

# Polygraph

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# *Polygraph*

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The journal *Polygraph* publishes articles about the psychophysiological detection of deception, and related areas. Authors are invited to submit manuscripts of original research, literature reviews, legal briefs, theoretical papers, instructional pieces, case histories, book reviews, short reports, and similar works. Special topics will be considered on an individual basis. A minimum standard for acceptance is that the paper be of general interest to practitioners, instructors and researchers of polygraphy. From time to time there will be a call for papers on specific topics.

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Manuscripts should be in English, and submitted, along with a cover letter, to Editor, American Polygraph Association, PO Box 10342, Ft. Jackson, South Carolina 29207 (USA). The cover letter should include a telephone number, return address, and e-mail address. Authors should also state clearly in the cover letter if they wish to submit their manuscript to a formal peer-review. The preferred method of manuscript submission is as an email attachment (MS Word, WordPerfect, or PDF format) with the cover letter included in the body of the email. Send to the Editor at:

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## **The Polygraph Plays a Key Role as a Containment Tool for Convicted Sex Offenders in the Community**

**Kim English, Linda Jones, and Diane Patrick<sup>1, 2</sup>**

### **Abstract**

Researchers in Colorado published the final research report from a national study evaluating the effectiveness of the post-conviction polygraph exam as a monitoring and behavior containment tool for convicted adult sex offenders. The research funded by the National Institute of Justice included a telephone survey of over 700 probation and parole supervisors, analysis of 232 offender polygraph files in four states, and field research in 17 sites across the country.

In the January 2000 *Elements of Change* (vol. 5, no. 1) (available at [www.cdpsweb.state.co.us/ors](http://www.cdpsweb.state.co.us/ors)), we initially reported data from this polygraph study that reflected significant crossover<sup>3</sup> in sex offender criminal behavior.

On the following pages, we report additional findings and information learned while conducting this polygraph study:

1. First, the telephone survey results and field research confirmed findings from our 1996 national sex offender study that the "containment approach," which includes the use of the polygraph (and is defined below), is an effective model for the management of convicted adult sex offenders in the community;

2. Second, the survey data allowed us to paint a picture of levels and types of polygraph use among probation and parole agencies across the country (see the data boxes throughout this newsletter for the survey results); and

3. Third, we share with you the background research we conducted on the polygraph while preparing for this project. Substantial and enduring issues surround the polygraph, including such "heavy-hitters" as whether it is reliable, admissible, and ethical. We found these issues compelling, and we want to pass on the discussion.

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<sup>1</sup> Copyright 2000 Colorado Division of Criminal Justice. Reprinted with Author's permission. Source for all data in this Article: *The Value of Polygraph Testing in Sex Offender Management: Research Report Submitted to the National Institute of Justice*, Colorado Division of Criminal Justice, Office of Research & Statistics, December 2000. Available at [www.caps.state.co/ors/doc](http://www.caps.state.co/ors/doc)

<sup>2</sup> This research was funded by grant D97LBVX0034 from the National Institute of Justice. Views expressed here are not necessarily those of the National Institute of Justice.

<sup>3</sup> Crossover occurs when a sex offender deviates from a single M. O. and targets victims in more than one age and/or gender category and/or exhibits multiple types of offending behavior (e.g., rape and exhibitionism).

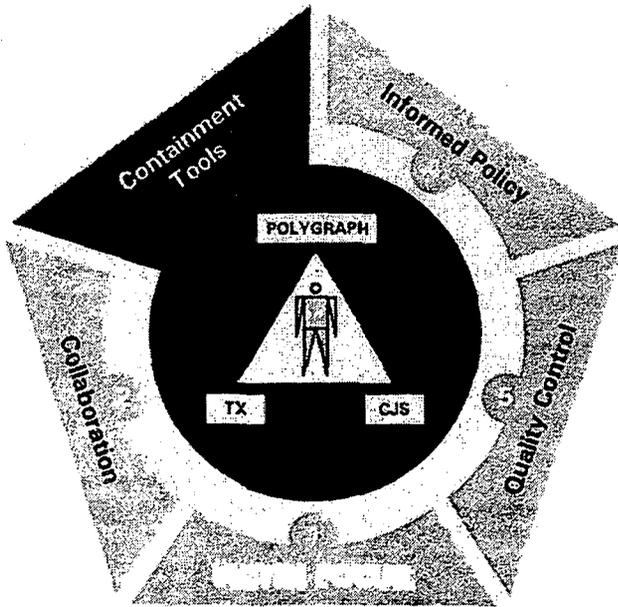


Figure 1 THE CONTAINMENT APPROACH  
Colorado Division of Criminal Justice, Office of  
Research & Statistics

### The Big Picture: The Polygraph as Part of a Containment Approach for Convicted Sex Offenders

This research builds on a previous study undertaken by the Colorado Division of Criminal Justice for the National Institute of Justice (English, Pullen, Jones, and Colling-Chadwick, 1995; English, Pullen, and Jones, 1996). That study focused on describing a model approach for the case management of adult sex offenders on probation and parole. Findings included a description of policies and practices that effectively contained the risk of sex offenders serving sentences in the community.<sup>4</sup> This collection of selected policies and practices was labeled by Division of Criminal Justice researchers as a "containment approach."<sup>5</sup>

The containment approach is a five-part strategy. Each of the five parts represents a fundamental element of effective management of adult sex offenders. In the

current study, we again found these same elements including the polygraph as a containment tool must be present to maximize the effects of risk management efforts by criminal justice professionals. A comprehensive containment approach to the risk management of adult sex offenders must include the components discussed in the following section:

### Information Is Obtained Using Three Types Of Post-Conviction Polygraph Examinations:

1. SEXUAL HISTORY DISCLOSURE POLYGRAPH EXAMS. Sexual history disclosure polygraph examinations are used to verify the accuracy and completeness of the sexual history information a sex offender provides during treatment. This information is obtained using a very specific treatment tool: the sex history document. This treatment task requires the offender to document the gender, age, and method of assault for every past victim. The sex history document is then provided to the polygraph examiner who, after reading it carefully along with other case file information, asks the offender very specific questions about the accuracy of parts of his or her sex history. In most cases, the completed sex history document is long, disclosing many prior assaults and attempted assaults, and many different types of assaults as well. Without the clear expectation by criminal justice and treatment officials that the offender be accurate and truthful on the sex history assignment - to be completed within six months of commencing treatment - why would the offender disclose this potentially embarrassing and illegal information to the treatment provider?

2. DENIAL AND OTHER SPECIFIC-ISSUE EXAMS. Denial exams verify the details of the conviction offense.

<sup>4</sup> Most (60-70%) sex offenders receive sentences to probation and, of those that go to prison, 98% eventually return to the community.

<sup>5</sup> Parts of this report are excerpted from *Managing Adult Sex Offenders in the Community: A Containment Approach*, (English, Pullen, and Jones, 1996). Available from the American Probation and Parole Association.

These tests are usually given when the offender's version of the crime varies from the victim's version, or the offender continues to deny committing the crime of conviction. Specific-issue exams are also used to address a single concern or suspicion that arises during an offender's probation or parole, such as suspected contact with children. Specific-issue tests are also recommended as a follow-up to deceptive results on previous exams to clarify the nature of the deception.

3. MAINTENANCE OR MONITORING EXAMS. Maintenance or monitoring exams are used to verify whether a probationer or parolee is complying with the terms and conditions of community supervision and cooperating with treatment expectations. These exams require the polygraph examiner, the treatment provider and the supervising officer to work together to identify questions that target high-risk behavior related to the assault patterns described in the offender's sexual history document. The information gained from post-conviction polygraphs—whether sex history, denial or maintenance exams—is then used to develop or modify treatment and supervision strategies so that these are congruent with the offender's risk and need areas.

These examinations do not stand alone in a sex offender management program. Rather, the use of the polygraph occurs in the context of a very important synergistic process that results from close, consistent collaboration among the polygraph examiner, the treatment provider and the supervising officer. The three professionals, and the activities they undertake, are interdependent in fully functioning containment teams, with each professional reinforcing the work of the other. When this interdependency does not occur, as we observed in some jurisdictions, the team suffers from diminished capacity. \* \*

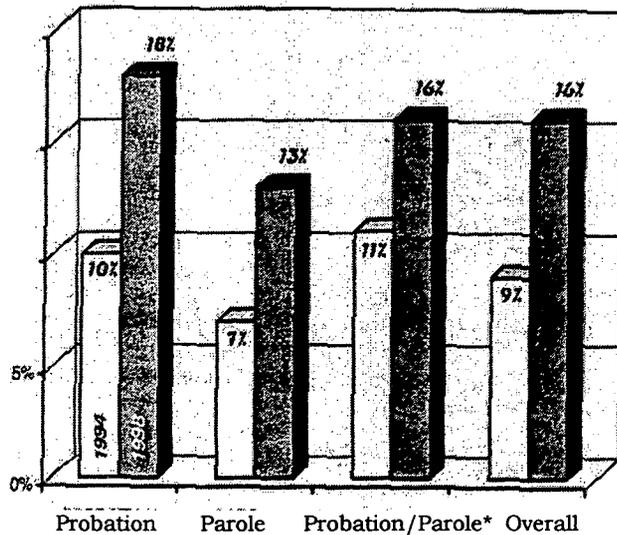
\*Because the information is usually incriminating, interagency teams must include representatives from victim's organizations and local prosecutors so that agreements regarding prosecution for past crimes or instances of limited immunity are discussed. Most commonly, the prosecution makes the decision to prosecute past crimes on a case-by-case basis, and frequently there is insufficient information to prosecute. Victim's

organizations must make recommendations about the value of contacting past and recent child victims from whom there has been no outcry.

\* \* Evidence of diminished capacity included the following: infrequent communication and sharing of information among team members; significant delays in scheduling the polygraph examination; lack of adequate preparation of the offender for the examination; insufficient contact and planning by team members before the examination; and team members who felt frustrated with each other or whose relationship with the offender was stronger than with each other.

1) A clearly articulated community safety/victim-oriented mission. This requires case decisions and cross-agency policies to be based on methods that prevent harm toward current and potential victims by known sex offenders. A strong victim orientation prioritizes community safety and serves as the foundation of the containment approach, reflected in Figure 1.

2) The coordinated activity of multiple well-informed, multi-disciplinary, intra- and interagency collaborative teams. Participating agencies must be committed to developing specialized sex crime units where possible and appropriate. This collaboration integrates expertise from the victim community, law enforcement, probation, parole, the treatment community (including prison treatment providers), the court, social services/child protective services, hospital emergency room staff, victim therapists, and the prosecution and defense bars. Teams form and work together as cases proceed through the criminal justice system (and/or child protection system) and develop consistent policies focusing on victim protection and offender accountability. The containment team, highlighted in the next component, is a very specific collaborative grouping and is at the heart of the containment approach.



\*Combined probation and parole agencies.

Figure 2 Survey Findings Percentage of Agencies Using the Post-conviction Polygraph with Adults Sex Offenders, 1994 vs. 1998

3) The use of a variety of containment strategies, especially a containment team consisting of the supervising officer, treatment provide, and post-conviction polygraph examiner. The members of the containment team work closely together to obtain the information needed to manage the offender.<sup>6</sup> Community containment strategies are coordinated by this three-member team using information obtained from individual offenders during the treatment/polygraph process (confidentiality is waived). Treatment and supervision plans are designed based on verified information about the offender's deviant patterns. Containment tools are applied accordingly. These tools include a wide range of risk management strategies such as intense surveillance, specialized treatment that incorporates regularly scheduled post-conviction polygraph examinations, law enforcement registration, urinalysis testing, electronic monitoring, curfews, and DNA testing. Effective containment limits access to

potential victims by monitoring and restricting all activities, including work, leisure time, and internet use. Containment strategies require the consistent use of an ample array of sanctions for pre-assaultive (or precursor) behaviors that some sex offenders carry out before committing a sexual assault.

4) Consistent, informed public policies (legislative, judicial, executive, administrative and programmatic). These policies should be based on research and best practices. Effective policies address gaps in risk management activities and allow the supervising officer to quickly respond to offender behaviors that are out of compliance with treatment requirements and supervision conditions.

5) Resources dedicated to state and local quality control efforts. Quality control is directed at a) program monitoring and evaluation activities, and b) professional standards of practice. Comprehensive quality control efforts ensure that strategies aimed toward victim safety and the humane treatment of offenders are not compromised.

#### **Why Is the Post-Conviction Polygraph Necessary as a Containment Tool?**

In the 1996 study, our recommendation to use the post-conviction polygraph examination as a component of a containment approach (a recommendation confirmed by the current research project) was among the most controversial findings. After all, the polygraph has a controversial history in criminal justice. Criminal justice professionals often think that the polygraph's findings are not admissible in court. Also, stories of its use on crime suspects who have "fooled" the machine have led the general public and many criminal justice professionals to distrust the polygraph.

<sup>6</sup> The containment team should expand as needed to include victim advocates, child protection services or the victim's therapist, for example. Although the well-being of current and potential victims is paramount in guiding the decisions of the team (see component #1), the victim is not expected to participate directly in a containment team. It is not the victim's responsibility to manage the behavior of the offender.

These concerns about the polygraph can distract criminal justice professionals from a fundamental issue in sex offender management: the need for complete and accurate information to (a) determine risk to the public, and (b) develop a treatment plan that reflects the offender's needs. The expectation that the sex offender be honest and forthright, as a condition of community supervision, is often lost in debates about the post-conviction polygraph. Complete information about the scope and frequency of a sex offender's deviant activities is available only from the offender, yet most sex offenders have made secrecy and dishonesty a part of their lifestyle.

**...Because Sex Offenders Are Masters of Secrecy**

Most sex offenders have fooled many people, often for many years<sup>7</sup>, and few containment professionals believe that a sex offender will suddenly begin telling the truth when placed under correctional supervision (Pullen et al., 1996). The skill that has allowed these offenders to manipulate many victims allows them to manipulate criminal justice system officials as well (see Strate et al., 1996, for a discussion of criminal justice policies that reinforce this type of manipulation). This lack of disclosure by sex offenders led the Association for the Treatment of Sexual Abusers (ATSA, 1993) to state, in its Practitioner's Handbook, that therapists should not rely solely on offenders' self reports. Rather, to determine compliance with treatment requirements, ATSA made recommendations for the use of the polygraph to validate the offender's self-report. The polygraph process—referred to as the psychophysiological detection of deception (PDD)—and its use with sex offenders is akin to using urinalysis testing with drug offenders. It is a method of monitoring very specific behaviors

Research on sex offenders reveals an astonishing level of secret sexual abuse activity. Because of this secrecy, official record

data are inadequate to describe a sex offender's complete assault history. Ahlmeyer, Heil, McKee, and English (2000) used the post-conviction polygraph to encourage disclosures for treatment and found that, for a sample of sex offenders in prison, fewer than one percent of victims of hands-on and hands-off crimes were identified using official record data.

Hesitancy of victims to come forward also helps offenders maintain secrecy. Lamb and Edgar-Smith (1994) studied 60 sexual assault victims. Twenty percent of the sample had been abused for over five years, and half of this group had been assaulted on a weekly basis. Yet, this group did not disclose the abuse for, on average, ten years after the assaults began. Young victims who know the offender are least likely to report the crime (Smith et al., 2000). Fewer than 80 percent of rapes are reported to law enforcement (Kilpatrick, et al., 1992), and arrests are made in less than 30 percent of cases reported (Snyder, 2000).

**Survey Findings**

Percentage of Agencies with Specialized Sex Offender Caseloads:

	1994	1998
Probation	28%	45%
Parole	35%	62%
Probation/Parole*	31%	47%
OVERALL	31%	53%

\* Combined probation and parole agencies.

The polygraph examination can be used quite specifically to reveal the hidden crimes and behaviors of individual sex offenders. The polygraph exam process is able to go beyond official record data and the conviction crime(s), providing critical information for the treatment provider and the supervising officer: what types of deviant behaviors the offender has engaged in, what ages and genders of victims have been targeted, the offender's method of accessing potential victims, and the behaviors and activities that precede assaults.

<sup>7</sup> Sex offenders report the time between their first sex crime and their first arrest or conviction to be, on average, 13 to 16 years (Free-man-Longo, 1985 and Ahlmeyer et al., 2000, respectively).

Most importantly, when offenders live with or have access to children, the examiner can ask about sexual contact with those specific children. Without information about the extent to which offenders have (and perhaps are) engaged in specific behaviors—and against whom—providing effective treatment and supervision intervention becomes unlikely.

### **Is the Post-Conviction Polygraph Accurate and Reliable?**

The most recent published review of polygraph reliability and validity studies was conducted by Forensic Research, Inc., of Severna Park, Maryland for the American Polygraph Association (APA) in 1997.<sup>8</sup> Reviews of field studies<sup>9</sup> indicated that between 96 and 98 percent of single issue exams accurately identified deception. The test-retest reliability of field examination charts has averaged 92 percent.<sup>10</sup> Using studies of mock crimes conducted in laboratory settings, 82 percent of exams resulted in correctly identifying deception.<sup>11</sup>

Many variables can affect the accuracy of polygraph examinations. To conduct a valid examination, a polygraph examiner must be properly trained in and administer an accepted testing procedure and scoring system (Ansley, 1997). The APA has published standards of practice for examiners conducting post-conviction sex offender examinations (Dutton, 2000), and these standards are intended to limit variation in practice across examiners. Examiners must

follow the APA standards to maximize accuracy and reliability.

### **Survey Findings**

About the Polygraph Exam (in 1998):

Average Time for Exam	2 Hours
Time Range Reported	.5 - 5.5 Hours
Average Cost of Exam	\$200
Price Range Reported	\$ 75 - \$625

A valid exam requires that the relevant test questions be clear to the examinee and narrow in scope. Also, accuracy depends in part on the extent to which the examiner prepares for the examination. This means that the treatment provider and the supervising officer must work with the examiner prior to the exam.<sup>12</sup>

### **Is Polygraph Information Admissible in Court?**

Often during the exam process—or during a treatment session prior to the exam—the offender will reveal that he or she has recently engaged in high-risk behavior. Such behavior reflects a lack of internal control on the offender's part, and so external controls (i.e., sanctions that restrict activity) must be applied. When polygraph exams reveal a new crime, courts vary in their willingness to accept this information as sufficient for revocation—whether the offender has confessed to a new crime or fails a question targeting a new crime.

<sup>8</sup> Copies of this paper may be purchased from the American Polygraph Association National Office, 951 Eastgate Loop, Suite 800, Chattanooga, Tennessee 37411-5608.

<sup>9</sup> Field studies involve determining accuracy by following up on real cases where the examination results were confirmed by confession.

<sup>10</sup> A few cautions when considering accuracy rates: 1) For nearly all studies, inconclusive results—meaning insufficient information was available to score the exam—are excluded from the averages, and this may overstate accuracy rates. However, calculating these inconclusive findings as deceptive would understate accuracy rates. 2) Studies that did not use numerical scoring (mostly before 1980) have somewhat subjective findings. For more information on concerns about polygraph accuracy and the quality of polygraph research, see Lykken's *Tremor in the Blood* (1998).

<sup>11</sup> Critics of mock crime research say that detecting deception is difficult because the polygraph client has nothing significant at stake, and physiological measures are less reactive because fear of detection is difficult to manufacture. Hence, the error rate will be higher in these studies compared to field studies.

<sup>12</sup> A thorough review of written case material is required to maximize accuracy. Without sufficient knowledge of the case, examiners might unknowingly develop questions that tap into outside issues, evoking a physiological response that is unrelated to the exam topic. Lack of preparation may result in the examiner letting the offender's story dictate the examination questions. The problem is confounded if a deceptive examinee gains confidence (and worries less) because he or she believes the examiner has insufficient knowledge about the case. On the other hand, a non-deceptive examinee will worry more if the examiner appears unprepared.

Since the standard of proof is "a preponderance of the evidence" in revocation hearings, rather than "beyond a reasonable doubt" required at a criminal trial, and since probation and parole are usually considered privileges, not rights, sometimes polygraph information is provided to the court or parole authorities in revocation hearings. But, this practice is uncommon, and most officials use polygraph information to step up supervision and surveillance.

Concerns about the use of polygraph information in court typically pertain to explicit standards governing evidence presented in criminal or civil proceedings. State statutes vary regarding the admissibility of polygraph information as evidence in a court of law.<sup>13</sup> These concerns tend to fall into the following categories:

1. The lack of agreement about whether polygraph theory and practice is a scientifically valid technique;
2. The lack of a known (certain) error rate;
3. The lack of controlling standards of practice in the polygraph professions(although this has changed); and
4. Questions about juries giving polygraph findings excessive weight in the decision making process and weakening their role as determiners of truth.

Most case law pertains to the admission of polygraph evidence for a determination of guilt or innocence. For seventy years, federal and state courts were uniform in ruling polygraph evidence to be inadmissible under the criteria for scientific evidence described in the 1923 case *Frye v. United States* (293 F. 1013, CDAC 1923). *Frye* held that scientific evidence, to be admissible in court, must be based on scientific methods

that have the general acceptance of the relevant expert community. In 1993, the Supreme Court held that certain Federal Rules of Evidence should govern the admissibility of scientific evidence and required the judge to make a preliminary assessment of the relevance and reliability<sup>14</sup> of the evidence (*Daubert v. Merrell Dow Pharmaceuticals, Inc.* [509 U.S. 579, 1993]).

The *Daubert* case opened the door for the admissibility of polygraph data in post-conviction sex offender management because it gives district courts the authority to determine if evidence is relevant and reliable. In *Kansas v. Lumley* (WL 218704, 1999), for example, the defendant appealed a prison sentence that resulted from his untruthful answer to a polygraph question regarding contact with a child.

Upon appeal, the judge found that polygraph reliability was sufficiently robust to be acceptable for a parole or probation revocation hearing that requires a lesser standard of proof than a finding of guilt. Further, the judge indicated that without the polygraph examinations and the admission of the results of the examination as a condition of probation, the sex offender community supervision program could not be maintained.

In *State v. Travis* (125 Idaho 1, 867 P.2d 234, 1994), the court found that, while the defendant's agreement to a probation condition requiring him to submit to a polygraph examination did not establish admissibility of the results, *Travis* was uncooperative and resisted supervision. His probation was revoked. Similarly, *Patton v. State* (580 NE.2d 693, Ind. App.1992) found "...the rehabilitative benefits of the polygraph examination condition must be obtained without the examination results being admissible in any subsequent court proceeding" (as cited by Dutton, 2000).

<sup>13</sup>Most commonly, states consider polygraph evidence per se inadmissible in courts of law. A few states admit polygraph evidence in some limited circumstances, by stipulation of both parties. A challenge to the per se inadmissibility statutes of many states was defeated in the Supreme Court case *United States v. Scheffer*, WL141151, 1998.

<sup>14</sup>In the context of the admissibility of evidence, reliability means scientific validity.

Our field research found that the polygraph exam is best used to inform treatment and enhance risk-focused supervision of offenders in the community—not as a make-or-break legal tool. As one containment professional noted, "We never use the P-word in court." From the telephone survey we learned from over half (56 percent) of the respondents<sup>15</sup> that probation and parole officers increased surveillance when violations of supervision were disclosed during a polygraph exam. One in four respondents said that a deceptive finding on a polygraph test could result in treatment termination.

Indeed, a deceptive polygraph exam should result in significantly increased surveillance along with other efforts to obtain additional information about the offender. Collateral information must be obtained from interviews with family members and potential victims, the victim's therapist, employers, and discussions with law enforcement officers. At a minimum, a deceptive finding on the examination reflects the offender's lack of cooperation with the containment approach and his or her lack of commitment to the honesty necessary to make the life changes expected by the containment team. This lack of cooperation with the containment team may link to willingness to commit new crimes.

### **Is the Polygraph's Use with Convicted Sex Offenders Legal and Ethical?<sup>16</sup>**

Officials using sex offense-specific treatment or the post-conviction polygraph, or both, must formally address the issue of what to do with new information learned as a result of the treatment/polygraph process.

### **Survey Findings**

Of the Agencies Using the Polygraph in 1998, 43% Had Not Had Polygraph-Specific Training.

These decisions are at the heart of the legal and ethical considerations surrounding use of the polygraph in community-based sex offender management. Resolving them requires conversations with the prosecuting attorney, representatives from victim organizations, and other stakeholders.

### **Survey Findings**

For Agencies Using the Polygraph in 1998, Where Did the Idea Originate?

Treatment Provider	36%
Exposed to idea via Training.	21%
Networking, Reading	
Polygraph Examiner, Board, Legislation, Other CJ Source	12%
Probation/Parole Officer	10%
Don't Know	31%

\*Categories not mutually exclusive.

Ethical concerns usually center on issues of self-incrimination, due process, and privacy. The Fifth Amendment of the U.S. Constitution protects citizens against self-incrimination. The issue is important in the context of post-conviction polygraphs because of the expectation and requirement that the offender will waive confidentiality and make a full disclosure of his or her sexual history, including prior victims. The question of self-incrimination thus arises because an offender who discloses prior or current victims may be at risk of further prosecution or revocation.

Case law has established many of the conditions for claiming one's Fifth Amendment rights. Generally, Fifth Amendment rights are automatic when a person is in custody and temporarily deprived of liberty (hence the Miranda warning). If a person is not in custody, courts have generally found that he or she must actively invoke his or her Fifth Amendment rights.

<sup>15</sup>This is the percentage of agencies that used the polygraph at least sometimes.

<sup>16</sup>Almost one in five (18.2 percent) survey respondents replied that barriers to using the polygraph included legal and ethical issues. Significantly more respondents from the Northeast (24.6 percent) and Central (21.4 percent) sections of the country identified this concern as a barrier to implementing the post-conviction polygraph. (A lack of resources was most frequently reported as a barrier to using the polygraph with sex offenders.)

In *Marcum v. State* (983 S.W.2d 762 Tex. App. 14th Dist., Sept. 17, 1998), the court found that a polygraph examination administered as part of a court-ordered condition of probation is not considered an in-custody interrogation for purposes of triggering the need to give a Miranda warning.

### **Survey Findings**

Of the Agencies Using the Polygraph in 1998, 26% Reported that ALL Sex Offenders Received the Polygraph.

Obtaining additional information about past victims was a significant concern to many criminal justice officials we interviewed in the field. They indicated that information gained about prior victims required a response such as an investigation, an arrest, or prosecution. To respond to this issue, policy makers in many jurisdictions developed the following solutions:

1) Limited Immunity. In some jurisdictions that use post-conviction polygraph exam, prosecutors provide limited or even full immunity from prosecution for prior crimes uncovered as a result of the treatment/polygraph process. Usually, an offender is given immunity from prosecution only for specific types of crimes.

Typically, limited immunity agreements stay in effect only as long as the offender complies with treatment and supervision conditions and does not reoffend. Of course, immunity agreements do not cover any new crimes committed while the offender is under probation or parole supervision.

Officials who support granting limited immunity argue that learning about prior victims is more important for treatment and public safety than prosecuting individual offenders for prior crimes that, without this containment strategy, would never be known. Officials in some jurisdictions also believe that identifying prior victims allows these victims to be contacted and offered services.

Several of the prosecuting attorneys we interviewed supported the concept of immunity agreements because they believe that the information about additional victims,

gained through the treatment/polygraph process is, in effect, coerced and therefore could not be used to prosecute the offender. Others said that, with or without immunity agreements, an offender's disclosure of prior criminal sexual behavior does not mean there will be sufficient evidence to prosecute a case. In Jackson County, Oregon, the prosecutor agreed to grant immunity for prior crimes of a similar nature: "Although not all prosecutors would agree, our community [Jackson County] has concluded that to prosecute all reported offenses would infringe on the offender's Fifth Amendment rights and thus would prohibit the therapeutic use of the polygraph" (Knapp, 1996:13-9).

### **Survey Findings**

For Agencies Using the Polygraph in 1998:

64% Indicated the Polygraph Was Regularly Used to MONITOR COMPLIANCE with supervision.

52% Indicated the Polygraph Was Regularly Used to OBTAIN A SEXUAL HISTORY.

46% Indicated the Polygraph Was Regularly Used When the Offender Was IN DENIAL about the Current Conviction.

\*Categories not mutually exclusive.

On the other hand, some prosecutors consider it professionally unpalatable and politically unwise to extend any immunity from prosecution for past crimes to sex offenders. These attorneys worry about uncovering a prior heinous crime that would elude prosecution as a result of limited immunity agreements. In such jurisdictions, there may be a formal (or informal) agreement between the prosecutor's office and the probation/parole agency to make decisions on a case-by-case basis. In these jurisdictions, the prosecutor exercises his or her broad statutory discretion about whether to initiate further investigation and file a criminal case on prior sexual crimes. Often, the offender is told that compliance with treatment and supervision requirements is likely to have an effect on such decisions.

If a prosecutor determines that enough evidence exists to prosecute a case, but the offender is complying with treatment and

supervision requirements, the attorney may request a sentence that allows the offender to remain in the community, perhaps extending the probation or parole period. This option may work best in jurisdictions that are small enough to maintain consistent informal agreements.

2) Don't Ask, Don't Tell (names, that is). In the absence of formal or informal immunity agreements with the prosecutor's office, the containment team at several sites noted that it manages information on past victims by asking the sex offender to omit identifying names or other information when disclosing prior sexual victims. For example, instead of using a victim's name, the offender might list victim #1, victim #2, etc., when he or she reports sexual history information. Using this approach minimizes or eliminates the risk for the offender of being prosecuted for past sexual crimes.

If this technique of non-identification of the victim name is used, both treatment providers and criminal justice supervisors should take extra precautions to ensure that the unidentified victims are not relatives or acquaintances with whom the offender may currently be having contact. Because most victims know or are acquainted with their offender (Kilpatrick et al., 1992), care must be taken to be sure that a current or recent victim is not missed as a result of an offender's non-disclosure of names.

Opinions are mixed on the "don't ask, don't tell" approach to handling criminal sexual history information. In some jurisdictions, the containment team believes that using this policy is the only way to ensure that sex offenders will provide information. To some professionals we interviewed, however, concealing specific victim information was seen as unacceptable—undermining the philosophy and the practice of full disclosure, reinforcing the idea that certain secrets are required, and continuing the offender's objectification of victims. Many jurisdictions that require full identification of prior victims

have not found a clear way to approach identified victims, or parents of a child, from whom there has been no outcry.<sup>17</sup>

### Survey Findings

For Agencies Using the Polygraph in 1998, Situations When the Exam Was Used:

Suspicion. Hunch, Red Flag	52%
Critical Incident	30%
Drugs. Contact w/Child, High Profile Case Following a Violation	11%
Assist Case Management	10%
Tx Termination. Reduction in Supervision Defense Request, Family Reunification Decision, Retest for Deception/Inconclusive	7%

\*Categories not mutually exclusive.

Whatever the policy regarding prosecution of new crimes, nothing eliminates the legal responsibility of treatment providers and others in most states to report child abuse when they learn of it. However, reports of prior victims made to child protection agencies often result in minimal consequences to the offender. The small amount of information generally available, the lack of knowledge about a victim's current location, the lack of outcry by the victim or family, and the high caseloads common to most child protection agencies combine to make it unlikely that these cases will receive much priority in the system.

### Information About New Crimes Committed While The Offender Is On Probation Or Parole

When an offender reports a new crime committed while under probation or parole supervision, the issues are very different. In this case, the offender's Fifth Amendment rights may be in effect, or may be invoked if a new case is under investigation.

<sup>17</sup>One exception to this is Oregon therapist Jan Hindmann who works to ensure that victims identified by sex offenders in treatment receive services.

When disclosure occurs as a result of the treatment/polygraph process, the supervising officer or local law enforcement officials must further investigate the suspicion or allegation.<sup>18</sup>

### Privacy Concerns

Privacy concerns surrounding the use of post-conviction polygraphs are an important part of a broader philosophical discussion about the role of government and the justice system in our lives. Some people are disturbed by the expectation that an offender will be coerced into sharing his or her entire sexual history as well as current deviant criminal and non-criminal behaviors and fantasies during the treatment/polygraph process.

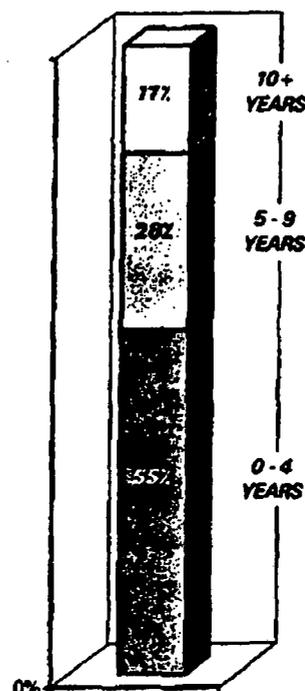
Indeed, sex offenders taking post-conviction polygraph examinations are subject to practices that considerably reduce their privacy rights. Sex offenders are required to waive confidentiality. Treatment contracts and conditions of probation or parole set the expectation of full disclosure of sexual history, at-risk behaviors, and new crime information.

However, current theories about the role secrecy plays in the lives of sex offenders and the power and control issues that appear to plague most offenders' lives have led risk-focused professionals to believe that it is therapeutic—rather than unethical—to encourage sex offenders to give up all secrets related to sexual deviance. Without the requirement for full honesty and disclosure, the offender is allowed to decide what the containment team knows about his or her offending patterns. Maintenance exams are necessary because some sex offenders display characteristics of antisocial personality disorder and/or psychopathy. "Because pathological lying and use of deceit are among the distinguishing characteristics of antisocial personality disorder and psychopathy, great care will have to be taken by those charged with supervision to ensure that conditions of

supervision are being followed" (Harris, Rice and Quinsey, 1998:104).

### Survey Findings

For Agencies Using the Polygraph in 1998, How Long Had the Polygraph Been Used?( Figure 3)



Another question related to the issue of privacy is whether the polygraph examination is more intrusive than other forms of community supervision of convicted offenders. Conditions of probation or parole commonly restrict associations (e.g., with other felons) and often require drug tests or prohibit the use of drugs and alcohol. Frequently, conditions of community supervision prohibit sex offenders from having unsupervised contact with children, even the offender's own children. In addition, the supervision contract (conditions of probation or parole) presumes that the offender will honestly answer questions posed by the supervising officer.

<sup>18</sup> Coordination with local law enforcement should precede any additional polygraph testing, so that a post-conviction polygraph does not inadvertently interfere with a law enforcement investigation of the alleged new crime.

The focus on sex, arousal, and assault patterns in sex offender management seems consistent with the focus on drugs and alcohol for substance abusing offenders, or on lifestyle and medication management for mentally ill offenders.

In sum, the post-conviction polygraph exam is to sex offenders what the urinalysis test is to drug offenders: a verification of information the offender self-reports to the treatment provider and supervising officer. The post-conviction polygraph, like the urinalysis, is a case management tool that targets the high-risk lifestyle associated with this crime type. The post-conviction polygraph emphasizes the need for sex offenders to be honest about the parts of their lives that have been secretive and dangerous to others. The polygraph's use should be combined with many other tools that encourage supervision compliance.

**Some Feedback from the Field**

The containment approach can be difficult to implement, and as explored above, use of the polygraph is sometimes considered to be controversial. So, research data aside, we gathered feedback from probation and parole supervisors as to whether or not the polygraph's use was important and had changed the way sex offenders were managed.

Three out of four (76 percent) survey respondents reported that the use of the post-conviction polygraph enhances knowledge of the offender, and two out of three (67 percent) said that its use led to better case management and supervision. One respondent remarked, "It helps find out [sex offenders'] true behaviors and not just what they tell us." Another said that the use of the polygraph "provides more security, more control, more restrictions for those who need them." Over half of the respondents (58 percent) said they believe the polygraph helps prevent new crimes: "[Sex offenders] are less likely to reoffend because we catch them earlier" and "we can detect recidivism patterns." And, as one respondent noted, "They know we are watching them." Just over 40 percent of the probation and parole supervisors we spoke with said the polygraph helped provide better and more appropriate treatment.

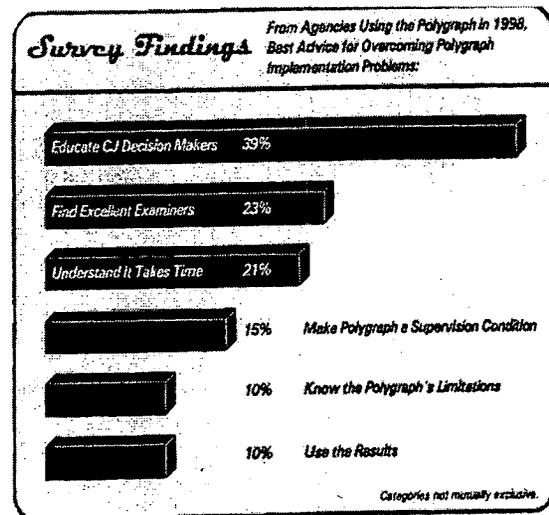


Figure 4. Advice for Overcome Polygraph Implementation

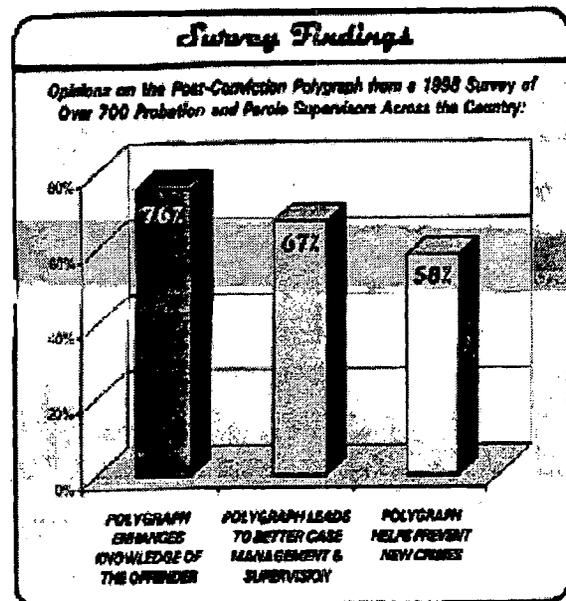


Figure 5. Opinions on the Post-Conviction Polygraph

**In Summary, Thank you, APA**

We are grateful to the APA members who welcomed us and our many questions at several annual conferences. Our formal and informal interviews with APA examiners enriched the study findings. We are especially grateful to David Amich, Jack Consigli, Andy Dollins, Donnie Dutton, Lawson Hagler, Rick Holden, Susan Holmes, Don Krapohl, Rob Kendell, Jeff Jenkins, and Jimmy Morse.

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## Ethical Considerations of Providing Polygraph Countermeasures to the Public

Paul M. Menges<sup>1</sup>

### Abstract

Polygraph or Forensic Psychophysiology is an *art-science* not well understood by the general public. Defended by law enforcement and intelligence agencies as a valuable investigative tool and castigated by others as intrusive and unscientific, polygraph has in recent years come under increasing fire from a vocal minority. Using the technology of the day, the Internet, polygraph opponents are attempting to further their stated goal, the abolishment of polygraph as a viable investigative aid to law enforcement and national security. In addition to questioning the scientific basis for and legitimacy of polygraph practices, some polygraph opponents have gone a step further to advocate the use of countermeasures to defeat polygraph examinations. Indeed, some argue that even innocent subjects need to employ countermeasures in order to be deemed innocent by examiners (Maschke & Scalabrini, 2000; Williams, 2000). The Constitution of the United States provides all citizens with the right of free speech. We enjoy the freedom to challenge government policies and to openly debate issues. However, bounds have been set by our society to protect individuals and the greater good for all citizens. Polygraph is scientifically valid and a tremendous investigative tool available to law enforcement and security personnel of this country. Efforts to openly subvert its use by advocating use of and providing countermeasures training and information to all subjects, regardless of innocence or guilt, run counter to the best interests of society and public safety. These efforts, while currently not illegal, cross the bounds of ethical conduct and present a threat to public safety and good order in society. The time has come to confront this threat by alerting the public to these efforts that aid guilty parties who threaten society, public safety, and quite possibly our national security.

### Ethical Situation

Polygraph as we know it has been used in one form or another to determine veracity for more than 50 years. Over that time, supporters and detractors have debated the benefits and problems of polygraph in literature, academia, legislative hearings, and today, on the Internet. However, some opponents of polygraph take the issue out of the arena where legitimate scrutiny can address use, accuracy, validity, and related concerns. They have planted themselves on a position which advocates interference with and obstruction of a process generally accepted by society and the public. This paper will address the question, Is it ethical to provide information to and assist guilty individuals who attempt to defeat a legitimate, legal,

publicly accepted, ethical procedure used by law enforcement and national security agencies? These agencies routinely use polygraph to protect the public and promote public safety. While the debate over polygraph accuracy and validity continues, sufficient empirical evidence exists to support the use of polygraph as a psychometric assessment tool (DoD Polygraph Institute, 1995a; Honts, Amato, & Gordon, 2001; Honts & Amato, 2001; Honts & Raskin, 1988; Kircher, Packard, Bell, & Bernhardt, 2001; Reed, 1994). United States Supreme Court Justice Stevens, in a dissenting opinion in *United States v. Scheffer* (1998), noted that although a number of studies reflect polygraph accuracy rates of between 85% and 90%, even critics acknowledge accuracy rates of 70%.

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<sup>1</sup> Paul Menges is a Federal polygraph instructor and examiner. The views expressed in this paper are those of the author and do not express the views of the Department of Defense or the U.S. Government.

For the purpose of this paper, some definitions are required. Guilty, as used above, refers to individuals who have committed a relevant act. Countermeasures refer to deliberate attempts by a guilty person to preclude the accurate outcome of a testing process.

By definition, someone who employs countermeasures during a polygraph examination is practicing deception. By most ethical standards, deception is wrong. Deception and lying refer to attempts to deceive. In her book, *Lying*, Sissela Bok (1999) defined lying as intentionally misleading statements of any form, while deception is the broader category and relates to any deliberate action or inaction with intent to deceive. When we deliberately mask our true feelings to portray a misleading image or we issue a false statement intended to deceive, we commit deception.

The earliest and primary arguments against lying and deception were religious in nature. Two biblical beliefs provided a basis for rejecting all lies: "that God rules out all lies and that He will punish those who lie" (Bok, 1999, p. 45). However, even among the religious, there is variance from the absolutist position against all lying. Most religious groupings, including Christianity, Buddhism, and Judaism, while rejecting lying in general, do allow exceptions. Other ethicists position themselves along a similar spectrum of justification and rationalization for or against lying and deception. The final arbiter is often the society in which the action occurs.

Employers routinely use a variety of psychometric instruments to provide some method of discerning applicant suitability. Most psychologists and lay persons would agree that to attempt to circumvent personality screening inventories by employing countermeasures would be deceptive and therefore, unethical. Such action would reflect unfavorably upon the integrity of the individual employing the countermeasure as well as anyone who advocated or supported such circumvention of the process. These screening methods are as susceptible to attack by countermeasures as is the polygraph examination process. Dr. A. H. Ryan (personal communication, December 3, 2001) of the Defense Polygraph Institute reported that

since most psychometric instruments used alone do not result in accuracy levels sufficient for diagnosis psychologists use multiple instrument batteries to increase diagnostic accuracy. In fact, single instrument predictive validity is similar to the oft reported 70% to 85% range of accuracy for polygraph (A.H. Ryan, personal communication, December 3, 2001).

Most screening type polygraph examinations involve a similar process of multiple series testing designed to increase accuracy and reliability, while resolving inconclusive issues. The success rate of efforts to employ countermeasures in any these psychometric tests may never truly be known. However, at least two recent studies indicated that the use of spontaneous countermeasures, e.g., the use of unpracticed and otherwise unpremeditated countermeasures by polygraph subjects in a mock crime scenario, did little to affect the accuracy of the outcomes (Honts et al., 2001; Honts & Amato, 2001).

The primary concern of this paper can be demonstrated with an example. Suppose a candidate for employment with a government security agency or perhaps with a large childcare center was turned down for the position because of test results from a personality inventory. He then becomes motivated and studies the methodology employed in various psychometric tests and obtains answer keys and codes to evaluate such tests. He learns that the testing techniques are less than 100 percent accurate and focuses his efforts on literature challenging use of the tests. He then establishes a web site from which he broadcasts his attacks on the testing techniques, emphasizing the lack of validity, scientific basis, and rates of false positive and false negative results. His web site quickly draws support from others who feel they were wronged by similar testing procedures, many of whom admit withholding information during their testing procedures, but who feel it was unnecessary to provide full disclosure to questions asked during the process. The site also draws one or more credentialed supporters in the form of opponents with advanced degrees and who previously worked within the community now under attack. Most of these individuals are persons whose prior

ties to the community in question were severed in a manner they feel was less than favorable and may have some additional motivation for their position opposing the screening tool.

The opponents of the procedure advocate its abolition. They also advocate the use of countermeasures and provide such information to anyone interested in circumventing the very systems intended to provide secure, efficient, and successful environments for businesses and national security. They openly state that since the testing is not valid, they have no qualms about providing countermeasures information to all, regardless of whether or not they have something to hide from the employer. A major weakness in their argument lies in the fact that when they circumvent acceptable norms or practices designed to protect the public they are acting against the will and best interests of society. This may be the most significant indication of unethical conduct. Theirs is action that has no public validation and it is not subject to public scrutiny. Why not ask the general public or even a panel of competent experts whether they approve of efforts aimed at helping guilty individuals try to defeat law enforcement and national security efforts, while we debate the accuracy and reliability of the assessment tool being used? The issue of aiding those persons openly acknowledging their efforts to defeat law enforcement and national security mechanisms has not yet been scrutinized in any public forum.

### **Theoretical Discussion of Ethical Situation**

Assessing character, honesty, and integrity has been a long accepted hiring practice for certain positions involving public trust and or national security. Polygraph is one tool used by many employers to assess candidates for these positions. Standards for employment within the law enforcement field and other areas where public safety and protection is paramount have long been accepted as more stringent than for positions in most of the private sector. Societies look to their law enforcement for protection. Those selected to enforce laws must live by those same laws. They should have no previously demonstrated propensity to violate the very

laws they seek to uphold. Few would argue that people not qualified for law enforcement positions by generally acceptable measurements of character and other qualifiers, should be allowed to enter that arena.

Those who disagree with generally accepted measurement tools, be they polygraph examinations or other psychometric tools, have the individual right and perhaps even moral and ethical obligations to work for changing the methods of assessment when necessary. However, to attempt to subvert the system, thereby threatening public safety and or national security, can hardly be justified using any ethical analysis. For the end to be justifiable to any ethical position, some proximity to ethical principles must exist. One could attempt an argument against polygraph on the grounds of fairness and equality (*justice*), working for the good of mankind and society (*beneficence*), doing no harm to others (*non-maleficence*), striving to ensure truth (*veracity*), and individual freedom to do as one pleases (*liberty*). However, to advocate the use of and provide information pertaining to countermeasures with the specific intent of subverting legitimate law enforcement activity and national security falls far from any ground which can be argued as in the interest of the public good, public safety, and the preservation of society.

*Antipolygraph.org* is a Web site that provides a forum for polygraph opponents. The site and its founders offer a manual, *The Lie Behind the Lie Detector*, which contains information pertaining to polygraph use and in their words, abuse (Maschke & Scalabrini, 2000). The manual contains advice regarding countermeasures to be employed to defeat polygraph examinations, but indications are that the focus will be expanded to any psychometric testing technique which attempts to provide insight to an employer or security agency. Indeed, a message posted by one of the site founders provided a link to information designed to defeat the Rorschach Inkblot test (Maschke, 2001). Another recent posting on the site sought advice and provided commentary from an individual who acknowledged that he had recently performed countermeasures during a polygraph examination for a law enforcement position. At

the point of writing, he was uncertain about the results but made clear that his intent was to withhold information from the law enforcement agency in question. He claimed the information withheld would have eliminated him from consideration (Anon, 2001). In a response provided to Anon, a writer indicated that he had no problem providing advice to apparently guilty individuals since he felt the technique was invalid (Anon, 2001). This is one of many such postings, which make it clear that many of the people perusing and participating on this site are interested in deceiving their prospective or current employers. The primary targets of this deception and unethical conduct are law enforcement or security authorities at the local, state, or national level.

There is a market for information on how to defeat law enforcement and security procedures. Petty criminals, local mobsters, international spies, and terrorists try to avoid detection by law enforcement. A *New York Times* news article in late 2001, mentioned that among other items recovered from a suspected terrorist safe-house in Kabul, Afghanistan, were instructions on how to defeat a polygraph examination (Rohde, 2001). What ethical justification would suffice for these polygraph opponents, if the document found was *The Lie Behind the Lie Detector* or *How to Sting the Polygraph!* (Maschke & Scalabrini, 2000)(Williams, 2000). This is not the first time that those who would do harm to the United States would attempt to defeat one or more of our law enforcement techniques but its timing could not have been more precipitous. Anyone following the postings and attacks on polygraph on the message boards of the various anti-polygraph web sites can see that more and more postings are being submitted by those attempting to circumvent law enforcement efforts to identify their illegal or otherwise disqualifying activity. Following the September 11<sup>th</sup>, 2001, terrorist attacks on America, law enforcement has been almost singularly focused on identifying and neutralizing a host of threats to our national security. All tools and investigative aids are being utilized in this effort, including polygraph examinations of suspected terrorists and or sources of information. To attempt to make these examinations by law enforcement and intelligence agencies more difficult and

openly aiding guilty parties attempt to evade detection is unethical. Whether it could also be argued to be illegal, in some cases seditious, or in the case of the Al Qaeda document, possibly treasonous will be left for attorneys to argue.

The issue of whether countermeasures are or can be effective in defeating a polygraph examination is moot to the main point of this article but will be addressed herein because of arguments by the anti-polygraph lobby. Research is varied and in fact dated on this point. Some older research indicated that accuracy of the polygraph examinations was reduced when examinees received specific countermeasures training (Honts, Hodes, & Raskin, 1985; Honts, Raskin, & Kircher, 1987; Honts, Raskin, & Kircher, 1994). Honts et al. (2001) discovered that although a high percentage of guilty subjects in a mock crime laboratory experiment performed spontaneous countermeasures, the identification of guilty subjects by the examiners was not significantly affected. Honts & Amato (2001) summarized findings related to the effectiveness of countermeasures employed in polygraph examinations, however, they also specifically questioned the ability of most subjects to obtain the degree of training and sophistication they deem necessary to defeat a polygraph examination. Increased training and awareness of the threat posed by countermeasures being employed in polygraph testing may provide evidence to support this position. However, no current empirical evidence is available to adequately answer this concern. Anecdotal evidence being reported almost weekly by field examiners and hopefully that which will eventually be reported in open source literature clearly indicates that examiners are identifying guilty subjects attempting countermeasures in increasing numbers. While many examiners once believed that countermeasures posed little threat to their ability to conduct accurate examinations, those who keep abreast of advances through training and professional development courses are keenly aware of the threat. Dr. Gordon H. Barland (personal communication, January 14, 2001) agreed that current levels of awareness and attention to the threat posed by countermeasures, along with increased training to recognize and detect countermeasures may be responsible for the

increased reporting of countermeasures being employed by some subjects.

One has no way of knowing how many guilty subjects in field settings are trying to defeat the tests and this debate may go on forever. Opponents argue that the threat of countermeasures invalidate the procedure because examiners can not properly identify countermeasures and in fact, the examinations can not be accurately conducted. Examiners, on the other hand, argue that their profession has become much more attuned to the threat of countermeasures, thanks in no small part to the postings of Maschke and Scalabrini (2000), Williams (2000), and others. Their evidence is anecdotal and not yet compiled in any form as empirical data. In the interest of not highlighting the fallacies of the information posted regarding methods to defeat polygraph testing, most examiners will not address to the anti-polygraph lobby, specific methodology being used to identify and combat countermeasures. This of course, frustrates opponents propagating the sites, continues the circular nature of the debate, and leaves intact an impasse not likely to be resolved anytime soon.

Polygraph opponents also attack the use of polygraph because of *false positive* and *false negative* rates. Whatever the rate selected for debate by the proponents and opponents, the fact is that all forms of psychometric assessment are subject to varying false positive and false negative rates. A primary concern is for the innocent person being screened for a position, who might be falsely identified in any form of psychometric test. Likewise, it is assumed that few want to see a guilty person pass the exam. Any competent professional conducting psychometric assessments is aware of the limitations and capabilities of the technique in use.

Polygraph screening of individuals for employment or security clearance purposes involves a process. Like other psychometric testing techniques, one method of reducing errors in the procedure is to utilize a series or battery of tests. An initial screening examination, which is unresolved because of subject's physiological responsiveness to a relevant issue, is almost always continued by

retesting. The retest most often addresses individual specific issues. While false positive and false negative rates will always be a concern in psychometric assessment, efforts can be made to mitigate these results. Agencies using such testing techniques must have mechanisms in place to address examinations that are unresolved. Most agencies also have procedures in place to further adjudicate the individual in question, usually through some form of additional inquiry or investigation. These are legitimate concerns. Efforts must be made to insure that whatever parameters of acceptability are set for such testing that these parameters be acceptable to society and the public. However, until current policy and the current level of public acceptability for these procedures is changed, efforts to derail the policy by attempting to help guilty individuals defeat law enforcement's efforts is unethical.

Another issue of contention for some polygraph opponents is their claim that the examiner is deceptive, therefore, the examinee is ethically justified in employing countermeasures to defeat the examination. While the argument may continue over whether the term *control*, is accurate as used in a Control Question Test, or whether it is ever appropriate to lie to a subject during an interrogation, many examiners recognized long ago the value of being honest with an examinee. One government agency conducting screening examinations in the 1970's and 1980's stressed the importance of honesty and professionalism to its examiners in order to expect complete honesty from the examinee. The use of phony card tricks or making wild claims about one's competency as an examiner or the capabilities of the polygraph instrument was discouraged (F. Don Clifton, personal communication, April 14, 2002).

Polygraph opponents undoubtedly possess a variety of motivations for their position. Some may truly feel wronged and ethically justified in their actions. Perhaps they were denied employment in a particular government agency because information was developed during a polygraph examination that precluded their hiring. Some opponents may feel the use of such a device to verify information is unethical and ought not to be

employed by government. Is it unethical to ask people questions they feel to be intrusive and or personal in nature? Who should decide what unfavorable information meets the threshold for denying employment? Who decides what information is unfavorable? Some feel a personal right to withhold information they deem irrelevant to the hiring process. Others may have some personal vendetta based on relationships once held. Assuming the most honorable of reasons, e.g., one feels that polygraph is inaccurate, scientifically invalid, personally intrusive, and perhaps even uncomfortable to endure, one may propose an ethical argument to oppose the use of polygraph examinations. If a *Decision-Maker* holds these views, he or she would be ethically bound to oppose such testing. Ethical principles such as *justice*, *beneficence*, *non-maleficence*, *veracity*, and *liberty* would require him or her to argue for banning the process. Ethical support for a position providing countermeasures information and advocating the circumvention of law enforcement techniques would be based on concern for equality and fair treatment, the good of society, doing no harm to others, supporting truth, and supporting individual rights and freedoms as valid justification. By opposing polygraph and helping others circumvent a legal process, opponents argue that they are nullifying the use of polygraph. Once nullified, the next step would be to abolish its use since it is not effective.

A major flaw in this judgement, however, is that arguments can be made, short of providing aid and assistance to those who would harm society. One can oppose the polygraph process and argue validity issues without trying to help guilty persons avoid detection by law enforcement. A second flaw is their assumption that the use of countermeasures invalidates the process (Honts et al., 2001; Honts & Amato, 2001; Otter-Henderson et al., 2002). Unfortunately, for reasons mentioned earlier, this issue will be debated for some time. In the final analysis, society, which sets the laws and moral standards is the *Decision-Maker* when it comes to what is and is not ethically, morally, and legally acceptable.

Polygraph as currently employed by the government has been and continues to be

scrutinized by legislators and their appointed panels. The doors of the polygraph profession have begun to open and the profession is under the microscope. As mentioned later in this paper, courts tasked with adjudicating requests for information regarding the technical aspects of individual polygraph examinations have recognized and validated the importance of protecting such information from release. These courts operate on behalf of the citizenry responsible for the laws and legislation promulgated for public safety. This *public scrutiny* refutes the notion that polygraph, at least in the federal sector, operates with impunity and without oversight. Such oversight is critical for the level of acceptance required for the polygraph profession to be seen as operating in an ethical manner. With public approval of its use, polygraph serves to strengthen law enforcement and national security. Serving the greater good and public safety are certainly ethical ideals. They are, however, ideals that proponents of countermeasures to law enforcement polygraph examinations either wittingly or unwittingly attempt to destroy.

### **Relevant Guidelines/Position Statements**

Law enforcement and national security issues are generally promulgated by the citizenry for the good of all and public safety. Acts to counter these efforts are by definition unethical. While not all unethical acts are illegal, one such effort to circumvent law enforcement's role in protecting the public has been deemed to be illegal. In a recent South Carolina Supreme Court ruling, a state law banning the sale of urine intended to help individuals defraud drug screening required by certain occupations, was upheld ("Law Banning," 2001). While the defendant in that case argued his right to conduct a private business and help others protect their privacy by thwarting drug tests, the court found in favor of the public interest. The law upheld was intended to protect society by insuring a drug-free workplace. In this case the unethical act adversely impacted the expectation of society to be safe and the government's ability to provide for the public good. Interestingly, one or more recent postings on the Antipolygraph.org's message boards purport to provide accurate advice and assistance to

anyone attempting to circumvent such required drug testing (Netnintubooly, 2002).

U.S. courts have repeatedly recognized and supported a position protecting certain polygraph related information from routine release and disclosure in response to Freedom of Information Act (FOIA) requests. Exemption category 7E, of the FOIA Guide (2000), intended to preclude the disclosure of law enforcement techniques and procedures that would risk circumvention of the law, cites several such cases:

See, e.g., Hale v. United States Dep't of Justice, 973 F.2d 894, 902-03 (10th Cir. 1992) (concluding that disclosure of "polygraph matters" could lessen effectiveness), cert. granted, vacated & remanded on other grounds, 509 U.S. 918 (1993); McDaniel v. United States Dep't of Justice, No. 99-1935, slip op. at 5-6 (D.D.C. May 8, 2000) (determining that FBI properly withheld polygraph information "to preserve the effectiveness of polygraph examinations as a law enforcement technique"); Blanton v. United States Dep't of Justice, 63 F. Supp. 2d 35, 49-50 (D.D.C. 1999) (finding that disclosing certain polygraph information--e.g., "sequence of questions"--would allow individuals to employ countermeasures); Coleman, 13 F. Supp. 2d at 83 (holding that disclosure of behavioral science analysis and details of polygraph examination would frustrate enforcement of law); Perrone v. FBI, 908 F. Supp. 24, 28 (D.D.C. 1995) (finding that release of precise polygraph questions and their sequence would allow circumvention of examination) (FOIA Guide, 2000, Footnotes Section, para. 13).

In spite of the FOIA exemption to preclude release of such information from government offices, there is no legal statute precluding individuals from selling and or freely providing polygraph countermeasures information, as do Williams (2000) and Maschke & Scalabrini (2000), respectively. Arguments and laws against allowing individuals to provide countermeasures information with the intent of subverting long

standing and appropriately promulgated law enforcement efforts might appear to be a violation of constitutional rights. On the surface this position appears to argue against the constitutional guarantee of free speech. In the United States we live in a society governed by laws intended to protect the rights of individual citizens, while protecting the greater good, that of society as a whole. The U.S. Constitution has been interpreted to contain protections for individuals and society as a whole. The Preamble to the Constitution clearly addresses the intent to insure justice for all, promote the general welfare, and insure domestic tranquility in the land (The Constitution, 1787). Under The Constitution, one may have a right to freely express opinions on an issue and even work for legislation to outlaw the offensive practice. But to take actions that subvert legitimate law enforcement practices, the result of which could threaten public safety and or national security, violates all principles of ethics and can, in some cases, be illegal. Providing polygraph countermeasures to guilty persons facing law enforcement or national security polygraph examinations is unethical, clearly attempts to obstruct justice, and should be stopped.

### **Alternatives**

Alternatives for those opposing the use of polygraph as an investigative aid or personnel security screening tool are obvious. Opposition can be dropped; it can continue in a form limited to all current forms of opposition, short of advocating and providing countermeasures to prospective examinees; or it can continue in its current form, which includes actions to help guilty persons attempt to defeat the efforts of society to maintain law and order.

For those supporting the use of polygraph, the alternatives are equally obvious. Current efforts by the anti-polygraph movement, including the providing of countermeasures information to the general public, can be ignored; they can be countered with efforts by examiners and professional polygraph organizations to engage the opposition in constructive dialogue to address the issue of aiding guilty parties; or a broader based initiative can be attempted by polygraph

proponents. The latter alternative would have polygraph proponents contribute toward furthering the science by openly engaging in legitimate discussions with those entrusted to publicly scrutinize the process such as the National Academy of Sciences panel mandated to study polygraph in 2001 (National Academy of Sciences, 2001). Ethical principles like *veracity*, *justice*, *beneficence*, and *non-maleficence* would be well served by mitigating or removing the threat to society posed by providing countermeasures information to the general public and guilty parties, in particular. Additionally, all would benefit from the increased research and experimentation certain to be generated by such discourse and *scrutiny*. The desired end result would be a termination of the current attitude regarding providing countermeasures information to the public, possibly through legislative action

intended to make the providing of specific countermeasures information illegal.

The latter alternative for the proponents would do much to further the resolution of the primary issue. Opponents could continue to exercise their constitutional rights to criticize, debate, research, and openly oppose the use of polygraph. Concerns for the fate of an innocent subject who fails to resolve all issues during the process is legitimate and worthy of continued attention. Few organizations can afford to miss out on a competent employment candidate. However, society must set the bounds of acceptable actions, whether involving national security clearance cases or cases where an applicant will have access to unprotected young children in a day-care center. In the final analysis, access is a privilege guarded by society, not an inalienable right.

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# Polygraph Theory and the Problematics of Postmodern Truth

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## Abstract

This essay examines philosophical assumptions upon which polygraph theory is predicated and considers the cultural context from which it derives. The science of polygraphy is viewed as a cultural institution that, like the entire scientific enterprise from which it derives, is a product of the "modern" era in the history of western civilization. This era, which lasted through the Reformation, Scientific Revolution, Enlightenment, and Industrial Revolution of the 16<sup>th</sup>, 17<sup>th</sup>, 18<sup>th</sup>, 19<sup>th</sup> and early 20<sup>th</sup> centuries, gave rise to certain fundamental assumptions regarding the nature of consciousness and truth that made scientific knowledge and methods possible. Thus polygraph science is based upon these modern era assumptions. These assumptions make polygraph theory possible and remain essentially unquestioned by scholars and practitioners in the field. However, the essay goes on to contend that, as the modern worldview is gradually displaced by the postmodern worldview during the course of the later 20<sup>th</sup> and early 21<sup>st</sup> centuries, the basic assumptions of modernism, and hence of polygraphy, are being challenged and undermined. The essay concludes by suggesting that polygraph theory, like scientific institutions generally, must address the challenge of postmodern views on consciousness and truth if it is to retain its legitimacy among non-polygraph experts in the postmodern cultural milieu.

## An Exposition Of The Problem

Although its author is a polygraph examiner, the purpose of this essay is pointedly not to address issues characteristic of conventional research and writing in the field of polygraph science. It makes no original scientific contribution to the field. Nor does it discuss specifically any technical or applied aspect of practice. In fact, all discussion of polygraph theory and practice is limited to subject matter that should be 'common knowledge' for polygraph practitioners.

Its purpose instead, is to examine certain fundamental assumptions upon which the science of polygraph is predicated. These are assumptions of an ontological nature, from which the entire enterprise of science has derived, and they are assumptions that sustain the cultural context from which polygraph science in particular has emerged. Thus the method employed here will be philosophical rather than technical, speculative rather than empirical. It will consider polygraph as a cultural phenomenon, and as a product of certain psychosocial

perspectives on the nature of consciousness and truth. These are perspectives that must be understood as evolving assumptions in the intellectual and social history of western

civilization in order to understand further how they have configured the nature of polygraph.

Although somewhat unconventional in current polygraph scholarship, such speculation may have significance for the profession. It can encourage both scholars and practitioners in the field to take a larger view of the scope of their work. It can also encourage deeper scrutiny of some basic assumptions that sustain polygraph research and practice. They are assumptions upon which the field is grounded but which are seldom, if ever, questioned by experts.

This essay will therefore examine the transformation of fundamental assumptions regarding the nature of consciousness and the concept of truth.

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It will explore the manner in which these assumptions, which provided a justification for science and the scientific method during the modern era in western culture (16<sup>th</sup> to the early 20<sup>th</sup> centuries), have begun to erode with the onset of postmodernism (latter 20<sup>th</sup> century to the present). It will further discuss how polygraph theory, which is a product of modern science and its assumptions, may also be affected by the postmodern challenge to these assumptions.

Accurate and comprehensive definitions of 'modern' and 'postmodern' are not easily formulated. Both terms have wide-ranging and multifarious applications across numerous academic disciplines and fields of knowledge. For this paper's purposes, modernism and postmodernism will refer to the respective cultural paradigms that configured psychosocial and ontological assumptions intrinsic to each historical era. Among these assumptions are views pertaining to the structure of self-identity and conscious experience, the possibility of objective knowledge and critical thought, and the nature of truth. This essay discusses the manner in which modern era assumptions regarding consciousness, knowledge, and truth—which have traditionally formed the basis for scientific inquiry in general and polygraph science in particular—are being usurped by postmodern assumptions on these themes in a way that is undermining both science and polygraph science as conceived by modernity.

### **Modernity, Science, And Polygraph Theory**

The evolution of polygraphy as a field of scientific inquiry during the modern epoch is well documented. By the 18<sup>th</sup> century, as the cultural influence of science became increasingly pervasive, researchers began using measurable data to study human behavior, psychology, and even criminology. In short order, the almost exclusive use of quantifiable research methods in all science-related fields of knowledge was pervasive, and scientific research methods were becoming the intellectual archetype for all methods of inquiry (Shorter, 1997, pgs. 26-29; Jardin, 1999). Philosopher and cultural historian William Barrett notes, "From the start technology and science go together; technology

is not merely an incidental application of science, it is at the root of modern science....Mechanics thus became the basic part of physics, and physics the basis of the whole of science....The strictly scientific effort to found mechanics as the basis for physical science passed over into a more general frame of mind...scientific materialism was to become de facto the dominant mentality of the west for the three and a half centuries that followed. It ruled not so much as explicit and articulate philosophy, but more potently as an unspoken attitude, habit, and prejudice of mind" (Barrett, 1986, pgs. 5-6).

Throughout the 18<sup>th</sup>, 19<sup>th</sup>, and 20<sup>th</sup> centuries a host of scientists were preeminent figures in the application of scientific methods and principles to the study of truthful and deceptive mental states. Polygraph emerged in this manner through the efforts of researchers such as Mosso and Lombroso in the 19<sup>th</sup> Century and Backster, Keeler, and Reid in the early 20<sup>th</sup> (Matte, 11-40). Matte also affirms the scientific status of polygraphy, writing,

"The APA holds that the PV examination is a validated scientific procedure not unlike other scientific techniques that are routinely subjected to the closest scrutiny" (Matte, 1996, pgs. 580) and again, "It has already been established by the Daubert Court and the scientific community that the competency of the expert, validity and reliability of technique, and the scientific methodology used to administer the test are critical in the evaluation of test results" (Matte, 581).

However, just as polygraph emerged from and was based upon modern science, the institution of science was itself predicated upon certain philosophical assumptions. These assumptions consequently became intrinsic to polygraph as well. The Reformation, a religious development that fragmented and diminished the totalitarian cultural supremacy of the Catholic Church during the 16<sup>th</sup> and 17<sup>th</sup> centuries, provided a social climate of secularism and free inquiry that made science possible. The Enlightenment, an intellectual movement that applied critical thought and methods to social, political and philosophical theory during the 18<sup>th</sup> century, did much to institutionalize

scientific inquiry. The Industrial Revolution, which brought about the rise of socioeconomic commercial capitalism during the 19<sup>th</sup> and 20<sup>th</sup> centuries, --in informal partnership with the Scientific Revolution itself-- made science and technology the dominant cultural ethos. All of these developments configured the fundamental world-view of modernity in western civilization (Bronowski & Mazlish, 1972).

Science though, did not arise in an intellectual vacuum and produce modern culture ex-nihilo. The values and world-view of modern culture --even when unstated or unconscious--did much to produce science. Without the values and world-view of modernity, in fact, science and technology could never have been possible (Crosby, 1997, pgs. 227-240). This social system of often unquestioned and largely unconscious beliefs or assumptions regarding such issues as the nature of truth and consciousness provided the intellectual foundation upon which the edifice of science was erected. As philosopher/historian Thomas Kuhn illustrated in The Structure of Scientific Revolutions, modern science was a manifestation of that era's "paradigm". It was a system made possible and justified by fundamental assumptions that were, in turn, reinforced by the system they supported (Kuhn, 1970).

### **Foundations Of Polygraph Theory In The Modern Era**

Thus science and technology are more than abstract theories, techniques, or gadgets. They embody and are sustained by assumptions or beliefs regarding the nature of existence and meaning of truth. Because these modern-era assumptions or beliefs were culturally self-evident, they remained largely unquestioned and unchallenged until the advent of the postmodern era. As an extension of modern science, polygraphy has also embodied these beliefs and assumptions.

One such unquestioned assumption -- easy to recognize as such since it still seems quite commonsensical-- is the concept of an individuated ego and enduring self-identity at the center of conscious experience. Informed by their cultural paradigm, modern thinkers

gave sanction to a concept of self-identity that was individualistic and autonomous in character. At the core of conscious experience was a distinct and independent personality or self. This self was understood to be the fundamental element of consciousness and essential to the human condition. It constituted the enduring "person" who unified the multiplicity of life experiences that are observed and acted upon. This self-concept legitimized the cultural institutions of government, law, education, and science that were then emerging (Cushman, 1995, pgs.357-388).

Psychology historian, Philip Cushman, notes that Rene Descartes and John Locke, two 17<sup>th</sup> Century philosophers who were also seminal figures in the development of the social and behavioral sciences, conceived of the "self" in just such a way as to make the individual compatible with the social order of that time.

"Descartes advocated a scientific attitude toward the material world, one that necessitated an objectifying stance. He advocated that individuals emotionally remove themselves from the world...Locke took some of Descartes ideas such as objectification, and radicalized them, applying them to the psyche in ways that ultimately led to the disciplines of psychology and psychotherapy" (Cushman, 1995, pgs.377)

Being independent and autonomous, the human agent became the arbiter of decision-making and the locus of moral responsibility. The ontological and ethical magnitude of self-identity acquired a significance during the modern era that had hitherto been unimagined. Cushman comments, "What was it about the modern era that necessitated the reconstruction of the self ? ...the identifying characteristic of Locke's self was the power to disengage from itself. It was a pure, independent, disengaged, instrumental consciousness. Locke developed an ideal of self-responsibility, an implicit moral theory of scientific objectivity....By remaking the self into the final arbiter of truth and center of initiative, individualism becomes entrenched and the dominance of church and folk traditions became severely undermined" (Cushman, 1995, pgs.381).

Where pre-modern culture had conceived of "self" in terms of transpersonal spiritual forces and social-ethnic-familial roles, modern culture conceived of self-identity as solitary, unified, and ego-centered. Such a self, now free from inter-subjective psychic bonds, social/familial constraints or obligations, and transpersonal spiritual identities, could function as an autonomous entity. The modern individual became responsible for his identity and morally responsible for his actions. This individual was "...a kind of radically independent self. It had to be, because it was responsible for producing what had heretofore been entrusted to tradition and community." (Cushman, 381)

In this way, the modern self-concept was necessary for the development of psychosocial and scientific theories. As an extension of these theories, polygraph theory also presupposes this concept of self-identity. Indeed, without the ego-centered individual as its object of investigation, polygraph science would be impossible. Polygraphy assumes the same unity of conscious awareness and individual autonomy that modernity presupposed as the basis for rational thinking and personal responsibility. This conception of consciousness makes polygraph theory feasible. It is the test-subject's ability to conceive of himself as a locus of personal awareness and responsibility that makes him testable via polygraph. Polygraph concepts as rudimentary as "psychological set" and the effect of "stressors" are only possible if conscious experience is understood in this way.

Another related assumption built into the basic structure of polygraph theory is the dualism or separation of observer and observed in conscious experience, which also has its origins in the ontological assumptions of modernity's Scientific Revolution. Having isolated the individual from external influences, "The early modern self was capable of prodigious feats of scientific observation, logic, and inward reflection" (Cushman,381) Certainly, a hallmark of any "scientific" knowledge is its basis in a meticulous process of objective logical examination. The validity of science rests upon the intellectual capacity for critical analysis. This assumes that neutral observers can scrutinize their observed

perceptions from an intellectually detached – and hence objective—vantage-point. Such objectivity requires critical distance between observer and observed. In Experimental Psychology, Ann Myers comments that, "Within the scientific framework, observations must be made objectively...The good scientist avoids merging with the data observed. Personal feelings, thoughts, and expectations must remain separate from the external events being recorded" (Myers, 1987, pg.10)

Scientific objectivity is accomplished by reducing observed experience to measurable data, which can then be quantified and analyzed from a critical distance by the rational observer. Through this process of reduction, the observer attains intellectual mastery of observed phenomena, which can then be predicted, repeated, and recorded, via experiment or testing.

This idea became an indelible aspect of scientific thought during the modern era. Galileo's mathematical conception of physical dynamics, Newton's Laws of physics, Locke's mechanistic principles of human action, and Adam Smith's logic of economic behavior, all reflected the belief that objective scientific analysis would yield "natural law at work governing the affairs of men just as it governed the trajectory of a cannon ball or the pressure of gas, and this social law manifested itself in the behavior of every individual" (Burke, 1997, pgs. 155-173). Thus, the belief in epistemological objectivity via the separation of observer from observed, is intrinsic to the very nature of science.

The assumption of such epistemological objectivity therefore remains intrinsic to polygraph science. The belief that mental states can be measured objectively via methodical recording and analysis of metabolic responses to controlled psychological stimulus, is the basis for polygraph theory. The possibility of objective neutrality and analytical detachment of the observer from the observed in polygraph research and testing must therefore be assumed. Polygraph procedure is designed to ensure this separation. The strictly defined roles of examiner and examinee maintain the professional distance necessary to provide objective analysis. The standardized

terminology of the discipline is also maintained for this purpose. Also as Matte notes, the evolution of generally accepted approaches to polygraph examination analysis from "clinical" or "global" methods—which involve evaluating case facts and kinesic behaviors as well as quantifiable physiological responses—to "numerical" methods—which depend entirely upon the quantification of recorded physiological data—reflects polygraphy's commitment to a rigorous standard of scientific objectivity. (Just as the evolution from "Relevant/Irrelevant" techniques to "Zone Comparison" techniques reflect its commitment to the best possible standard of accuracy). These trends derive from an on-going attempt to keep polygraph technique free from subjective emotions, biases, or preconceptions. For polygraphy's legitimacy as a science rests upon its ability to ensure critical objectivity.

The foregoing assumptions— of an autonomous, stable ego at the center of conscious experience and of the epistemological separation of observer and observed experience—are related to another basic assumption of modern science and polygraph: That "truth" and "falsehood" correspond to objective fact and that truthful and deceptive mental states can be clearly defined. "Truthfulness" or "honesty" is asserting what is thought to be true—or what is thought to correspond to facts-- "falsehood" or "deception" is the opposite of this.

Descartes' introspective ruminations provided the solid philosophical bedrock of "clear and distinct" or self-evident ideas upon which true beliefs and assertions could be founded (Descartes, 1976). British Empiricism following Locke (a school of philosophical thinking beginning in the 18<sup>th</sup> century that emphasized the application of experiment to critical analysis) tended to destabilize the intellectual certainties of Cartesian continental rationalism (a contemporaneous intellectual tradition which emphasized theoretical consistency in knowledge) somewhat, but generally maintained modern culture's confidence in self-determination and the scientific method. Truth from the modern perspective was intelligible, reliable, and demonstrable. "Honesty" in the modern sense became, by the 19<sup>th</sup> Century, integral to good

character in the capitalist bourgeois cultural ethos. (Bronoski&Mazlish, 1972)

Deriving from these origins, this concept of honesty or truthfulness remains fundamental to polygraph theory. Truthfulness of this sort is precisely what polygraph examinations are designed to test. Since, in Matte's words, "The Forensic Psychophysicologist's objective is to seek the truth, and the F.P. verifies the truth as well as detects deception..." (Matte, pg.4), the science of polygraphy relies upon the assumption that there are mental states and statements which can be definitively categorized as either true or false.

### **Postmodernism's Challenge To Polygraph Theory**

However, the meaning of truthfulness and deception in the modern sense has undergone radical transformation during the course of the past century. Basic assumptions regarding consciousness and truth have been altered, attenuated, or repudiated in the postmodern milieu. Modern-era philosophical assumptions regarding self-identity, objective inquiry, and truth, upon which polygraphy relies, are being gradually displaced by postmodern assumptions.

During the course of the 20<sup>th</sup> Century, global conflicts, world capitalism, ethnic diversity and social change, technological lifestyles and values, media-generated virtual realities, and other such developments engendered monumental changes that have radically transformed western civilization. A new cultural paradigm – commonly called "postmodern"—has begun to replace the paradigm of modernity and its institutions. Since science is one of these institutions, its basic assumptions have been challenged. The postmodern paradigm thus presents a fundamental challenge to the assumptions that give polygraphy its validity.

The postmodern paradigm embodies new philosophical perspectives. In Freud and Philosophy, Paul Ricoeur described three preeminent postmodern thinkers as "Masters of Suspicion" – Nietzsche, Marx, and Freud -- because of their radically subversive views regarding consciousness and truth (Ricoeur,

1970). Jeremy Campbell, in his History of Falsehood, adds Darwin to Ricoeur's list, claiming that these four figures symbolize "...the transition to the mistrust of consciousness which has culminated at the turn of the millenium in postmodern suspicion...with no anchor in truthful meanings lodged in the mind" (Campbell, 2001, pgs. 29). Campbell goes on to contend that the modern era marked an apex of faith in scientific truth and the self-determined intellect. However with postmodern intellectual and social change came new ideas regarding the nature of self-identity, the possibility of objective knowledge, and the character of truth.

These new ideas are becoming contemporary psychosocial assumptions. As such, they have not only begun to supplant those of modernity, but they have also begun to become living realities in contemporary experience. Having internalized the postmodern paradigm, contemporary consciousness has been transformed (Berman, 1999). This is the challenge facing modern institutions generally and polygraphy specifically.

The modern era's conception of consciousness or the self, for instance, is integral to polygraph, as previously discussed. However, postmodern thought has undermined modernity's, independent and morally responsible self-concept. Freud's Interpretation of Dreams, published at the outset of the 20<sup>th</sup> Century, helped initiate the tradition of "postmodern suspicion" directed against the stable Cartesian ego. While modern thought had considered the autonomous ego's objective existence to be self-evident, postmodern thought beginning with Freud cast doubt upon both self-identity and self-awareness. Freud's omnipresent and radically mysterious "unconscious" mind rendered conscious identity, intentions, and actions, intrinsically unreliable. Self-determination in the modern sense became impossible because all conscious thoughts are manifestations of unconscious motives. All mental states are inherently problematic and multi-dimensional. Clear and unequivocal intentions and desires are no longer possible for the postmodern mind.

For the modern mind, conscious and deliberate mental states could be objectively perceived and understood. Within the nebulous postmodern mind however, unconscious forces are always at work, imperceptibly, behind every mental act. As Freud described it:

"...the unconscious must be assumed to be the general basis of psychical life. The unconscious is the larger sphere, which includes within it the smaller sphere of the conscious. Everything conscious has an unconscious preliminary stage; whereas everything unconscious may remain at that stage and nevertheless claim to be regarded as a psychical process. The unconscious is the true psychical reality" (Freud, 1965, pg. 651).

The psychoanalytic destabilization of self-identity via the unconscious has been enhanced further by the influence of existentialism and phenomenology, which have thrown into question the substance of consciousness as well. Nietzsche attacked the very idea of self-identity:

"When I analyze the event expressed in the sentence 'I think', I acquire a series of rash assertions which are difficult, perhaps impossible to prove – for example, that it is 'I' who think, that it is something at all which thinks, that thinking is an activity of the part of an entity thought of as a cause, that an 'I' exists, that I know what thinking is....Whence do I take the concept 'thinking'? Why do I believe in cause and effect? What gives me the right to speak of an 'I' as the cause of thought?" (Nietzsche, 1970)

Sartre also attacked the concept of an enduring Cartesian ego or self at the center of conscious awareness. Examining the relationship between free will and the transitory nature of mental states, he concluded that no enduring or definitive self-identity is possible for beings with a free consciousness. The ego perpetually "is not what it is and is what it is not" (Sartre, 1978, pg. 231).

The destabilization of the ego—exemplified by the emergence and profound cultural influence of such postmodern ideologies as psychoanalysis, phenomenology,

and existentialism-- is a challenge to polygraph theory's basic assumptions and raises some interesting issues for polygraph science. One involves the status of unconscious mental states, which are difficult, if not impossible to account for in a definitive or scientific manner. If, as psychoanalytic theory contends, every conscious thought, belief, statement, or desire, is merely a superficial expression of deeper and incomprehensibly complex unconscious motives, how then can the ultimate veracity of the conscious mind be determined? Indeed, if Freud's conception of psycho-dynamics is accurate, can there be any such thing as a simple, uncomplicated 'true statement'? Psychoanalysis would seem to imply that any statement or belief, no matter how consciously sincere, is at best a partial truth and always deceptive to some degree. -- Certainly, every statement or belief is imbued with subtle contradictions and unspoken undertones. If this is the case, then exactly what does polygraph help to discern? Do 'reactions' to test questions indicate only relative degrees of truth or deception? Where, in fact, does truth or deception begin or end in the psyche, and how will complex unconscious beliefs manifest themselves on a polygraph chart? Trained field examiners all know that correct pretest procedure entails the examiner clarifying relevant questions, identifying and dispelling 'impeding variables', and ensuring that the examinee clearly understands the issue(s) under examination. --but how can examiners or examinees identify unconscious issues that neither is aware of?

Moreover, the existential fragmentation and dislocation of self-identity in the postmodern world makes it more and more difficult for individuals to assume personal responsibility for past actions. In a cultural ethos that destabilizes any fixed or lasting locus of individual accountability, can individuals be expected to assume such responsibility reliably or consistently enough to be tested with respect to it? This quandary is not as far-fetched as commonsense might seem to suggest. Psychologist Kenneth Gergen finds that the postmodern person experiences self-identity in increasingly disjointed multi-contextual manner -- literally 'becoming a different person' as roles or circumstances change:

"Psychologists have been working on two assumptions. 1) That it is normal for a person to develop a coherent sense of identity and 2) it is good and healthy to do so and pathological not to...My research over the past years has led me to question both these assumptions very seriously. I doubt that a person normally develops a coherent sense of self-identity" (Gergen, 1995, pg.137).

Psychologist Connie Zweig concurs, postulating "The death of the self in the postmodern world" (Zwieg, 1995, pg.145) So the postmodern person is processing experience less and less as a single self that unifies life events, and more and more as a collection of selves that vary with circumstances and are often in conflict within the person. Maintaining a coherent or consistent sense of personal responsibility for past behavior thus becomes increasingly difficult as time passes.

Such findings perhaps help to explain the pervasive influence of the so-called "excuse mentality" in contemporary society. If 'I' am, in fact, only a loosely conjoined series of multi-selves, arising and passing away with each new life-situation, how then can 'I' (of the present moment) have a meaningful connection to the 'other' person who 'I' was in the past? I literally "wasn't myself when I did that." --and hence, am not responsible.

How can this fleeting postmodern subject be polygraph-tested? If a person is capable of disassociating at will from actions that he feels no obligation to identify with, how can the sense personal responsibility essential to "psychological set" consistently influence that individual's response to Relevant or Control questions?

Postmodern thought has also undermined the distinction between observer and observed, upon which science and polygraph science rely. As discussed, this distinction ensures the scientific objectivity of polygraph research and practice. However, intellectual developments during the postmodern era have cast doubt upon both assumptions.

Darwinism began a trend in the social sciences and physical sciences that eventually

culminated in the erosion of modern Newtonian era assumptions regarding knowledge. The ideal of a disinterested observer reflecting impartially upon observed experience gradually gave way to the notion that observers proactively shape observed experience through the very act of observation. As John Dewey noted in "The Influence of Darwin on Philosophy", 'truth' since Darwinism is considered to be knowledge that's usefulness rather than accuracy makes it better than other knowledge—and usefulness as a criteria for knowledge depends upon the subjective interests of the observer, rather than upon the objective accuracy of the observation. Observed reality has no comprehensible existence apart from the observer (Dewey, 1910).

Philosophical implications of contemporary quantum physics are similar. Physicist Werner Heisenberg, who formulated the groundbreaking "Uncertainty Principle" wrote: "Science does not simply describe and explain nature; it describes nature only as exposed to our method of questioning. It was a possibility of which Descartes could not have thought, but it makes the sharp separation between the world and the I impossible" (Heisenberg, 1999, pg. 81)

Mathematician Kurt Godel's "Incompleteness Theorem" also entails subversive implications for the possibility of objectivity—particularly in scientific research, since it demonstrates the impossibility of self-referentially justifying systems of thought. "Is there a Godel's theory of psychology?", Logician Douglas Hofstadter asks, "I think it can have suggestive value to translate Godel's Theorem into other domains...Everyone knows that the insane interpret the world via their own peculiarly consistent logic; how can you tell if your own logic is peculiar or not, given that you have only your logical system to judge itself" (Hofstadter, 1979, pg. 96)

Since polygraph science requires objectivity in research and practice, these implications are significant. If as Heisenberg's Uncertainty Principle implies, the observer is inextricably involved in creating observed events, what does this suggest about the polygraph examiner's role in the examination process? If observation without the influence

of subjective preconceptions is impossible, then how can the examiner remain true to his role as an objective observer? Further, following the implications of Godel's Incompleteness Theorem, how can the validity of polygraphy be established objectively by research that—notwithstanding its commitment to impartial inquiry—necessarily begins with theoretical presuppositions regarding the validity of polygraph?

However, perhaps the most significant postmodern challenge to the assumptions of modernity (and hence, polygraphy) is the devaluation of the idea of truth in contemporary discourse. To the self-assured modern mind, truth was an ideal, but a realizable one. Truth, though elusive, was a rationally intelligible concept. Truthfulness was a simple unproblematic mental state. It was honesty, integrity, and reasoned belief in accord with objective reality. Hence, modern institutions like law, education, and science, are still largely predicated upon this conception of truth.

However, the philosophical assumptions of modernity are changing as the postmodern paradigm gains intellectual and social acceptance. The traditional concept of truth is one of modernity's assumptions that has become increasingly ineffectual in the postmodern world. In his recent book on "evolutionary psychology", Robert Wright comments on the transformation of truth in the postmodern milieu:

"All told, the Darwinian notion of the unconscious is even more radical than the Freudian one. The sources of self-deception are more numerous, diverse, and deeply rooted, and the line between consciousness and unconsciousness is even less clear. To an evolutionary psychologist, the delusion seems so pervasive that the usefulness of thinking about any distinct core of honesty falls into doubt. ...In short: if Freud stressed people's difficulty in seeing the truth about themselves, the new Darwinians stress the difficulty of seeing truth period. Indeed, Darwinism comes close to calling into question the very meaning of the word 'truth'...This Darwinian brand of cynicism doesn't exactly fill a gaping cultural void. Already, various avant-garde academics—'deconstructionist' literary theorists and

anthropologists, adherents of “critical legal studies”— Already, many people believe what the new Darwinism underscores: that in human affairs, all (or at least much) is artifice, a self-serving manipulation of image. And already this belief helps nourish a central strand of the postmodern condition: a powerful inability to take things seriously....What is to be avoided at all costs in the postmodern age is earnestness, which betrays an embarrassing naivete” (Wright, 1994, pgs.324-325)

Thus, in an era in which information is disseminated via media entertainment, politicians deconstruct the meaning of ‘sex’ to suit political expedience, public opinion is shaped through advertising, and reality is communicated via ‘virtual reality’, modernity’s once stable concept of truth is being replaced by a more transitory, malleable, and ineffable notion. The postmodern mind has a different experience of truth than did the modern mind.

The problem that this poses for polygraph science is that, as a system based upon the modern concept of truth, it may consequently encounter difficulties in understanding the postmodern mind. If “truth” becomes meaningless, hypocritical, or unattainable, how then can a “truthful” or “deceptive” statement be determined via objective testing? –Do different kinds or degrees of truthfulness and deception exist? –Can they exist simultaneously? –And can they be distinguished in a quantifiable way?

### **A Thought Experiment, Questions And Reflections**

The foregoing questions bring to mind a thought experiment posed in a philosophy class involving a dilemma on the popular television show “Frasier”: The episode involved two brothers who are psychologists, their elderly father, and their housekeeper/physical therapist. One of the brothers, Niles, was infatuated with the housekeeper, a woman named Daphne who also served as physical therapist for the father, who had injured his leg. In this episode Daphne had nursed the father back to health and was prepared to leave their house to find new employment. Niles was desperate to have Daphne remain with them, but could not convince her to stay,

since she felt that the father no longer needed her assistance. After unsuccessfully attempting to convince Daphne to stay with them, Niles and the father –now with a perfectly healthy leg—were walking side-by-side down a flight of stairs in their home. Somehow Niles’ foot strayed in front of the father’s feet and tripped him, causing him to fall down the stairway and re-injure his leg. Daphne’s assistance was thus required once again and, though he regretted his father’s misfortune, Niles was happy that Daphne had a reason to stay with them. Niles’ brother (a Freudian psychoanalyst) assessed the situation and rendered the conclusion that Niles’ unconscious mind had caused him to intentionally trip his father, so that his re-injury would necessitate Daphne’s remaining in the house. Niles, of course, objected vehemently to the idea that he could ever intentionally do such a thing. However, the viewer is left wondering whether Niles did unconsciously want to hurt his father. By the end of the episode, Niles even seems worried about this possibility.

This situation raises several important questions: What is the causal relationship between the unconscious and the conscious mind, and has polygraphy addressed it? Is there any awareness of unconscious thoughts at any level, and does polygraphy detect this? If Niles did unconsciously want or intend to trip his father, how would he react to a polygraph question about this? If he unconsciously, but not consciously, committed the act, would his denial result in a ‘Deceptive’ examination result? – Or does the unconscious mind have no effect upon polygraph results? If an examinee has conflicting perspectives or memories about an issue, at different levels of conscious knowledge, how can their relative influences upon a polygraph examination be calculated? – Most importantly perhaps, if Niles unconsciously did want to hurt his father, but could not face this fact consciously, is he responsible for intentionally tripping him? –In what way and to what extent?

The intent of raising these issues is certainly not to suggest that polygraph science is becoming obsolete or ineffectual. Polygraphy has proven far too effective as an investigative tool to dismiss on philosophical grounds. By

any pragmatic standard, its legitimacy is undeniable.

As a scientific institution that has its philosophical basis in modernity, though, polygraphy faces fundamental challenges to its assumptions in the postmodern world. Addressing these challenges offers polygraph science the opportunity for renewed research and a deeper perspective on how it envisions itself. Practitioners and researchers, for instance, might benefit from paying more attention to how possible presuppositions or biases may influence their work. Such radical self-criticism not only increases practical effectiveness but also may also lead to original theoretical insights. Along these same lines, perhaps the field should reconsider the assumption that objectivity in research necessitates a culturally neutral intellectual vacuum. Seeing polygraph science as a social practice that emerges from a particular kind of cultural context, can ensure sensitivity to important ethnic, religious, and ethical dimensions of research that may have

previously been neglected. Most significantly perhaps, the postmodern challenge can encourage everyone in the field to become more deeply self-aware in the course of their work.—realizing that no matter how much the ideal of complete objectivity is prized, any observer's frame of reference ineluctably contains intellectual presuppositions that condition the event being observed. Finally, polygraphy can keep in mind that the conscious states it measures may be infinite in complexity and ultimately unfathomable.

In fact, by becoming aware of its subjectivity, polygraph theory may paradoxically become more objective in its perspective. By realizing the ultimate elusiveness of truth, polygraph theory may paradoxically come closer to attaining truth. — Such is the ambiguous opportunity that postmodernism's intellectual legacy seems to present. What the field will make of this opportunity remains as open a prospect As Postmodernism Itself.

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## Concept of Temporary Unsuitability of Examinees in the Use of Polygraph Methods

Dragan Mijovic<sup>1</sup>

### Abstract

If all deceptive examinees always had the same psychophysiological reaction, recognizing lies through polygraph methods would be a routine job. However, there are categories of deceptive examinees that do not have a polygraphically identifiable reaction. There are also those whose reactions are always identifiable, but do not react in a mutually identical way. The same examinee can have different reactions when telling a lie in repeated tests. There are also cases when the examinee at one moment does not in any way respond to a lie, whereas at another moment he has a noticeable reaction to the very same lie. The last case is the subject of the following article.

### Definition

With respect to an ability to detect lies through polygraph methods, polygraph examinees are roughly divided into UNSUITABLE (polygraph methods cannot detect their specific reactions that would suggest deception) and SUITABLE (when deceitful, they react in a manner which is detected and recognized as such by polygraph methods). In this context, those examinees who at one point have no reaction, while at another react visibly, can be viewed as:

- a) A separate category of examinee;
- b) Subcategory of suitable examinees.

If they are a separate category, that would mean that apart from suitable and unsuitable examinees, there are those who are alternately suitable and unsuitable, and that changeable quality is a permanent condition of the organism.

If they are a subcategory of suitable examinees, that would denote that some suitable examinees under certain psychophysiological and environmental conditions could at some point be unsuitable, too. Experience confirms the latter approach.

Therefore, we can define temporary unsuitability of examinees in polygraph methods as temporally limited manifestation of psychophysiological non-reaction, insufficient reaction or unspecific reaction to methodological stimuli, which polygraph either cannot detect, or can detect, but cannot interpret.

The importance of this manifestation is in the fact that, if not under control, it can have two possible results:

- a) False answers can be misinterpreted as true due to polygraph inability to detect accompanying psychophysiological reactions, or due to detection of unspecific reactions
- b) Lack, marked decrease or appearance of unspecific psychophysiological reactions of the examinee to methodological stimulations can be interpreted as permanent unsuitability for polygraph methods, which would then result in definite abandoning of those methods with the particular examinee.

### Key Concept

The key concept concerning temporary unsuitability is the emotion of fear.

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What is fear? Speaking in phylogenetical and ontogenetical terms, it is one of the oldest affections whose primary function is to protect the organism from danger. Its purpose is to agitate the organism, to prepare it, through a series of physiologically hormonal reactions, for fight, great strain, etc. In psychological terms it is defined as an autonomous mental state, which appears as a result of an inner or outer stimulus, which is very unpleasant and has a nature of threat (Popovic & Jerotic, 1985).

When a person experiences a phenomenon as danger, he feels fear, i.e. discomfort and tension that is an individual signal for the organism. Nervous tension is intensified for defensive purposes through hypothalamus and sympathetic part of autonomic nervous system, which instigates physiological correlation of awareness about strong discomfort: changes in blood pressure, pulse, respiration, sweating, pupil reflex, chemical composition of blood and urine, muscle tension, digestive system, and gland secretion. From the standpoint of the phenomenon examined, the most important in a completely intensified endocrine system activity is adrenalin secretion, which prolongs reflex activity of sympathetic vegetative nervous system, and thereby all accompanying physiological phenomena.

All phenomena under influence of fear are adaptable, which means they tend to restore the state that preceded the appearance of fear. Contrary to the mentioned physiological-hormonal processes, the organism activates processes whose function is to remove anxiety and restore balance.

During polygraph testing we come across, in a wider methodological sense, two kinds of fear:

- a) Already existing, unstimulated feeling of fear
- b) Stimulated feeling of fear.

Already existing feeling of fear is the one that the examinee has throughout testing,

unconnected to the examiner. Its changes, if there are any, are mild and gradual, while direction of the change depends primarily on methodological needs dictated by the examiner (controlled decrease or increase of tension), and secondarily on whether or not the examinee is a perpetrator.

With perpetrators, we are dealing with the fear of detection and punishment that is fundamentally fear of loss of safety, love, protection, etc. If polygraph testing is correctly conducted, this fear is most often gradually intensified towards the end of testing, which sets conditions for confession: the stronger the tension – the more urgent the need for its removal.

With the innocently accused, we are dealing with the fear of:

- a) Being suspected as a perpetrator of an offense;
- b) Situation he faced (investigation concerning a criminal offense);
- c) Police (fears instilled in childhood, fear as a result of previous experience with the police, fear of possible overstepping of authority during interrogation, of staying in custody, of even a short-term loss of freedom);
- d) Possible mistake at his expense;
- e) Consequences of being linked to a criminal offence (fear of public condemnation, loss of reputation, loss of trust, etc.).
- f) Within the same group is traumatic anxiety – (with examinees who were:
  - In a relationship with the victim – love, friendly, family, professional, etc.;
  - Somehow connected to the offense

- as witnesses, potential victims, etc.).

During the test with the innocently accused, their fear (or fears) mostly tend to decrease in intensity; for that to happen, it is crucial that the examinee develops trust in examiner's confidence and intentions. The Stimulation test has a special role in this process, because it should convince an innocent person that his innocence concerning the criminal offense will undoubtedly be registered (Mijovic, 1993).

Given the fact that an already existing, unstimulated feeling of fear is inevitable and continually present, it represents a special affective base on which a specific methodological communication between the examiner and the examinee takes place.

As theory of communication would put it, it is a special (affective) noise that has to be controlled in order not to disrupt or even prevent the aforementioned communication. In this context, **momentary prevention of methodological communication between the examiner and the examinee is a state of temporary unsuitability.**

**Stimulated feeling of fear** is used for indirect lie detection and it is one of the most important aspects of polygraph methods. It is based upon described fears that the examinee has from the very beginning of testing. The difference is that those fears are being additionally methodologically stimulated by test questions, and physiological changes to which they lead are short-lived (measurable by seconds). This enables control of testing as a psychological experiment: immediate emphasizing of individual experiences of fear connected to perpetration of a criminal offence and its elements within the time limits of one test and interpreting records of their physiological components.

Cases when the examinee feels no fear whatsoever are rare and they are of no concern to us in this article because they are not connected to appearance of temporary unsuitability.

The aforementioned affective-physiological mechanism represents functioning of suitable examinees. In order that it leads to a condition of temporary unsuitability, certain CAUSES are necessary, direct influence of which is favored (in the form of emphasis or alleviation) by certain conditions.

### **The Conditions that Favor Appearance of Temporary Unsuitability**

SUBJECTIVE CONDITIONS are connected with the examinee's condition:

**a) Broken health** (especially within parameters that are registered by polygraph: problems with heart, respiratory organs, blood pressure, hyperglycemia ... but also all the processes in the body that instigate pain, itching, coldness, pressure, heat: severe migraine, toothache, ulcer attack, kidney and bile problems, etc.).

**b) Physiological dysfunction** (especially concerning reflex reactions, functioning of senses, autonomic nervous system, some higher nervous system functions - memory, regulation of adrenalin secretion, etc., which could be the result of, among other causes, alcohol, narcotic and drug intoxication).

**c) Poor mental health** (presence of certain neurotic or psychotic disorders).

**d) Dysfunctional mental functions** (primarily lack of concentration and inability to hold attention).

**e) Singularity of reaction in stressful, traumatic and crisis situations** (concerning nature, intensity, duration and results of subjective experience).

**f) Singularity in coping with stressful, traumatic and crisis conditions** (concerning manner, duration and effects).

**g) Below average intellectual ability** (which hinders understanding and reaction).

**h) Emotional instability** (qualitative and quantitative inadequacy of emotional reaction in relation to the kind and strength of an objective stimulus).

**i) Moral maturity** (in relation to the results of a criminal offense, it can provoke an extremely strong feeling of guilt).

When present to a great extent, most of these conditions can cause permanent unsuitability; the context in which they are mentioned here takes for granted that they are present to an extent in which they do not lead to permanent unsuitability.

#### OBJECTIVE CONDITIONS:

**a) Seriousness of the criminal offense;**

**b) Public alarm provoked by the criminal offense;**

**c) Societal danger, which results from the criminal offense.**

The examinee has to be aware of all these conditions if they were to function. In that case they are potentially an additional source of tension (discomfort and strain) for the examinee's personality, in accordance with his subjective experience. With regard to his position at a moment of polygraph testing, the innocently accused may experience even these objective conditions in themselves as a source of danger to his integrity, and thereby as a source of fear. Every normal person in that situation has to experience them, more or less, as a source of uncertainty, responsibility, anxiety – in any case as an additional psychological burden, regardless of culpability, and the more pressured a person, the more sensitive and emotionally vulnerable he is.

The aforementioned subjective and objective conditions do not cause temporary unsuitability by themselves, they just favor it; a direct cause is inevitable for its appearance.

#### CAUSES OF APPEARANCE

Direct causes for temporary unsuitability are twofold: organic and psychological.

#### Organic causes:

- **Hunger**

- **Thirst**

- **Tiredness**

- **Sleepiness.**

These causes are related to basic life needs for food, sleep and rest. If these needs are incompletely satisfied or unsatisfied, they can very often be a direct cause for temporary unsuitability.

Metabolic chain of creating energy for maintaining organism in life and for its functioning begins with food intake. When this need is not satisfied, metabolism is disturbed and decreases in energy functional potential takes place in every respect, including the ability of the organism to respond to a methodological stimulus.

Also, the organism cannot function normally unless it has periodical rest (while both asleep and awake), when regeneration of spent energy and toxic matter is dissolved. Thus the organism recovers energetic balance that was disturbed by previous activity. Insisting on activity of any kind without sleep and rest results in general exhaustion of the organism: energy is spent without giving the organism necessary break to restore it, so decrease in energy potential is drastic, and one of the results is diminished ability, inability or inadequacy to react to methodological stimuli.

Unsatisfied life needs in themselves are a very strong stimulus (or stimuli system). It is possible that these stimuli overcome organism to such an extent that, while they are present, the organism either does not pay attention to the other stimuli (including test ones) or notices them only as secondary. In the first case, as it does not pay attention to them, it will not react in return, while in the second case, even if it does react, it is not enough so as to have those reactions emphasized and polygraphically registered in relation to the present reactions, caused by unfulfilled needs.

One of the options is that an attempt of the organism to react during such a condition ends out of standard, therefore polygraph record of those reactions would be inconclusive. Unfulfilled life needs in this case pose a more serious threat to the organism than consequences of the criminal offense and test situation, so an affective-physiological base will be a result of the first, not the latter. In such conditions already existing feeling of methodologically usable fear can be insufficient for testing superstructure into a stimulated feeling of fear, which also means it is insufficient for reliable conduct of polygraph methods.

#### **Psychological Causes:**

- **Too strong subjective experience of examinee's already existing, unstimulated fear ;**

- **Too long duration, from examinee's subjective point of view, of existing, unstimulated fear.**

Very strong and long-lasting fear means very strong and long-lasting tension. In accordance with that, the auto-regulative mechanism of the organism, which is activated in order to ease tension, has to operate more strongly. Given the intensity and the duration, all these processes spend great amounts of energy potential of the organism, so it inevitably becomes exhausted. The consequences are threefold:

a) The organism cannot react to additional stimuli of fear in the form of test questions;

b) Reactions to methodological stimulations are so weak that they cannot in any way be separated from registered parameters of already existing fear;

c) Reactions received are so unusual and out of defined reaction rules of a certain population under certain conditions, that they cannot be methodologically used.

The examiner cannot, in any of these three cases, draw a reliable

conclusion on the basis of registered physiological parameters, whether the examinee is afraid of detection and punishment or not, i.e. if the examinee is being deceitful.

It is possible that polygraph testing takes place when the examinee's organism is strongly excited by already existing fear, before exhaustion prevails. His organism is then over-irritated and therefore has very marked and unselective reactions to almost anything that catches its attention. From a methodological point of view, it means that examinee reactions are equally turbulent to relevant and irrelevant questions, which completely excludes the possibility that the examiner controls polygraph testing and that he draws a reliable conclusion.

Polygraph testing can coincide with maximum stimulation of examinee's organism by already existing fear. Physiological reactions of the organism in that condition are of such intensity that they reach the limit of reactivity and do not leave any space for additional reactions to additional stimuli. In this case, too, the polygraph result is inconclusive.

#### **Recognizing a Condition of Temporary Unsuitability**

Following are aggravating circumstances for recognizing this phenomenon:

- Uniformity of physiological reactions that are registered by the polygraph, no matter of their origin (whether their cause is of methodological nature or not);

- Limited time for observation of the examinee;

- Inability to repeat observation of the same examinee;

- Overlap of phenomenal content with a condition of permanent unsuitability.

Out of these aggravating circumstances, the first three are unspecific – they apply not only to this phenomenon, but to the overall method, while the last one is specific of the phenomenon we are considering: both conditions, temporary and permanent unsuitability, appear completely the same – physiological lack of reaction, insufficient or out-of-standard reaction, and the same

consequence – inconclusiveness regarding the examinee's truthfulness.

That is why we can say that recognizing a condition of temporary unsuitability is, in effect, distinguishing between temporary and permanent unsuitability.

### Recognition Steps

a) Observation of physical, psychological and physiological aspects of the examinee that are important for application of polygraph methods: behavior, outward appearance, sensory abreaction, comprehension, emotions, stress, etc. Direct contact between the polygraph expert and the examinee is necessary for this assessment.

b) Collecting information on:

- The examinee's state of health (with an emphasis on respiratory organs, heart, endocrine and nervous system and use of drugs in general and in the last few days)

- All of the examinee's important aspects of life (family, friends, profession, finances, origin, habits, interests, sexual activity);

- His inclination to drugs and alcohol (in general and in the last few days);

- His inclination towards committing criminal offenses (whether he has already been arrested and why, how did he behave at the time, whether he has a criminal record);

- His past subjective experience with the police, primarily criminal police, including the current experience;

- The nature and degree of the examinee's involvement with the criminal offence which is the subject of investigation;

- The examinee's activities just before, at the time of, and immediately after the criminal offence had been committed;

- The treatment the examinee had at the police after the arrest (how long has it been since he was arrested, what he was told, what the subject and manner of conversation with him was, whether he has been pressured and how, what his behavior was like all the time)

- Fulfilling the examinee's basic life needs for food, sleep and rest (in general and in the last few days),

- The examinee's feelings at the moment (feeling of guilt, fear, rage, hatred, anger, shame, jealousy, etc., reasons and intensity)

- Subjective attitude to the situation he was in (threat, loss, safety, etc., reasons and intensity)

Information is collected indirectly from the operative who conducts the investigation and in a direct contact with the examinee.

### c) Establishing the examinee's (un)suitability on the basis of:

- Collected information

- Evaluated psychic, physical and physiological aspects

- Results of the stimulation test (which shows how examinee's organism reacts when exposed to, from the standpoint of criminal offence, a neutral stimulus);

- Ability to react to methodological stimulations applied in other tests (which show momentary ability of the organism to react, in a methodological sense, to a controlled stimulus) (Mijovic, 1994).

It is very likely that the examinee is suitable for polygraph testing if polygraph identifies his reaction to a critical stimulus in the experimental test and to methodological stimulations in other tests, and collected information and observation of his condition at the moment suggest that psychophysiological criteria for methodological reliability are met: the examinee does not have any major health problems, he is not addicted to alcohol, drugs

and he has not used them in the past 24 hours, he is under intensified stress and is anxious to a degree that does not interfere with his normal functions, his sensory function is preserved, as well as his comprehension and attention ability, he has never been psychiatrically treated and has no symptoms of the kind, there is no information on disorders concerning satisfaction of basic instincts, he has no traumas from previous experience with the police, with his basic life needs fulfilled to an extent that does not hinder polygraph testing, and with a feeling of fear, no matter of what nature, which is within limits that allow it to be methodologically used. In the opposite case, there is a high probability that the examinee is unsuitable for polygraph methods.

**d) Establishing the character of unsuitability: whether it is permanent or temporary**

The following are main criteria for distinguishing:

- Reasons for appearance: the thing that directly causes temporary unsuitability (described organic or psychological causes) never causes permanent unsuitability.

- Lack of time limits of a phenomenon compared to duration of the need for testing: a particular examinee's temporary unsuitability always and without exception ceases before the need for polygraph examination terminates; in contrast to that, permanent unsuitability lasts all the time while there is a need for polygraph testing, and from a methodological point of view it is of no importance whether and when it ends. Therefore, a term permanent unsuitability is not exclusive in the sense that it is related to a permanent condition of the organism, but it is rather of a relative character – it is related to the time at which the results of polygraph testing are useful from the standpoint of criminal investigation.

- Anticipation of the course of phenomenon: causes, duration and overcoming the condition of temporary unsuitability are

always predictable; while with permanent unsuitability it is not always the case.

- Prediction of reliable testing or retesting at the time that is useful for preliminary investigation: with temporary unsuitability it is always possible to organize reliable testing and retesting at the time useful for preliminary investigation, while with permanent unsuitability there is no such possibility.

**e) Finding a cause of temporary unsuitability**

It is being done from the aforementioned sources in a way that was previously described (see: Recognition Steps, a) and b). It is important for the assessment of its duration, choice of activities for overcoming it and therefore, for the organization of the polygraph examination. For example, if it is found out that the causes for temporary unsuitability are organic – hunger and tiredness, we can conclude that the examinee will not be suitable until he fulfills these life needs; we can easily foresee what is the necessary time because it is under our control and on this basis we can precisely plan the timing and conditions for polygraph testing.

**Overcoming a Condition of Temporary Unsuitability**

The purpose of all the mentioned steps in recognizing condition of temporary unsuitability is solely practical: when a condition is recognized, it should be overcome if possible.

This can be done in three ways:

- By itself

- In a combined way

- With decisive help of the polygraph expert.

The first way is usually used when the cause for temporary unsuitability is psychological: when an existing, unstimulated fear lasts too long from the examinee's subjective point of view. This cause is such by nature, that no psychological or methodological interventions by the expert, no matter what his abilities are, can accelerate the process of overcoming. The right thing for the expert to do

is to leave the examinee alone for a while, so his organism can have the necessary break to activate auto-regulative mechanism. This mechanism relieves accumulated tension and restores balance. Methodologically speaking, the examinee then moves from a condition of temporary unsuitability to that of suitability for the polygraph examination. Duration of the break is individual – the polygrapher decides about that.

In cases when the second psychological cause is behind temporary unsuitability – too strong subjective experience of found, unstimulated fear – the combined approach is applied: while organism is trying to overcome the situation by itself by activating adaptable processes, the polygrapher has an opportunity to instigate those auto-regulative processes by means of psychological influence. Most often, he uses the following methods:

- Direct invalidation of sources of found fear (the examiner convinces the examinee through arguments, logical deduction and authority that the source of his fear is not as strong as he feels);
- Indirect invalidation of sources of found fear by means of diverting attention: relaxing the examinee through conversation that is either neutral for him (weather, sports, eating habits, free time activities), or that elicits positive emotions (plans, wishes, interests, hobbies – unless those subjects are connected to the criminal offence in question and the situation that resulted from it).

The third way to overcome temporary unsuitability is applied when its causes are of organic nature. Their predictability is of “if...then” type, which means that in most cases the polygraph expert can control it completely. He can therefore help the examinee overcome it by letting him, from methodological reasons, have a rest, eat or sleep. In that way he will make a crucial influence in the examinee’s transfer from unsuitability to suitability.

The difference between these three ways of overcoming condition of temporary

unsuitability is in the ability of the polygraph examiner to control and predict them. It increases in proportion to his direct contribution to the process of overcoming: it is the least with the first, a bit greater with the second and the greatest with the third way.

### **Examples from Experience**

In order to illustrate the previously described phenomena, we will present two cases from practical work, which deeply alarmed the Yugoslav public.

**The first case:** murder of Milorad Skoro in August of 1997 in Belgrade.

Three months after the murder a suspect was polygraphically tested. It was S.P. from Zabljak, an ex-boxer, known as a tough guy. Apart from the murder, he was suspected as being involved in a robbery, when more than \$100 000 was stolen.

Given the fact that the examinee did not know the reasons for testing and that he did not have a criminal record, he was first given a peak-of-tension test in categories of criminal offences, and he responded unambiguously as a possible participant in both the murder and the robbery. Personality assessment and the observation that he was under intensive stress suggested the possibility that, if testing on the occasion of murder started immediately (given the seriousness and consequences of such a criminal offence), his organism would get aroused by the existing fear to the level that causes a condition of temporary unsuitability. That is why the next step was examination on the occasion of the robbery, because if detected, the examinee would be less afraid, since there would be less danger to his personal integrity (concerning the consequences: treatment at the police, judgment at court, family relations). An extremely important factor was the fact that detecting the examinee as a participant in the murder would inevitably result in revealing the other participants, whose revenge the examinee feared very much. Expert assessment was that his fear of punishment by his friends was incomparably stronger than his fear of institutional punishment.

Test results on the occasion of the robbery clearly indicated that the examinee

responded that he was familiar with the elements of the criminal offense that only a perpetrator or a person who learned it from

him could have known, which he had denied in the previous conversation (Figures 1, 2 and 3).

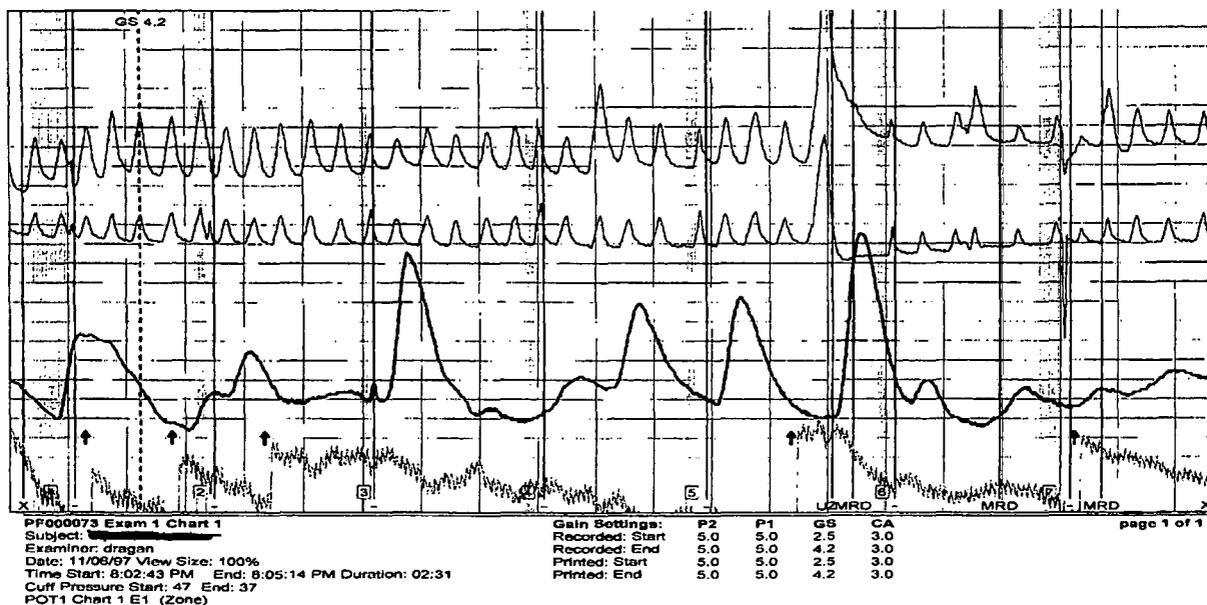


Figure 1. Reaction to question number 3 (that he participated in the robbery) and number 5 (that he participated in the murder).

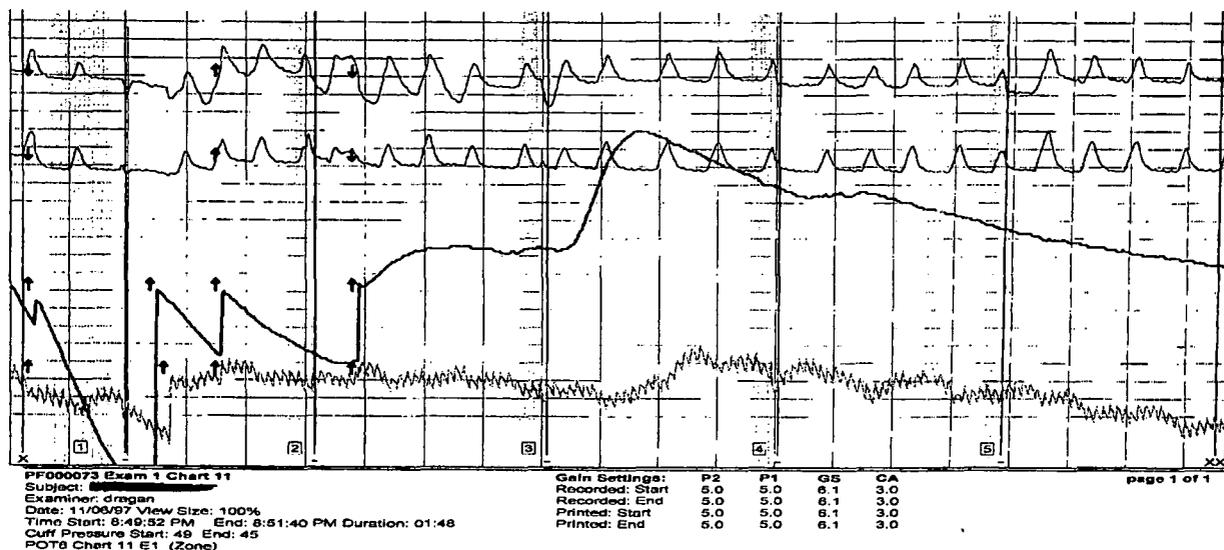


Figure 2. Reaction to the question number 3 (that he participated in the robbery in front of the "Metropol" hotel).

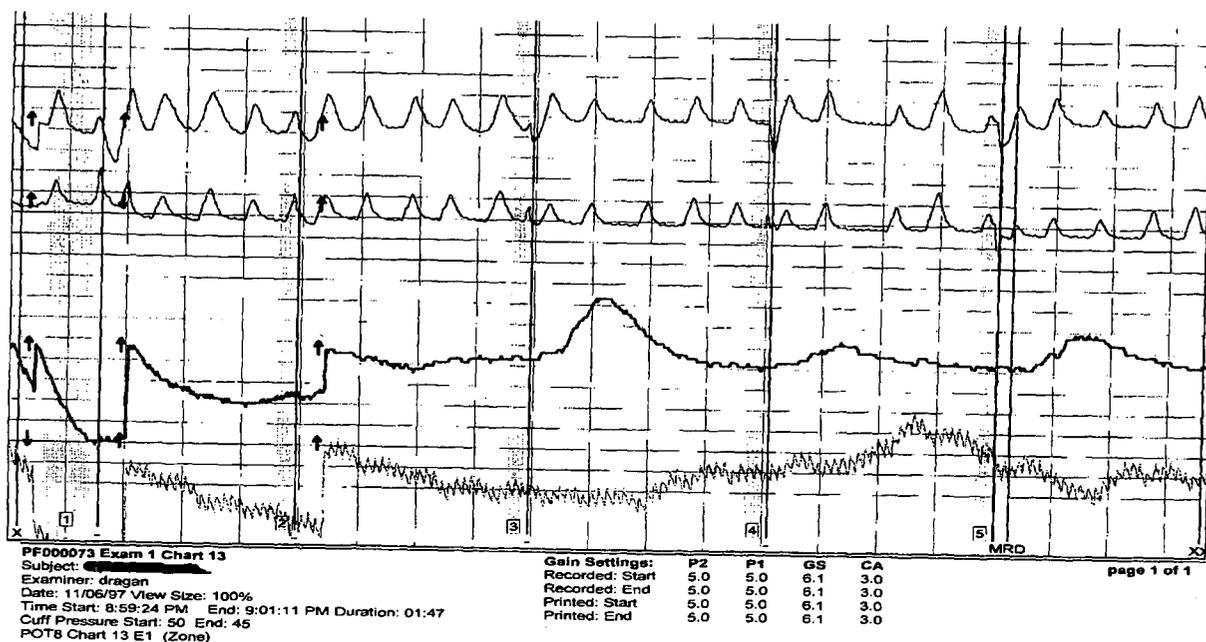


Figure 3. Reaction to the question no 3 (that the victim of the robbery was a Swiss citizen).

The examinee's fear of disclosure concerning the robbery was - in intensity and accompanying physiological manifestations - within limits of proper conduct of polygraph examinations. However, as soon as testing on the occasion

of the murder started, his existing fear culminated and stimulated his organism to the maximum degree, and he, as a consequence, started reacting very distinctly and unselectively to every test stimulus he was exposed to (Figure 4).

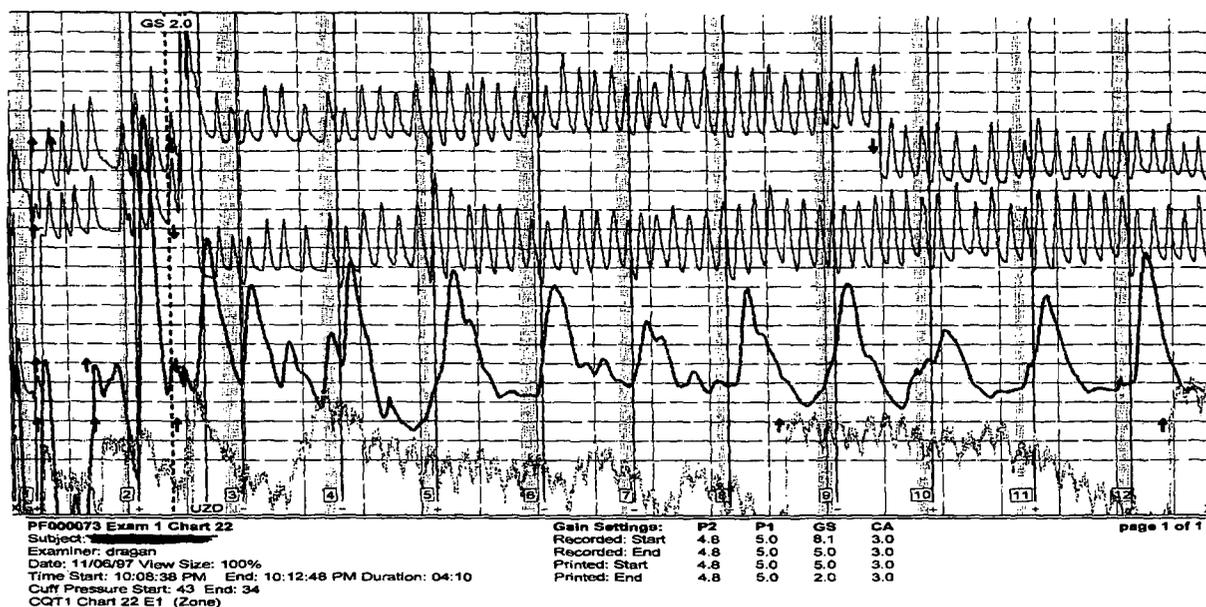


Figure 4. Unselective reaction to every test stimulus.

The examinee's reactions were equally stormy to all test questions, both relevant (number 4: "Do you know who killed Skoro?" and number 7: "Were you present when Skoro was killed?"), and irrelevant (for example number 2: "Were you born in 1969?" and number 5: "Do you come from Zabljak?"), which completely excludes the possibility of control over test situation and makes the results inconclusive. In other words, the examinee was at that moment, temporarily unsuitable for polygraph testing.

Diagnosis of temporary unsuitability in this case was helped by the fact that it appeared during the examination, so that permanent unsuitability was out of question. Due to a satisfactory test control, before temporary unsuitability appeared, the examiner had already taken all measures to recognize it, and consequently fulfilled conditions to overcome it.

The examiner's assessment was that in this case the cause of temporary unsuitability was too strong subjective

experience of existing, unstimulated fear and that this condition would not last too long so that the examination would have to be stopped, i.e., there were reasons to try to overcome it within a framework of current examination. A combined way of overcoming temporary unsuitability was applied: indirect invalidation by diverting attention from the source of existing fear, relaxation through conversation that was neutral for him – since the examinee used to go in for boxing, that subject was chosen and in the following conversation the murder was not mentioned at all.

When the examiner estimated that the examinee's existing fear diminished within limits that enabled control of test situation, testing on the occasion of murder was continued and the following results were obtained (the examinee's reactions to the question number 3 in charts 5, 6 and 7 show that he knew what he had previously denied) that the victim was hit in the head with a meat hammer (Figure 5); that a window was broken during the perpetration of the murder (Figure 6); that the victim was killed from a gun calibre 6,35 mm. (Figure 7).

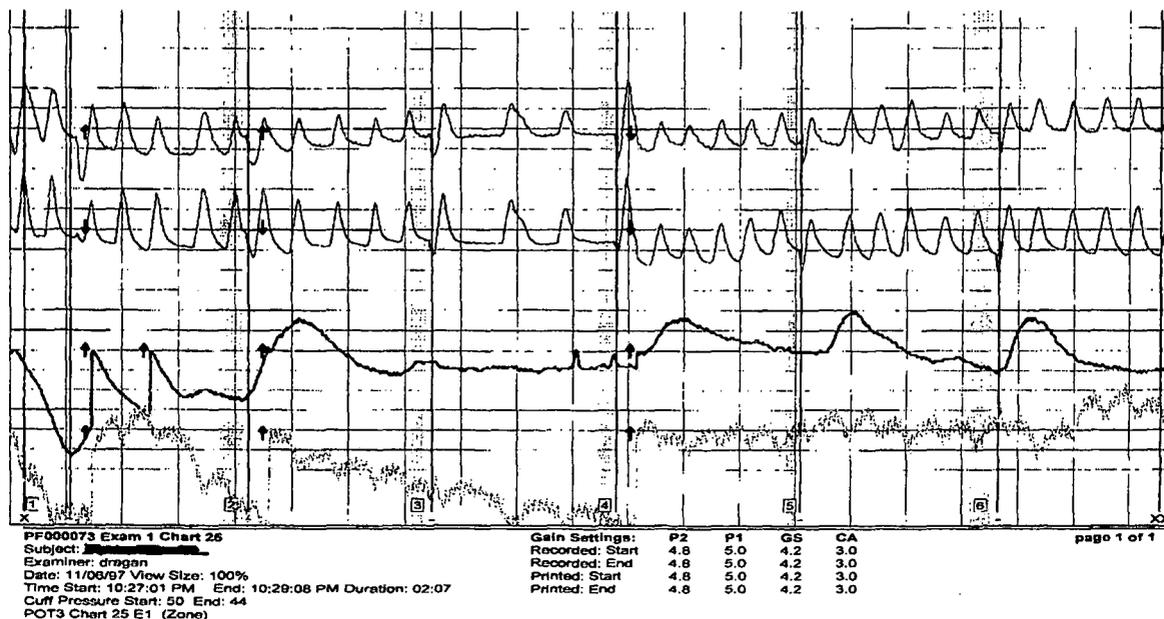


Figure 5. Reaction to question about the victim being hit in the head with a meat hammer.

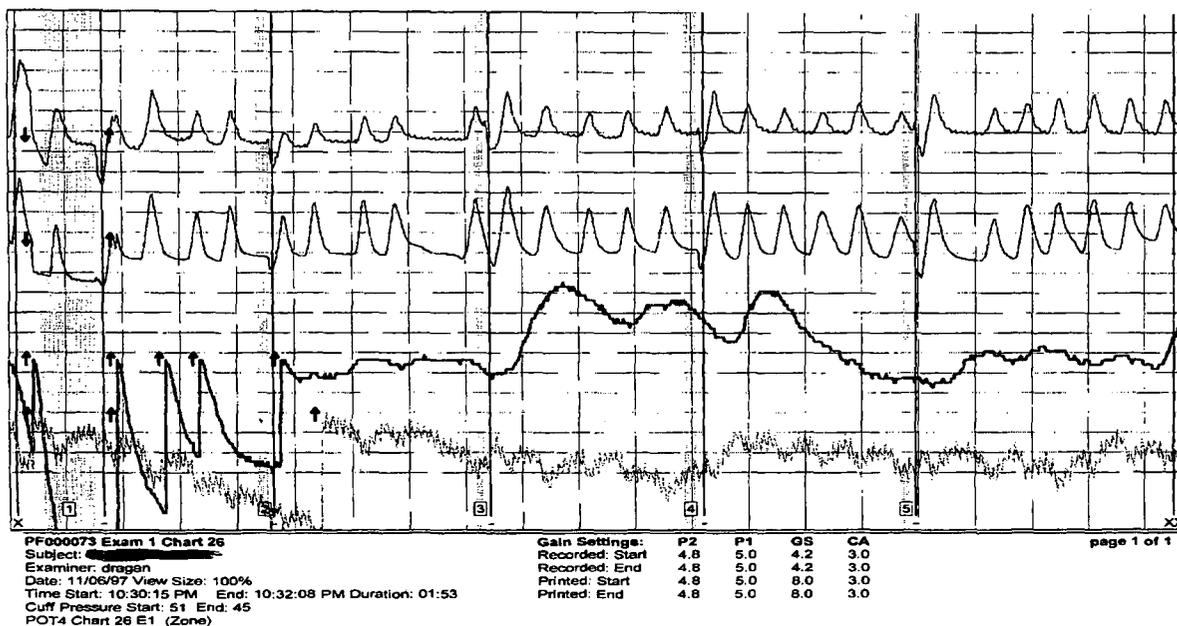


Figure 6. Reaction to question about a window being broken during the perpetration of the murder.

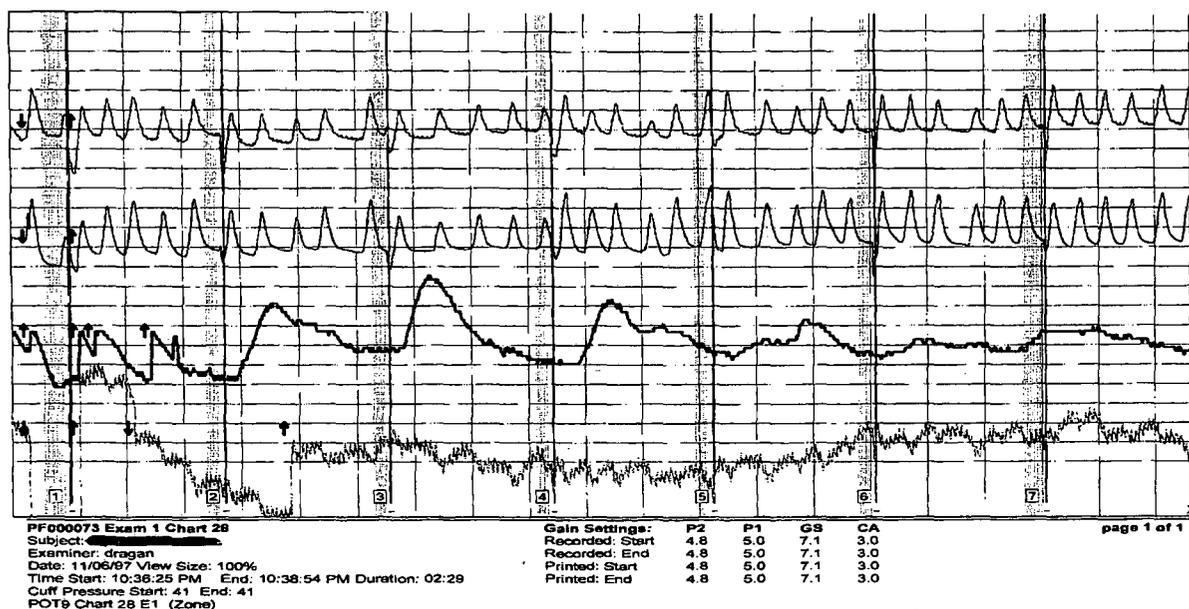


Figure 7. Reaction to question about the victim being killed with a gun calibre 6,35 mm.

Therefore, knowing a mechanism of appearance, course and ways to overcome a condition of temporary unsuitability made it possible not to stop the examination, but to complete it successfully – to provoke and register clear reactions and reach a reliable conclusion.

**The second case:** an incident from July 1996, near Jagodina, a small town in central Serbia, which, due to unprecedented cruelty, deeply shocked the whole area.

J D (19), who was hiking, was given a lift by an unidentified man, who first raped her under threat of a gun, and then poured her with

gasoline and set her on fire. A few days later, JD died of burns.

A week after the perpetration, M.M. from Paracin was suspected and polygraphically tested on the basis of an information that he had tried to lure a female person to his car several years before, and an identification from a photograph by the victim (while she was still conscious).

Since the examinee was aware of the reasons for his arrest, the testing on the occasion of the concrete criminal offence started immediately: out of the elements that he said he was unfamiliar with (the sort of clothes that the victim was wearing,

the color of her shoes, the place where she was poured with gasoline and set on fire, the name of the neighboring village, the name of the victim's boyfriend that she had told him in the car) peak of tension tests were made and successively given to the examinee. However, he did not respond to them. Since he neither reacted to a stimulation test (Figure 8), nor to stimulations in other tests (Figure 9), it was clear that his lack of reactions did not suggest his innocence, but rather unsuitability. During the test, his organism was unable to react (in a methodological sense) to concrete stimuli. But the question was, what kind of unsuitability it was, temporary or permanent? In other words, was there any point in continuing the test with the examinee?

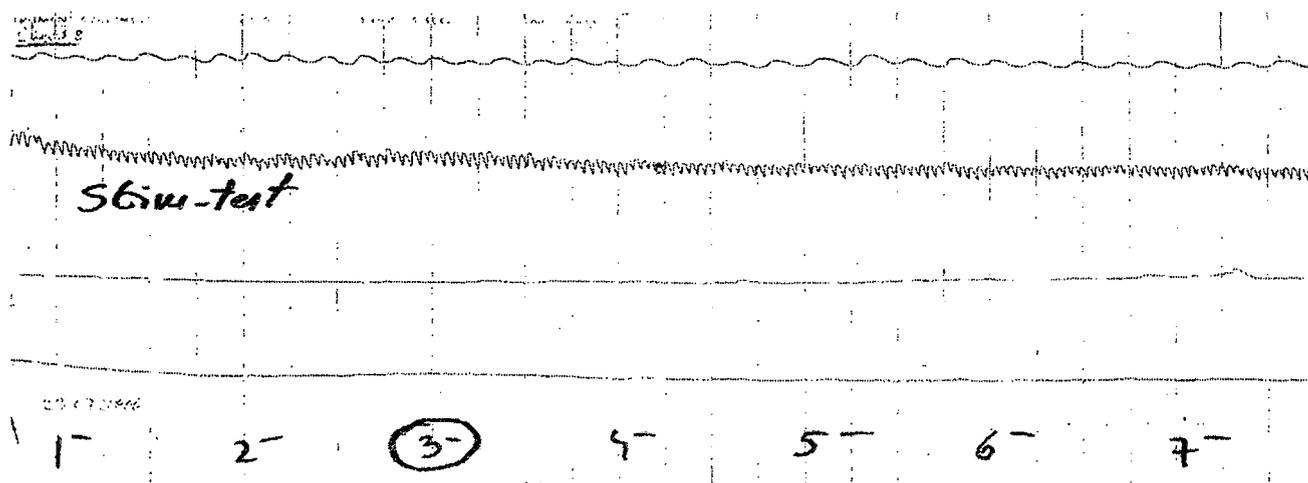
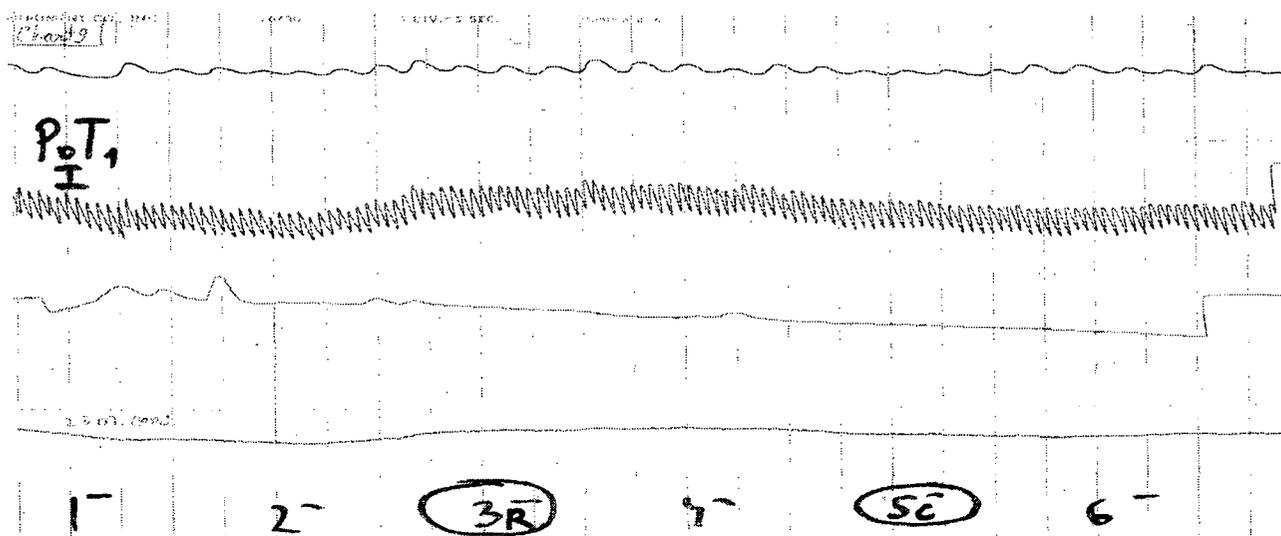


Figure 8. Results of the stimulation test show the examinee's complete unreactivity;

Available information and observation of the examinee suggested the following: he did not sleep all night, he showed signs of tiredness and mild depression, he was absorbed in thoughts, a bit absent-minded, he was not excited, he did not show any fear, nor any trace of guilt. Such a symptomatic picture implied

two possibilities: if he was the perpetrator, with respect to the sort of offense and manner of performance, he could be a mentally deranged person to an extent that leads to permanent unsuitability. On the other hand, as a possible perpetrator, he could have a psychopathic character



**Figure 9.** Results of the peak-of-tension test show complete lack of reactions to the relevant question (no 3) and to the methodological stimulation (in the form of question no. 5).

structure and a sexual drive disorder, which does not necessarily result in permanent unsuitability, but which can set conditions for the appearance of temporary unsuitability. In that case, a direct cause for possible temporary unsuitability could be exhaustion because of lack of sleep. The same cause would be most probable if he was innocently accused. So, there was a real possibility that the registered unsuitability was not permanent, but temporary, and that going on with the test would give results.

As it was estimated that, no matter whether he was guilty or not, the most likely cause for possible temporary unsuitability was organic (exhaustion due to lack of sleep), the polygraph expert decided to try to overcome the condition by making a direct influence on the examinee. The speed of police investigation did not allow making a break for the examinee in order for him to rest and restore balance. Instead, the examiner had to adapt to the situation and use other tactics: to transfer the examinee verbally from a state of mental confusion (lack of concentration, thoughtfulness, insufficient interest for the examination contents) into a "state in which, throughout the test, the examinee's whole world would be reduced to the polygraph test" (Lakcevic & Jovanovic,

1987). Thus, increasing tension concerning the criminal offense, which would make the examinee's sleepy, non-reactive organism reactive again, would compensate for lack of energy potential caused by fatigue and drowsiness.

For that purpose the examiner used the fact that the examinee had been told before the polygraph test began, that the victim had recognized him, and that the red lighter, the hard pack of "Lord" cigarettes and the gun that were found among his belongings, matched the description of attacker's things. The fact that the time and place of the criminal offence and the examinee's movements matched was also used.

The process of coping lasted for three hours. As the time passed, due to accentuating uncontroversial elements, which showed the examinee's involvement in the criminal offense, his consciousness became increasingly absorbed in the offense, and consequently his attention grew stronger. All this time the examinee's verbal and non-verbal behavior clearly indicated that his tension was growing; and increase of his tension meant, in a psychophysiological sense, that his energy potential for reacting was increasing, too.

A moment was awaited when his organism would, in a methodological sense, become

## Concept of Temporary Unsuitability of Examinees in the Use of Polygraph Methods

reactive again. In order to notice that moment in time and to stimulate tension increase additionally, the examinee was periodically given peak-of-tension tests (which always included, apart from the key question, methodological stimulation). Finally, he was told that his deceitfulness was detected. When given a test of that kind, the examinee responded strongly to the key question, and not to a methodological stimulation, which suggested:

- That the condition of temporary unsuitability was overcome, i.e. the examinee became suitable for polygraph methods;

- That he was a possible perpetrator of the criminal offence in question.

In order to confirm these two conclusions methodologically, the polygraphist repeated all tests (including those to which the examinee had not previously responded). This time reactions were clear in every test (Figures 10, 11, 12, 13, and 14 show the examinee's reactions to the relevant questions that suggest false answers, i.e., that he was acquainted with the elements of the offence that he had claimed he was ignorant of, and which were known only to the perpetrator or to the person who learned it from him).

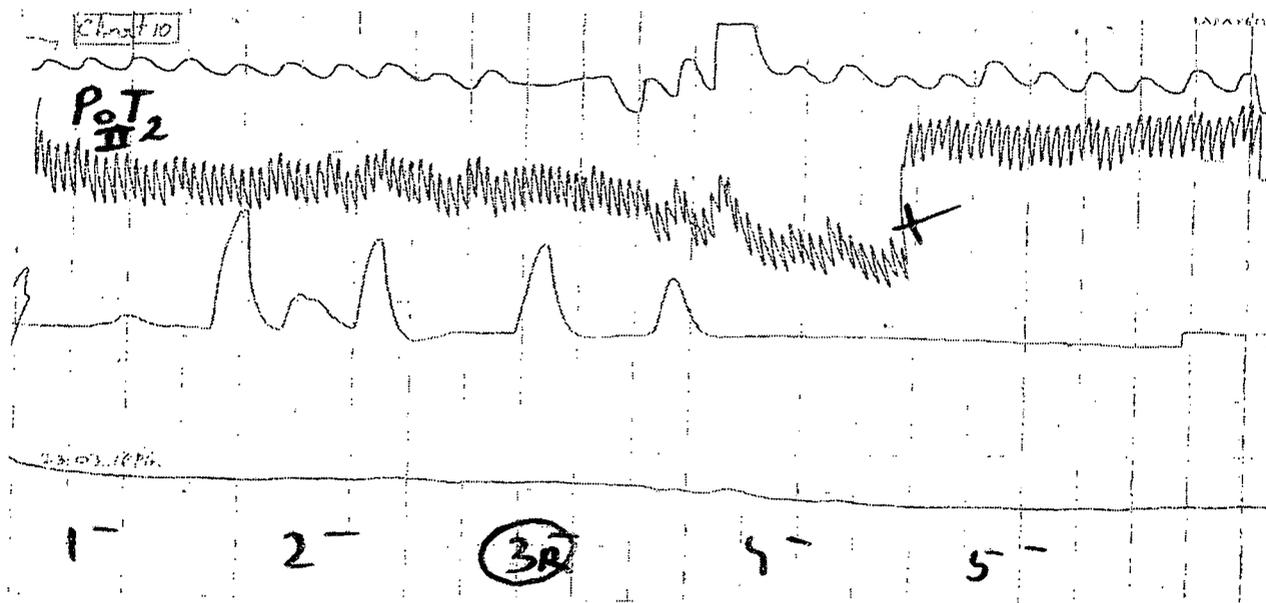
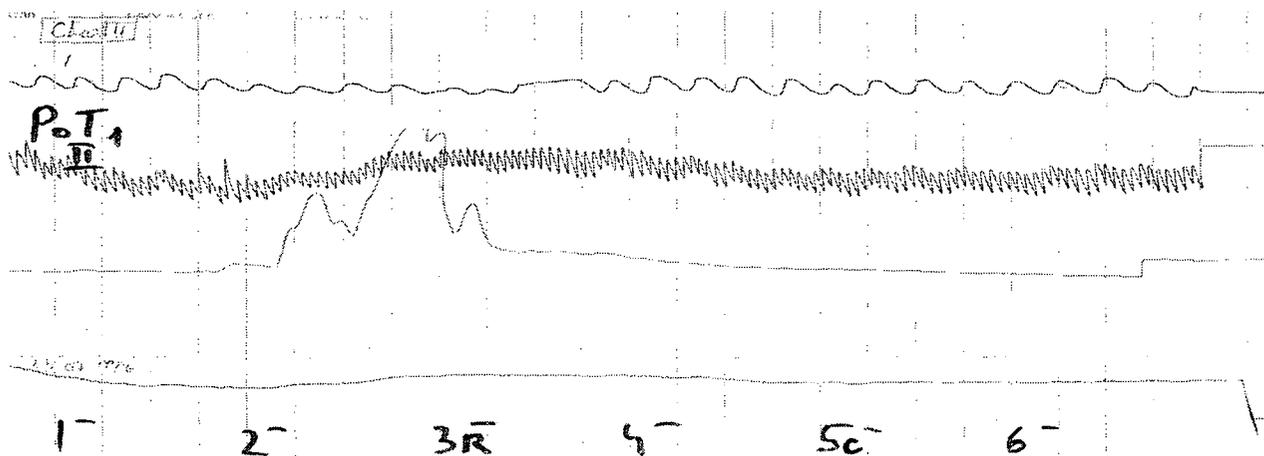
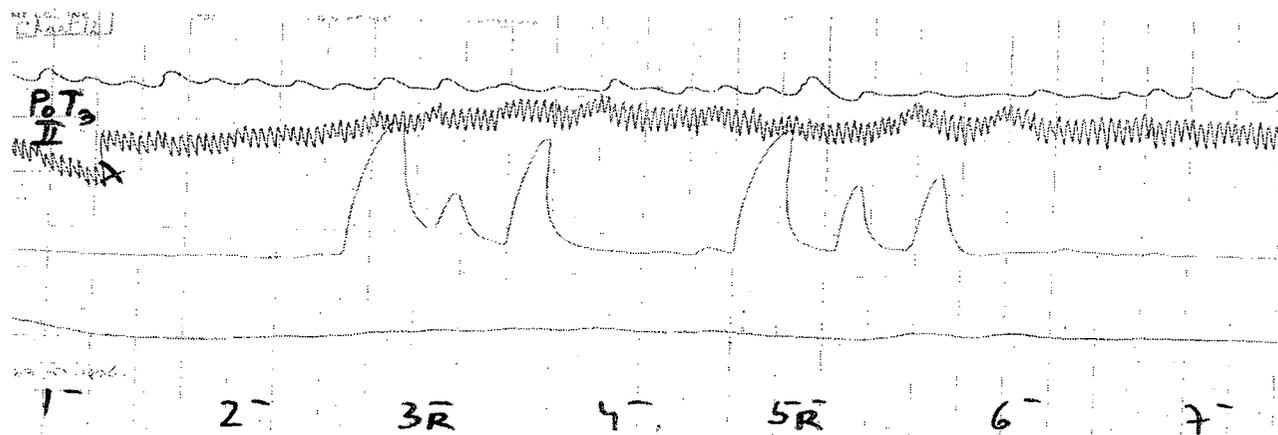


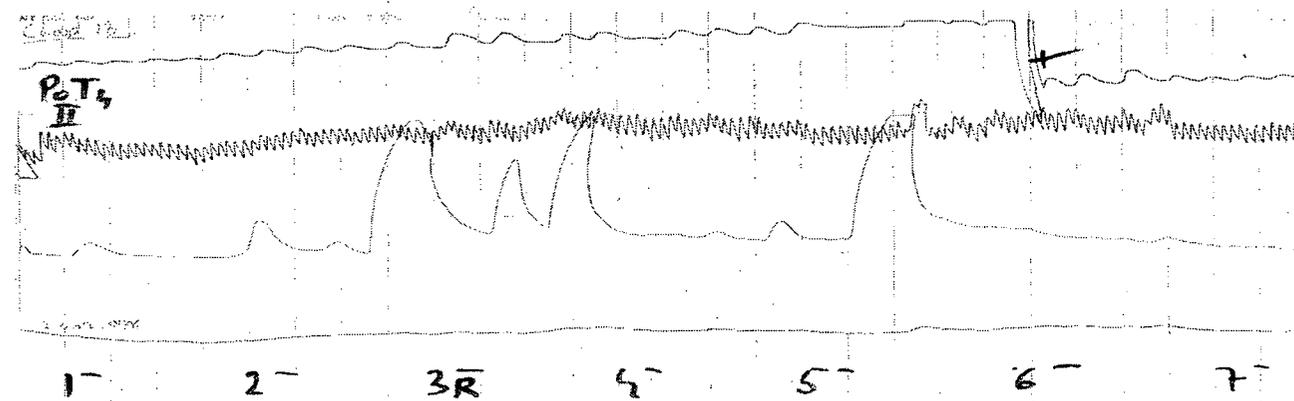
Figure 10. Question about the victim was wearing high-and-thick heeled shoes.



**Figure 11.** Question about her shoes being black.



**Figure 12.** Question about the victim being poured with gasoline and set on fire near a cemetery.



**Figure 13.** That the cemetery was located near Koncarevo village (note: the second strongest reaction to the question no 5 is to the village Mijatovac, because he had used it in the conversation with the victim as an excuse to turn off the main road).

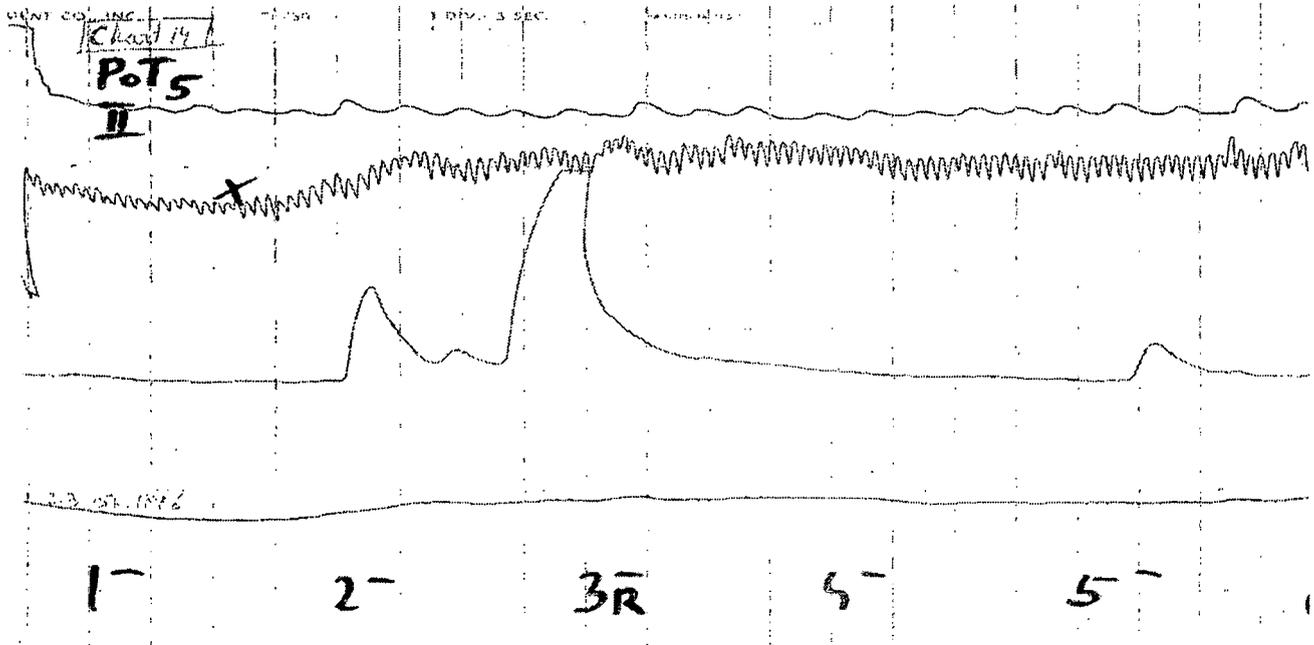


Figure 14. that the victim had told him in the car her boyfriend's name was P\_\_ B\_\_.

The results achieved in this way have enabled the polygraph expert to reach a clear and unambiguous conclusion concerning the examinee's deceitfulness. Consequently, the police investigation was directed towards the right trace and resulted in finding concrete evidence that the examinee was guilty.

#### Summary

The condition of temporary unsuitability is a distinctive phenomenon, which has specific causes and certain conditions that, more or less, favour its development. Its characteristics make it different from other phenomena, very similar in content, but different in consequences. On the basis of those characteristics it is possible to recognize

and overcome the condition of temporary unsuitability. Recognition makes conditions for avoiding a mistake that can possibly have very negative results: when a false answer is given, the fact that polygraph is not registering accompanying psychophysiological reactions or that it is registering non-standard reactions, can wrongly be interpreted as a truthful answer; momentarily registered unsuitability can incorrectly be interpreted as a more lasting one, and therefore further work with him can be stopped. Overcoming sets conditions for administering reliable testing or retesting in time useful for police investigation. It also makes it possible for polygraph methods to be applied and used for establishing truth even in cases when at first it seems unfeasible.

Experience has considerably confirmed this approach.

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## Hypnosis as a Countermeasure against the Polygraph Test of Deception: Bibliographic Resources

Melvin A. Gravitz<sup>1</sup>

For more than a century dating back to the early work of Cesare Lombroso, the pioneering Nineteenth Century criminologist-psychologist, technical instrumentation measuring a variety of psychophysiological responses has been employed in an effort to detect willful and deliberate attempts at deception. Such techniques in law enforcement, employment screening, research, and other settings frequently focus on respiratory rate, pulse rate, dermal resistance, and blood pressure. They do not specifically measure prevarication, as such, although that that is a common misconception. Concurrent with these applications, there has been an interest in counter-measures designed to circumvent or obviate the physiological reactions that are considered to accompany falsehoods. Such counter-measures have included physical, pharmacological, and psychological techniques, hypnosis being among the latter.

Hypnosis itself has been theoretically conceptualized and defined in a number of ways (Gravitz, 1991; Lynn & Rhue, 1991), and it has a lengthy history of numerous successful applications in medicine, psychology, education, and other areas (e. g., Burrows, Stanley, & Bloom, 2001). Its use as a direct polygraph countermeasure has received some attention in the professional and scientific literature, and there are also a number of studies that indirectly bear on the matter.

Many of the references citing hypnosis as a polygraph countermeasure utilize the well-documented research-verified power of hypnosis to impact memory. Memory can be refreshed, as is usually the case in

investigative procedures (Gravitz, 1985), so that previously unreported details of a case may be retrieved and enhanced. It has also been demonstrated that hypnosis can be used to reconstruct memory, so that a subject's recollection of an event is changed. For example, in certain situations memories have been altered by hypnotic techniques, so that the subject believes that an event occurred that in reality did not ("reconstruct" of a memory), or that an event did not occur that actually did ("deletion" of a memory) (Gravitz, 1994). Hypnosis can also modify physiological responses (e.g., Agosti & Camerata, 1965; Anderson, Frischholz & Trenatelage, 1988). That and the role of post-hypnotic suggestions (e.g., to induce amnesia or modify memory for events) have immediate relevance to polygraph countermeasures. Several caveats should be noted: Utilization of such hypnotic techniques should be undertaken only by well-trained and otherwise qualified psychological professionals; in addition and relatedly, there are certain potential legal issues that may arise when hypnosis is employed in forensic situations.

This paper presents a bibliography of experimental and applied studies for reference by professionals and others who are interested in either hypnosis or psychophysiological investigation of detection or both. Copies of most of the citations may be obtained, in the form of interlibrary loans or photocopies, through a university library or a comprehensive facility such as the National Library of Medicine in Bethesda, Maryland, or the Library of Congress in Washington. Similar resources in other countries include the British Library in London and the Bibliotheque Nationale in Paris, as well as others.

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## Short Report Update for the Objective Scoring System

Donald J. Krapohl<sup>1</sup>

In 1999 in this journal appeared a report of a polygraph scoring system that was based entirely on measurements of three key tracing features (Krapohl & McManus, 1999). The method, called the Objective Scoring System (OSS), had been constructed with, and for, the three-question single-issue Zone Comparison Technique (ZCT) taught by the Department of Defense Polygraph Institute (DoDPI). A unique scoring rule taught with the DoDPI ZCT is that the scorer compares the first relevant question against one of two adjacent comparison questions, choosing the comparison question that evoked the greater physiological response. The next two relevant questions have only one adjacent comparison question each, and they are scored only against that one. The different treatment of the first relevant question led to the creation of scoring ratios in the OSS that were only useful for this singular form of the ZCT.

To expand the utility of the OSS, we calculated ratios appropriate to single-issue ZCTs that have scoring rules where each relevant question has a companion comparison question against which it, and only it, is always scored. The application of the OSS with comparison question techniques that derived from the Reid school, such as the Modified General Question Technique, has not yet been subjected to sufficient investigation. Neither is the OSS the appropriate method for directed-lie techniques, multiple-issue

examinations, or non-comparison question methods such as the relevant-irrelevant or concealed information tests.

For the purpose of distinguishing the original OSS system from the adjusted version, the latter shall be labeled OSS-version 2 for convenience. The OSS-version 2 was developed with the same data set used for the OSS. The OSS-version 2 ratios were calculated by dividing the measurement of the relevant question by the measurement of the comparison question that immediately preceded it. It did not include the conditional method of selecting a comparison question for the first relevant question as used for development of the original OSS. With that single exception, the steps taken to calculate the ratios were exactly as described in Krapohl and McManus (1999).

Table 1 below lists the ratios of the OSS-version 2. Like the original OSS, users measure the features in each polygraph channel, create a ratio by dividing the measurement of the relevant question feature by that of the comparison question, find the correct score for that ratio, repeat the process for all relevant questions, sum the scores, and render a decision based on the total. For a more complete discussion of the procedure, see Dutton (2000). In addition, some manufacturers of computer polygraphs have integrated the OSS into their operating software.

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<sup>1</sup> The opinions expressed in this article are not necessarily those of the Department of Defense or the US Government. Reprint requests should be sent to: Donald Krapohl, PO Box 10411, Ft. Jackson, SC 29207, or via e-mail to [dkrapohl@aol.com](mailto:dkrapohl@aol.com).

**Table 1. Ratios for score assignment in the OSS-version 2 method.**

RLL	0.00 - 0.77	0.78 - 0.86	0.87 - 0.93	0.94 - 1.02	1.03 - 1.10	1.11 - 1.21	1.22 - 9999
	score =>	-3	-2	-1	0	1	2
EDR	9999 - 2.60	2.59 - 1.72	1.71 - 1.27	1.26 - 0.95	0.94 - 0.70	0.69 - 0.45	0.44 - 0.00
	score =>	-6	-4	-2	0	2	4
BV	9999 - 1.81	1.80 - 1.39	1.38 - 1.14	1.13 - 0.93	0.92 - 0.74	0.73 - 0.56	0.55 - 0.00
	score =>	-3	-2	-1	0	1	2

RLL = Respiration Line Length  
 EDR = Electrodermal Response  
 BV = Blood Volume

At its inception, the OSS was designed to permit users to select their own cutting scores from a probability table, based on tolerance for error. While any cutting scores could be chosen, for comparison purposes Table 2 shows the OSS and OSS-version 2 decisions at the +/-6 cutting scores used in the original Krapohl & McManus (1999) paper. These cutting scores are predicted to produce about 7% error. As Table 2 clearly indicates, the differences in performance between the OSS and OSS-version 2 are inconsequential.

The OSS-version 2 can be used with more versions of the ZCT than can the OSS, and because it did not appear to have lower accuracy in the two cross-validations, we would submit that the OSS-version 2 could supersede the OSS. Table 3 lists probabilities for the OSS-version 2, and an updated score sheet is found at the end of this article. In another Short Report under development, we shall investigate the relationship between errors and cutting scores for the two-relevant question ZCT.

**Table 2. Comparison of decision accuracies of the OSS and OSS-version 2 using the data sets from Krapohl & McManus (1999).**

<b><u>Training Set (n=300)</u></b>				
<b>Method</b>	<b>Correct</b>	<b>Error</b>	<b>Inconclusive</b>	<b>Correct w/o Inc</b>
OSS	82.3%	5.3%	12.3%	94.0%
OSS-version 2	83.0%	5.3%	11.7%	94.0%
<b><u>First Cross Validation Set (n=60)</u></b>				
<b>Method</b>	<b>Correct</b>	<b>Error</b>	<b>Inconclusive</b>	<b>Correct w/o Inc</b>
OSS	83.3%	10.0%	6.7%	89.3%
OSS-version 2	83.3%	6.7%	10.0%	92.6%
<b><u>Second Cross Validation Set (n=99)</u></b>				
<b>Method</b>	<b>Correct</b>	<b>Error</b>	<b>Inconclusive</b>	<b>Correct w/o Inc</b>
OSS	77.8%	8.7%	13.5%	89.9%
OSS-version 2	77.3%	4.7%	17.9%	94.3%
Traditional scorers	65.2%	3.6%	31.1%	94.5%

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**Table 3. Probability estimates for scores of deceptive and nondeceptive cases when using the OSS-version 2.**

Score	Probability of a truthful subject having this score, or lower	Probability of a deceptive subject having this score, or higher
-40	<0.01	
-38	0.01	
-36	0.01	
-34	0.01	
-32	0.01	
-30	0.01	
-28	0.01	
-26	0.01	
-24	0.01	
-22	0.01	
-20	0.02	
-18	0.02	
-16	0.02	
-14	0.03	
-12	0.03	
-10	0.04	
-8	0.05	0.23
-6	0.06	0.20
-4	0.07	0.17
-2	0.09	0.15
0	0.11	0.13
2	0.13	0.11
4	0.16	0.09
6	0.19	0.07
8	0.22	0.06
10		0.05
12		0.04
14		0.03
16		0.02
18		0.02
20		0.01
22		0.01
24		0.01
26		0.01
28		0.01
30		0.01
32		0.01
34		0.01
36		0.01
38		0.01
40		<0.01

**Appendix A**

**Objective Scoring System - 2002  
Worksheet**

Chart 1	MEASUREMENTS						RATIOS R/C			SCORES (circle) see table		
	CQ1	RQ1	CQ2	RQ2	CQ3	RQ3	Spot 1	Spot 2	Spot 3	Spot 1	Spot 2	Spot 3
RLL 1										1 resp score only, the stronger.		
RLL 2												
EDA												
BV												
Total												
Chart 2	MEASUREMENTS						RATIOS R/C			SCORES (circle) see table		
	CQ1	RQ1	CQ2	RQ2	CQ3	RQ3	Spot 1	Spot 2	Spot 3	Spot 1	Spot 2	Spot 3
RLL 1										1 resp score only, the stronger.		
RLL 2												
EDA												
BV												
Total												
Chart 3	MEASUREMENTS						RATIOS R/C			SCORES (circle) see table		
	CQ1	RQ1	CQ2	RQ2	CQ3	RQ3	Spot 1	Spot 2	Spot 3	Spot 1	Spot 2	Spot 3
RLL 1										1 resp score only, the stronger.		
RLL 2												
EDA												
BV												
Total												
Sub totals (all charts)												
										Grand Total		
Scoring Table (OSS-2002)												
RLL	-3	-2	-1	0	1	2	3					
	0.00 to 0.77	0.78 to 0.86	0.87 to 0.93	0.94 to 1.02	1.03 to 1.10	1.11 to 1.21	1.22 to 999					
EDA	-6	-4	-2	0	2	4	6					
	999 to 2.60	2.59 to 1.72	1.71 to 1.27	1.26 to 0.95	0.94 to 0.70	0.69 to 0.45	0.44 to 0.00					
BV	-3	-2	-1	0	1	2	3					
	999 to 1.81	1.80 to 1.39	1.38 to 1.14	1.13 to 0.93	0.92 to 0.74	0.73 to 0.56	0.55 to 0.00					

Case # \_\_\_\_\_

Examiner \_\_\_\_\_

Date \_\_\_\_\_

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## **Of Spies and Lies** **A book by John F. Sullivan**

**Reviewed by Gordon H. Barland**

Sullivan, John, F. (2002). *Of Spies and Lies: A CIA Lie Detector Remembers Vietnam*, University Press of Kansas: 280 pp. Hard bound, with 35 photos and 7 maps. Indexed. \$ 29.95

If you want to know what it was like running polygraph exams during the Vietnamese War, this is the book for you! John Sullivan<sup>1</sup> was a CIA examiner in South Vietnam for the last four years of the war, April 1971 to April 1975. He conducted more than 6,000 exams during his 31-year career with the Agency. He uncovered seven double agents, two of whom are described in this book. One was a Viet Cong rallier, the other a Czech asset. His Vietnamese cases ranged all the way from the farcical theft of four slices of ham to the most serious and complex operational exams of the CIA's top clandestine assets.

John Sullivan had one overarching purpose in writing his reminiscences, and that is to chronicle how the war affected him and reshaped his views. The book is therefore a highly personal account of one man's unique experiences. He went from viewing the war as a moral cause worth dying for, to seeing it as a horrendous mistake with devastating consequences for both America and Vietnam.

He describes his transformation through two different threads, devoting several chapters to each. One thread consists of the people he worked with. He met more CIA

personnel than perhaps any other Agency person in the country. He describes many of them – the good, the bad, and the in between – their strengths and weaknesses, and how they affected the conduct of CIA operations, CIA's reporting on the war, and his own work. He details the different operating environments in the five Military Regions in Vietnam. The second thread is the polygraph. He conducted more exams in Vietnam than any other CIA examiner. He uncovered numerous bad operations such as some of the early road watch operations being run out of Laos, which were often continued because the case officers and their superiors didn't want to believe the polygraph results, or because they believed that a bad operation was better than none at all.

The chapters examiners will find most interesting are 7, 10 and 11, all of which detail some of the many exams he conducted. He describes a very interesting case involving two agents code named Violet/1 and Violet/2. The Fireball operation is also described in some detail. This book is fascinating and easy to read. You may well finish it in one evening, but there is much food for thought in it. It is worthy of a more careful reading and analysis.

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<sup>1</sup> See also Sullivan, (2001) John F. *Spies and Lies*. *Polygraph*, 30(3), 182-184.