.org, a non-profit, public interest website dedicated to exposing and ending polygraph waste, fraud, and abuse.
Como Vencer un Examen de Polígrafo

LO QUE NO QUIERE QUE SEPA del polígrafo es que el “examen” depende de la artimaña y el engaño, no de la ciencia. El examinador del polígrafo exige al examinado que conteste honestamente todas las preguntas, pero secretamente presume que las negaciones a ciertas preguntas, las así llamadas “preguntas de control,” no serán verídicas. Por ejemplo, una pregunta de control común es, ¿Has mentido para no tener problemas? El examinador guía al examinado a contestar no, advirtiendo que cualquier persona que mentiría para no tener problemas es de poca confianza. Sin embargo, secretamente se presume que todo el mundo, hasta los honestos en el asunto bajo investigación, ha mentido para no tener problemas.

El examen se califica por comparar las reacciones fisiológicas a las preguntas de “probable mentira,” contra las reacciones a las “preguntas relevantes,” tales como, ¿Lo hizo Ud.? Si las reacciones fisiológicas son mayores a las preguntas de control, la persona aprueba; si las reacciones son mayores a las preguntas pertinentes, la persona no aprueba. Dicha metodología simplista no tiene nada que haber con el método científico y resulta que muchas personas inocentes sean llamadas mentirosas.

Los exámenes de polígrafo también incluyen “preguntas irrelevantes,” tales como, “¿Es hoy viernes?” El examinador falsamente explica al examinado que dichas preguntas demuestran
George Teaches

- Just say No!
- Complete Honesty-tell examiner you understand PDD and give them a copy of the LBTLD
- Don’t try- drugs, wiggling toes, tack in shoe, meditation, hypnosis, antiperspirant on hands,
George Teaches (continued)

- 2 types of CMs-
  - Behavioral
  - Chart recording
Behavioral CMs

- Make no admissions except minor transgressions to “control” questions and sign no statements,
- Examiners will fake empathy, play on your ego and become aggressive with you in the post test.
- Read the DODPI Interrogation handout.
Behavioral CMs (continued)

- Make a good 1st impression—Arrive early, wear conservative clothing, polish your shoes, minimal make up for women
- You are being watched, bring reading material like Newsweek, National Geographic, Wall Street Journal, PDA, laptop etc.
Behavioral CMs (continued)

- During the pre-test
  - Keep your answers short,
  - Be polite
  - Don’t be chatty or overly friendly,
  - Avoid “yes basically”, “not really”
Examiner Expectations

- Truthful behavior-based on Arther and Reid truthful people may initially express nervousness that will dissipate, they are completely cooperative, emphatically deny the crime,

- Examiner expectation of liars-fidgety, nervous, ambiguously answers, looks away, closes eyes
Head games –”What do you know about PG?”

- Tell examiner heard it is very accurate
- Have a friend in law enforcement who advised them to tell the truth
- Lot more accurate than “voodoo” CVSA
- Eddie Haskell your examiner
- Important!! Don’t memorize the lines in this book. The examiner may recognize it
Identifying CQs

- Look for ambiguity
- Read the examiner
- Give small admissions and see if they modify the question. That will tell you it is a CQ.
- Questions are reviewed in groups
Chart recording manipulations

- Breathing CMs

- Use 15 -30 BPM about 2-4 seconds each. Not too deep.

- Maintain from tubes on to tubes off.
Chart Recording Manipulations (continued)

- As soon as you recognize a CQ or right after answering change your breathing pattern to match one of the DODPI patterns in the TDA manual on the website.
  - Blocking (Apnea)
  - I/E ratio change
  - Slow rate
  - Suppression
Enhance the response by causing a cardio / EDA response. Choose only one of the following:

- **Mental CMs** - count backwards by 7 from a large number or some other difficult math problem. (Use mental imagery - falling off a cliff, meeting a snake, being raped)

- **Tongue Biting** - bite the side of tongue hard enough to cause moderate pain for 8-20 seconds. Be subtle!
What about the Anal Sphincter?

- **Do not** squeeze your anal sphincter.

  - No examiner has ever demonstrated the ability to detect CMs with the sensor but don’t do it just in case.

  - Using the CMs taught on the web site can not be detected by activity sensors.
What about the Acquaintance Test?

- Try to produce a strong reaction to the key in the ACQ to lull your examiner into a false sense of security.
What about the RQs?

- Don’t worry about the RQs!
- Just breathe normally and try not to think about them.
  - You are in control and *not your examiner*. 
Post Test Procedure

- Don’t stay for a post test.
- Your examiner will interrogate you and trick you.
Counter-Counter Measures

- SAT
- Yes Test
- Refer to the IRQs as CQs
- Time bar IRQs,
If accused of employing CMs

- Deny, Deny, Deny!!!!

- Examiner may tell you
  - He knows what you are doing
  - Obvious you are manipulating the charts,
  - *Make no admissions* that may be worse than any transgression.
Always Pass * No Matter What * Guaranteed

Call toll free for questions or for free advice at 1-866-839-8841 or cell phone at 765-661-9480.

Learn how to take, beat, and pass any polygraph (lie detector) or VSA test examination in the world...even if you are lying no matter what!
Polygraph Expert

- Chad Dixon
  - Not a polygraph examiner
  - 6 hours of instruction
  - Practice Test for $495.00
  - $895 in Indiana; $2,895 + expenses at your site
• However, sources like the Maschke & Scalabrini’s book do contain accurate information about how polygraph tests work and about possible countermeasures.

• The critical question is:
  - Does polygraph information affect the validity of the polygraph?
Dr. Rovner’s Findings
(Rovner et al, 1979 and Rovner, 1986)

- Information had no effect on accuracy.
  - Identical Accuracy for Innocent and Guilty subjects with and without information alone.

- Information + Practice increased False Positives and False Negatives.
  - But no significant difference in Guilty scores
  - Numerical scores for Innocent subjects in the information + practice were lower than information and innocent control group
Studies on Polygraph Information

Rovner et al., 1979 examined the effects of Information and Practice on the CQT.

- No effects for information
- Weak, but possibly confounded effect for Practice
Alloway & Honts, 2002

• Alloway & Honts gave subjects one week of access to *The Lie Behind the Lie Detector* and then tested them with the new Test for Espionage and Sabotage.

• They found no effects for exposure to the book.
Honts, et al., also reported

- No relationship between countermeasure use and:
  - Age
  - Sex
  - Number of years of education
When subjects answer a comparison question with a “yes,” is that a countermeasure?

- Honts, Raskin, & Kircher (1992) examined the frequency of YES answered controls in 290 laboratory subjects. They report:
  - YES answers were common.
    - 23% of the subjects gave at least one YES answer to a comparison question.
  - YES answers were most often given by Innocent subjects
    - 67% of the YES answers were given by Innocent subjects
  - There were no reliable differences in the numerical scores resulting from comparison to YES versus NO answered comparison questions

- Conclusions
  - The research shows that YES answers to comparisons are a common behavior by Innocent subjects taking CQTs.
  - YES answered controls should be used in scoring.
BEAT THE BOX
The Insider's Guide to Outwitting the Lie Detector

WAITING ROOM
Who will the examiner pass?

DON'T OVERTDO THE DRUGS!
FICTION

- CMs are easy to detect
  - Only true for **naive** subjects who overdo it.
- CMs not effective against experienced examiner
  - Probably only true with **naive** subjects
FACT

- It is hard for guilty to suppress reactions.
- It is easy to make realistic looking reactions.
- It is difficult to detect CMs when skillfully applied by trained subject.
- We know who we catch but not who got away.
Some Scientific Talk about CMs

- Honts et al (2009)

- In a study using both probable-lie and directed-lie examinations. Honts et al (2009) debriefed participants about their spontaneous use of countermeasures.
In a study using both probable-lie and directed-lie examinations Honts et al (2009) debriefed participants about their spontaneous use of countermeasures.
Overall 48% reported attempting a countermeasure.

- Probable-lie 50% attempted
- Directed-lie 46% attempted

Of the Guilty 78% attempted

- Probable-lie 83% attempted
- Directed-lie 72% attempted ($p = .095$)

Of the Innocent 18% attempted ($p > .001$)

- Probable-lie 15% attempted
- Directed-lie 20% attempted
There currently are countermeasure classes being offered to polygraph examiners that claim to provide ways for examiners to detect countermeasures.

Some of the material in this classes is based on case studies of individuals who have attempted countermeasures, failed and then confessed to countermeasure use.

In science this is known as a case study approach.

In science, case studies are never used to define causal relationships.

In science, case studies are used to stimulate hypotheses that can then be used to define causal relationships.
Case Studies

A case study is a descriptive record of a single individual’s experience, or behavior, or both.

Kazdin (2003) suggests case studies have 5 major purposes:

1. *Source of inference, hypothesis or theory*
2. Source of developing therapy techniques
3. Allow the study of rare phenomena
4. Provide exceptions to accepted ideas, theory or practice
5. They have persuasive and motivational value.
Limitations of Case Studies

- Working with a small N means our findings may not generalize.
- Unable to completely observe individual can result in a decrease in specificity. In PDD we can watch the outside but not the inside of the subject.
- Subjects may fail to report all important information thinking it irrelevant or embarrassing.
Some polygraph experts have used these case study data to analyze current field cases and then to offer testimony in courts of law:

That based on their study of these field cases they can determine when subjects are attempting counter measure.

That if a subject is attempting counter measures the test should be considered unreliable and not admitted as evidence.

Neither of these conclusions is supportable as science.
Scientific studies show that innocent individuals now frequently engage in countermeasures. Although doing so produces negative effects for them in terms of their total score. Nevertheless, most are classified correctly.

Should they be denied the benefit of a polygraph they passed?

No published scientific study shows that any person to be better than chance at detecting countermeasures, either from watching the subject or from analyzing the charts.

Extraordinary claims of ability, require extraordinary evidence of performance.
Why those claims are not Science

- The case study approach used here has one fatal flaw.
  - There is no comparison group.

- The unanswered, and ultimately critical question is:

  *How often do non-countermeasure users show the same patterns that are being used to allegedly detect countermeasures?*

- If such patterns and markers are displayed by subjects *who are not using countermeasure*, then they are useless as countermeasure detectors as they are as likely to implicated an non-user as a user.

- In scientific terms, the case studies being used, do not test for specificity.
New Research by Honts & Crawford (2009)

- Upon learning about experts methods and claimed abilities, Honts’ laboratory decided to look at some non-countermeasure charts and see if the patterns and markers were present.

- We sampled 92 cases from the recent validity study by Honts et al., (2009).

- Since experts claimed to be able to detect countermeasures by recognizing respiration patterns trained by Doug Williams we chose to look for those patterns of response in our subjects, **NONE OF WHOM** had been exposed to the Doug Williams materials.
Recall Doug Williams’ Example

Respiration Patterns

EXHIBIT E

PNEUMO REACTIONS

FIGURE NO. 1

FIGURE NO. 2

FIGURE NO. 3

FIGURE NO. 4

FIGURE NO. 5
Doug Williams’ Respiration patterns in **Innocent** subjects (ICQ & IRQ=innocent question responses.)
Doug Williams’ Respiration patterns in Guilty subjects
Percentage of Individuals showing the DW Respiration Patterns
The Future of Polygraph Countermeasure Research

In the late 1980s a decision was made by the U. S. Government that all internal polygraph countermeasure research would be classified.

Moreover, it was decided that the U. S. Government would not provide funds for any private-sector polygraph countermeasure research, unless it too was classified.

Polygraph research, if done properly, is expensive.

Until Government policy changes, or researchers in other countries take the initiative, it is unlikely that there will be much progress in the area of polygraph countermeasures research.
WHO DETERMINES EFFECTIVENESS

- EXAMINER

- The Pretest Interview
  - Professionalism – Discussion – F/F/F

- The In-test Phase
  - Instructions – Equipment - Technique

- The Post Test Interview
  - Chart Evaluation – Interrogate / Interview
NORMAL Tracings

- Respiration
  - Shallower
  - Slower
  - Both mean shorter line length

- EDA
  - Simple rise and recovery, not complex

- Cardio
  - Simple rise and recovery, not complex
Indicators of Countermeasures

- Respiration
- #1 – “Breathing Outside the Box”
- Slower rate on relevant
Possible Indicators of Countermeasures

- **Respiration**
  - Abrupt recovery from a “reaction”
    - Abrupt – NO Staircase – YES
  - Is 6 to 8 breath cycles OK?
    - Run an Acquaintance Test to be sure.
    - Surreptitiously record breathing.
  - Progressive increase in amplitude followed by a deep breath
Possible Indicators of Countermeasures

- Respiration (cont.)
  - Holding breath at anywhere other than the bottom of the breath cycle
  - Diverging baselines
    - Results from a stomach crunch or sphincter squeeze
Indicators of Countermeasures

- Respiration (cont.)
  - Exaggerated notch on the first inhalation after the answer
    - Extended answering distortion
    - Usually results from a muscle contraction during the answer
  - Panting on a comparison question
  - Excessive deep breaths on the comparisons or relevant questions
Abrupt recovery. Patterned breathing.
Answer-like distortions.
Panting after answer
Indicators of Countermeasures

- **EDA**
  - Unusually flat
    - May indicate drugs antihistamines, hand lotions
  - Unusually active - doesn’t habituate - last chart is very reactive
    - May indicate movements
  - Inconsistent EDR Latency
    - a. stimulus onset to response on set
    - b. what is atypical?
    - c. Look for the indiv. response stereotypically
    - d. if all CQ’s EDA’s are different, latencies be suspicious
  - Exaggerated EDA’s Reactions
    - a. globally out of proportion
    - b. frequency
    - **Devil’s Finger** = physiologically impossible
Very Active EDA
“Devil’s Finger-Loss of electrical contact
Indicators of Countermeasures

- EDA (cont.)
  - Late reactions to the comparison questions
    - Subject answers then thinks, bites, etc.
  - Abrupt onset
  - Numerous artifacts
Lip Biter to Irrelevants
Indicators of Countermeasures

- **Cardiograph**
  - Rapid rise amplitude on the comparison questions
    - Lasts to long and to good to be true
    - Often has a secondary response before the first is completed
  - Sharp rises or jumps-obvious movement artifacts.
Rapid Rise Cardio

C1 (N) Before being made regional manager, did you ever lie to cover up something you did wrong?
Same shot with Foot Sensor
Indicators of Countermeasures

- Cardiograph (cont.)
  - Repeated artifacts specific to the relevant or comparison questions
    - Clusters of activity or patterns
  - Excessive heart rate
    - In excess of 100 beats per minute may indicate drug use
Indicators of Countermeasures

- General Indicators
  - Consistent significant responses to the relevant questions often similar to the sacrifice relevant question
  - Erratic, messy charts
  - Delayed answers
  - Delayed physiological responses on the comparison questions
  - Behavioral CMs- Eddie Haskell
Indicators of Countermeasures

- General Indicators (cont.)
  - Remember to look for the indicators in clusters
    - When it looks too good to be true on the comparison questions – IT IS.
    - When it looks too good to be true on the relevant questions – ITS GENUINE.
Low Level – Holding Breath
Low Level - cardio
More Breath Holding
Decision Making

- Review charts globally. Don’t focus on individual spots. (Forest for the trees)
- Double check by scoring across.
- Don’t be afraid to score a ZERO.
- Sum of pneumos and sum of cardios compared to sum of EDA (Chuck Slupski).
Anti-Counter Measures and Counter-Counter Measures

- Anti-Counter Measures – Routine actions taken to preclude or deter the use of countermeasures

- Counter-Counter Measures – Actions taken when counter measures are suspected
Anti-Counter Measures

- Pre-Test Interview
  - Project Professionalism
  - Inquire about polygraph knowledge
    - ?? Discuss/challenge the use of CMs ??
    - Consider a CM Advisory form for screening tests.
    - Inquire about internet sophistication, email addresses, etc.
  - Explain how polygraph works.
- Question Review:
  - Concise Relevants
  - IRs as known truth or identity, not necessarily “controls”.
Anti-Countermeasures (continued)

- Disguise irrelevants as comparisons
  - “Prior to moving to Texas, did you go to school?”
  - “Between the ages of 18 and 25, did you ever work at Wal-Mart?”

- Always use an Acquaintance Test
  - Don’t show it to the examinee
  - If clearly attacked, consider “baiting” examinee.
I1g-Prior to 2005, did you attend high school?
Anti-Countermeasures

- **In-Test Phase**
  - Stress Cooperation & Truthfulness to pass
  - Give specific, exact instructions.
  - Use a movement sensor device
  - Watch the subject as much as possible
    - Utilize a camera to assist & record. Incorporate a discussion of the camera as an anti-CM device.
    - Arrange the room so that you can better watch the subject and let them know you will be watching them.
    - Consider assisted stimuli presentation to lower cognitive load.
Countering Countermeasures

- **In-Test Phase**
  - Silent Answer Test
  - Repeat Last Word Test
  - Eyes Shut Test
  - Concise Relevant Questions
Countering Countermeasures

- Chart Scoring
  - Numerical and global
  - Compare component sums with each other
  - TGTBT on comparisons = not true
  - Individual Response Specificity
  - Selective DBs
  - Diverging Pneumograph tracings
  - Strange drops in EDA
Countering Countermeasures Post Test Interview

- If DI on tests – interview accordingly
- If INC on tests – Interview on the relevant issue(s), not on CMs.
  - After admission/confession, interview on CMs
  - Why did you take the testing knowing...
  - What did you do to try to beat it?
  - Where did you get that knowledge?
  - Why did you decide to tell the truth? What did I say?
Activity Sensors

- Federal Examiner’s Handbook
- C18.3.3.1. A MSD is designed to detect covert movements during a PDD examination.
- C18.3.3.2. A MSD shall be used in all PDD examinations, when available.
- C18.3.3.3. When a MSD is employed, sensitivity settings for the component should allow for optimum tracings.
Fighting Back

Counter-Countermeasures are likely to become an endless game.

- Countermeasure Detectors
- Movement Detectors
- EMG
- Statistical
Automated Artifact Detection
Algorithm Development
Sample A
Lafayette Instrument Company

Objective Scoring System - Version 3
By Raymond Nelson, Mark Handler and Donald Krapohl (2007)

Result
Description: No Significant Reactions
p-value: < 0.001 - Probability this result was produced by a deceptive person
Exam Type: Mixed Issues (Screening)
Scoring Method: Screening
Test of Proportions: None - No significant differences in artifact distribution
Kruskal-Wallis Test: 0.123 - No significant differences in spot scores
PF Name: xxxxxxxxxx 07J-1121
Report Date: Wednesday, June 24, 2009
Examiner

<table>
<thead>
<tr>
<th>Spot Scores</th>
<th>Decision Alpha (1 tailed)</th>
<th>Components</th>
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<tr>
<td>ID</td>
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<tr>
<td>R4</td>
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<tr>
<td>R6</td>
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<td>R8</td>
<td>0.019</td>
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<tr>
<th>Relevant Questions</th>
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<tbody>
<tr>
<td>ID</td>
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<tr>
<td>R4</td>
</tr>
<tr>
<td>R6</td>
</tr>
<tr>
<td>R8</td>
</tr>
</tbody>
</table>
Lafayette Instrument Company

Objective Scoring System - Version 3
By Raymond Nelson, Mark Handler and Donald Krapohl (2007)

Result: No Significant Reactions
Description: p-value: 0.009 - Probability this result was produced by a deceptive person
Exam Type: Multi-facet (MCOT)
Scoring Method: Two-stage (Senter 2003)
Test of Proportions: None - No significant differences in artifact distribution
PF Name: [Redacted] 07J-1221
Report Date: Wednesday, June 24, 2009
Examiner:

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<td>ID p-value</td>
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<tr>
<td>R1 0.010</td>
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<tr>
<td>R6 0.004</td>
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<td>R8 0.020</td>
<td>Test of Proportions (2 tailed) 0.100 Cardio 0.28</td>
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<th>Relevant Questions</th>
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<td>R1</td>
<td>Did you ever attempt to touch Lisa's vagina?</td>
<td>No</td>
</tr>
<tr>
<td>R6</td>
<td>Did you continue to sexually touch Lisa after she told you 'no' or 'stop'?</td>
<td>No</td>
</tr>
<tr>
<td>R8</td>
<td>Besides what you disclosed, did you ever take off Lisa's shirt or bra?</td>
<td>No</td>
</tr>
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</table>
CT (No) Before 1998, have you ever done anything you were tempted to keep secret?
**Lafayette Instrument Company**

**Objective Scoring System - Version 3**

By Raymond Nelson, Mark Handler and Donald Krapohl (2007)

Result: Inconclusive - Collect additional test data if possible

---

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<th>Exam Type</th>
<th>Scoring Method</th>
<th>Test of Proportions</th>
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<td>Two-stage (Senter 2003)</td>
<td>&lt; 0.001 Significant differences in artifact distribution - review data for intentional distortion</td>
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<th>Report Date</th>
<th>Examiner</th>
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### Spot Scores

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<td>R4</td>
<td>0.003</td>
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<td>Cardio</td>
<td>0.28</td>
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### Decision Alpha (1 tailed)

Cumulative normal distribution (Barland 1985)

### Components

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<tr>
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### Relevant Questions

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<td>R8</td>
<td>Besides what you disclosed, did you ever take off Lisa's shirt or bra?</td>
<td>No</td>
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Automated Artifact Detection - A

Data Integrity - Artifact Detection
Nelson (2009)

**p-value Result**
0.232
No significant differences in artifact distribution

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**Relative Response Magnitudes**

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**Measurements**
(Kircher and Raskin 1988; Raskin Kircher Honts and Horowits 1988)

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<tr>
<th></th>
<th>C1</th>
<th>R4</th>
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<tr>
<td>(Kirk and Raskin, 1988; Rakin and Horowitz 1989)</td>
<td>Chart 1</td>
<td>TRUE Chart 1</td>
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(Kircher and Raskin 1988; Raskin Kircher Honts and Horowits 1988)

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(Kircher and Raskin 1988; Raskin Kircher Honts and Horowits 1988)

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(Kircher and Raskin 1988; Raskin Kircher Honts and Horowits 1988)

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(Kircher and Raskin 1988; Raskin Kircher Honts and Horowits 1988)

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# Measurement Table - B

(Kircher and Raskin 1988; Raskin Kircher Honts and Horowits 1988)

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(Chart 1 has 5 rows and 7 columns, Chart 2 has 5 rows and 7 columns, Chart 3 has 5 rows and 7 columns, Chart 4 has 5 rows and 7 columns, Chart 5 has 5 rows and 7 columns)
Automated Artifact Detection

Limestone Technologies Inc.
Data Integrity - Artifact Detection
Nelson (2009)

p-value Result

0.01
Significant differences in artifact distribution - review data for intentional distortion

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Relative Response Magnitudes

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Measurements
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Conclusions

- Automated artifact detection is **possible**
- Automated artifact detection is **complicated!!!!**
- Depends on
  - **Feature Development**
    - Through measurement
  - **Artifact Detection**
    - ipsative-z (within subject measurement)
  - **Test for Randomness**
    - Test of Proportions
Countermeasure Pop Quiz
Rules

- Look at the chart.
- Decide whether the examinee is attempting to manipulate the tracings.
- After each chart I will show the same chart with the motion sensor turned on.
- All, none, or some of them are manipulated.

Ready?
Grading Scale

- 10 Correct = A
- Less than 10 correct = buy a motion sensor
Questions?

- Thank you for your dedication to professionalism.