

Polygraph Questions and Questionable Questions:

Sexual Thoughts and Fantasies

in Post-Conviction Treatment and Supervision

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Abstract

Central to the effectiveness of the polygraph, or any test, are the test stimuli. This paper argues that the validity of the polygraph test has been established as a test of behavior but not as a test for thoughts and fantasies independent of behavior. Potential problems in polygraph target selection and question formulation are discussed in the post-conviction sex offender testing context, with attention to the capabilities and limitations of the polygraph test. The polygraph does not measure lies *per se*, is not a test of *mens rea*, cannot read minds, and is not a test of intent or intention. Caution is urged around the unscientific use of the polygraph in attempt to test for unreported sexual thoughts and fantasies that are not expressed in behavior. Questions about sexual thoughts and fantasies cannot meet the falsifiability requirements of science, and, will reduce the use of the polygraph from a scientific test to a bogus-pipeline or interrogation prop. Although potentially gratifying for a short time, polygraph questions about sexual thoughts and fantasies not expressed in behavior may ultimately lead to the devaluing and replacement of the polygraph with other emerging methods for scientific lie detection and credibility assessment. An argument is made for the use of behaviorally descriptive test stimuli that will help to ensure that polygraph testing conforms to the falsifiability requirements of science and comports with the established knowledge-base on the scientific polygraph test.

Questionable Questions

R1: Have you deliberately concealed any sexual thoughts or fantasies from your therapist?²

R2: Have you deliberately hidden any sexual thoughts or fantasies from your therapist?

Central to the effectiveness of any test are the test stimuli. Test stimuli during polygraph testing take the form of questions, intended to prompt the examinee to choose between the options of deception and truth-telling with a verbal answer: *yes* or *no*. According to the Model Policy for Post Conviction Sex Offender Testing (PCSOT; American Polygraph Association, 2009) and other publications,

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2 These questions were taken verbatim, with the removal of the therapist name, from a case that was discussed in a recent courtroom proceeding.



the basic requirements for effective polygraph relevant questions are that the questions are: closed, descriptive of the examinee's behavioral involvement in an issue of concern, simple, direct, and easily understood, time-delimited, free of assumptions of guilt, free of idiosyncratic jargon and legal terms that are not easily understood by the examinee and others. Another requirement is that questions are free of references to mental state or motivational terminology except to the extent that memory or sexual motivation may be the target of the investigation following an admission of the behavior. It is also important that the questions are structurally and linguistically balanced so that they require similar attention and effort to understand. And finally, questions should be formulated in a manner that does not allow an examinee to rationalize one's involvement in a behavior or truthfulness about involvement in a behavior.

The relevant questions above are questionable for several reasons. First, they portend to investigate *sexual thoughts and fantasies* that have not manifested in actual behavior such as masturbation or sexual contact with another person. Second, they are unbounded in time (i.e., the time-delimitation refers to one's entire lifetime of *sexual thoughts and fantasies*). Although the time of reference may have been discussed during the pre-test interview, best practice is that the question clearly describes both the behavior and time period of concern. Reliance on pretest explanation is a form of logic that assumes that *the-examinee-knew-what-I-meant-even-though-the-question-did-not-articulate-it*. Instead, it should be assumed that all polygraph examinees will be confused if the questions are not unambiguous.

Some may attempt to argue that the verbs "*concealing*" or "*hiding*" (or any other synonyms for *lies* and *deception*) are the behavior that is under investigation with these questionable questions. This is incorrect. The problem with this argument is that it would require that the polygraph can measure or detect lies *per se*. It is preferable if polygraph questions make use of action verbs that describe observable behavior instead of passive or unobservable activity.

Polygraph Does Not Measure Lies *Per Se*

It is well known that the polygraph test does not measure lies *per se* (Nelson, 2014). All scientific tests, including the polygraph test, are intended to quantify things that cannot be subject to deterministic observation or direct physical measurement. Tests work as a function of proxy or substitute data sources for which observable and recordable response have been shown to have some statistical relationship or correlation, with the phenomena of interest, though the test data and test result are not themselves the phenomena of interest. Test data enable us to make probabilistic inferences to quantify the phenomena of interest. Probabilistic inferences can be used to support categorical conclusions.

The polygraph test, like all tests, is ultimately a matter of stimulus and response. The analytic theory of the polygraph test is that greater changes in physiological/autonomic activity are loaded at different types of test stimuli (i.e., differential salience of the stimuli) as a function of deception or truth-telling in response to the investigation target stimuli (American Polygraph Association, 2011; Horowitz, Kircher, Honts & Raskin, 1997; Kircher & Raskin, 1988; Honts & Peterson, 1997; National Research Council, 2003; Nelson, 2016a; Offe & Offe, 2007; Office of Technology Assessment, 1983; Raskin, Kircher, Honts & Horowitz, 1988; Senter, Weatherman, Krapohl & Horvath, 2010). Tests are conducted as a simple matter of presenting a test stimulus and then observing, recording and quantifying the response.

To increase the precision and effectiveness of test results, tests often use multiple types of data and multiple iterations or presentations of the test stimuli. This can be observed in the polygraph test using multiple types of recording sensors and multiple repetitions of the sequence of test questions. Test data from several sensors and several iterations of the test stimuli are aggregated together using structured procedures – algorithms – for which the combined data can be mathematically optimized to achieve a greater diagnostic correlation or coefficient than the data from any individual sensor. Tests data are interpreted by comparing the aggregated data to a reference model that helps us to choose the



best from different possible conclusions while optimizing our practical goals in the form of test sensitivity and specificity, or false-positive and false-negative error rates.

Ultimately, all test results – including categorical conclusions – are probability statements³. Scientific tests are expected to quantify those probabilities as a basis of information upon which to base a conclusion. The questionable questions above encourage referring professionals and others to make the naive and dangerous assumption that the polygraph can somehow measure lies. It cannot.

It Is Not Humanly Possible to Report All Sexual Thoughts and Fantasies

Sexual thoughts and fantasies can occur rather frequently, with some estimates suggesting they may occur several times per day for both males and females⁴. Notwithstanding the important concerns about whether it is clinically or therapeutically desirable or necessary, in any evidence-based treatment modality, to report all *sexual thoughts and fantasies* to one's therapist, we can start by considering that an individual therapy session is exactly 50 minutes by tradition. A week includes 168 hours or 10,080 minutes.

If a person attempted report all *sexual thoughts and fantasies* it would usurp the therapy time and would prevent discussion of other important therapy issues. Neither the use of paper-and-pencil reporting procedures nor technology-based reporting protocols will rectify the fact that one cannot possibly report *all* sexual thoughts or fantasies to one's therapist. There is simply not enough time. If it were therapeutically necessary to report all sexual thoughts or fantasies to one's thera-

pist, then any progress in sex offense specific therapy would be impossible. Therapy would be pointless. The fact that not all reports can be reviewed in detail serves to illustrate that it is not therapeutically necessary or desirable for one to report all *sexual thoughts and fantasies* in therapy. In reality, some thoughtful choices will always be made about which *sexual thoughts and fantasies* to discuss, and what level of detail to discuss them. Is this not deliberate? It is.

Wise clinicians will understand that over-intrusion into non-deviant *sexual thoughts and fantasies* (i.e., those that are within normal limits) may be counter-therapeutic. Equally important, the presence of a third-party observer in the form of a polygraph examiner, may impair the therapeutic discussion of sexual thoughts and fantasies. This type of a delicate and careful discussion must occur in a safe context so that a therapist can work to rectify distorted thoughts and feels about one's *sexual thoughts and fantasies*. Polygraph examiners are concerned primarily with obtaining information and may resort to the use of psychological manipulation of an examinee's thoughts, feelings and perceptions to accomplish this. This can result in iatrogenic effects. It would be preferable to investigate only the underreporting of masturbatory fantasies indicative of sexual deviancy. Moreover, it may be preferable to limit the use of polygraph testing of sexual deviant masturbation fantasies to examinees who are not presently engaged in therapeutic work on *sexual thoughts and fantasies*.

Some may argue that the verbs "*concealed*" and "*hidden*" are the behavioral action targets of these questions. This is incorrect. Words such as "concealed" and "hidden" are

³ An anonymous reviewer pointed out that the word "test" is sometimes used more broadly. The author generally agrees. For example, blood tests such as those for hemoglobin, sodium or potassium are quantifying these things directly, though these may be measurements. To the extent that blood levels are dynamic and situational, any measurement of these levels is still an estimate of the actual level based on data from blood sample. Another example: x-rays and ECG are not actually tests but are procedures for obtaining recorded imaging formation that then requires clinical interpretation from a knowledgeable expert.

⁴ A recent self-report survey by Fisher, Moore & Pittinger (2012) placed the median at 19 thoughts per day for men and 10 for women. There was wide ranging variability for both groups, 1 to 388 for male participants and 1 to 140 for female participants. Other data by Alexander & Fisher (2010) using bogus-pipeline methods found only negligible differences for males and females, suggesting that self-reported differences are influenced by social factors.



synonymous with “*lying*” and “*deception*” when used by field polygraphists. Because they do not refer to behavior with any other action verbs, these questionable-questions about “deliberately concealing or hiding any *sexual thoughts and fantasies* from [one’s] therapist” place the effectiveness of the polygraph squarely on its ability to measure or detect lies *per se*⁵. If not contingent on the ability to directly measure or detect lies, these questionable-questions place the use of the polygraph test in the unscientific realm of mind reading.

The Polygraph Is Not a Mind Reading Tool

It will be important for all professionals to remain humbly aware that – for the present – it is humanly impossible for us to ever know everything about another person’s *sexual thoughts or fantasies*. All scientific test results are probability statements, including when probability results are simplified to categorical results. The purpose of any scientific test is to quantify some interesting phenomena that cannot be subject to deterministic observation or physical measurement. Neither the polygraph nor any scientific test can read minds.

Returning to the questionable question examples above, involving *sexual thoughts and fantasies*, we are reminded that words such as “*concealed*” or “*hidden*” are synonyms for “*lied*” or “*falsified*” and “*withheld*” and that the polygraph machine cannot measure or detect lies *per se*. We should also be reminded that the psychological basis of responses to polygraph stimuli is thought to involve several processes including attention, cognition, emotion, and behavioral conditioning. Recorded test data are a combination of physiological proxies that have been shown to vary significantly in response to different types of test stimuli as a function of deception and truth-telling in response to relevant target stimuli.

Interpretation of the practical meaning of the test data depends on both the sensitivity and specificity of the proxy signals to decep-

tion and truth-telling, the alpha boundaries at which differential salience of the test stimuli – expressed as the loading of greater changes in physiological activity – will be regarded as statistically significant, and the prior probability of deception and truth-telling. Overarching any probabilistic and categorical inference of deception and truth-telling, is the fact that all probabilistic inferences about deception and truth-telling are based on mathematical and statistical combination of data points that are correlated with the difference between deception and truth-telling when data are elicited and recorded using standardized procedures that conform to the requirements of science.

Recorded test data are themselves neither truth nor deception. Similarly, recorded test data are not themselves the behavioral issue under investigation. And finally, the recorded data are not themselves, and cannot be taken to be, the examinee’s sexual thoughts and fantasies. All test data are a form proxy that are correlated with, and so they can be used to make probabilistic calculations of, the issue of concern. Our ability to make probabilistic calculations is contingent upon our ability to study the statistical relationship between the data and the phenomena of interest – in this case, sexual thoughts and fantasies.

Without the ability to read minds, we will face a difficult or impossible challenge in finding some suitable external criterion for with which to calculate the statistical relationships between the recorded data and one’s actual *sexual thoughts and fantasies* (*i.e.*, some criterion that does not depend on self-report information that will be subject to the same underreporting problem as these polygraph questions). We simply cannot know *everything* about a person’s *sexual thoughts and fantasies* – including when a person is reported as “passing” polygraph questions about *deliberately concealing sexual thoughts and fantasies*.

5 Use of the words “concealed” and “hidden” or other similar words such as “withheld” along with other behavioral action verbs may or may not relieve the assumption here. For example: “Did you masturbate to sexual thoughts of violence any times that you have concealed from your therapist?”



Science Requires Falsifiability

Falsifiability means that there is some conceivable means to determine if the data and conclusion are incorrect. Neither *thoughts* nor *fantasies* – when these are not expressed in behavior – can be subject to deterministic observation or to direct physical measurement. Without the ability read minds, there is no conceivable way to obtain any extra-polygraphic or independent evidence such that we could ever know ground-truth. Use of *sexual thoughts* and *fantasies* as a polygraph investigation target is unfalsifiable and therefore unscientific. Use of these questionable-questions reduces the polygraph from a scientific test to a bogus-pipeline prop⁶.

Some types of study are difficult or prohibitive due to cost or under-developed study methodologies. Where needed scientific study it is seen as temporarily prohibitive, science allows us to remain open to the potential scientific value of an idea – until some future time when scientific study is more likely to occur. When an idea has not been studied it is simply regarded as an *unstudied hypothesis*. Where evidence has emerged to controvert an idea – where the evidence shows an idea to be false – then the idea is referred to as a *false hypothesis*. When there is no conceivable way to obtain any external evidence that is completely independent of a test result – when the idea is conceptually *unfalsifiable* – then the idea exists outside the realm of science.

To exist in the realm of science polygraph target questions must offer some conceivable way of obtaining or locating – even if not immediately possible – some independent information to confirm or refute our conclu-

sions as correct or incorrect. Only in this way can we begin to claim any scientific knowledge about the potential effectiveness of the polygraph test at discriminating truth and deception. A simple way to ensure that polygraph questions remain in the realm of science is to require that polygraph questions describe a behavior that can conceivably be verified/falsified as a function of some independent observable evidence.

With respect to polygraph questions about *sexual thoughts and fantasies*, some will attempt to resolve un-falsifiability problem with pragmatism, stating that confessions are enough to support the use of these questions. Although confessions are sufficient to resolve questions about individual cases, they are insufficient to answer questions about the scientific validity of the polygraph and the scientific principles of the polygraph. Confessions are insufficient as a scientific criterion – to validate the polygraph – because confessions are not independent of the polygraph if they are obtained in response to actions that are prompted by the polygraph result. We have observed, in some polygraph research, what appears in hindsight to have been the systematic exclusion of unconfirmed error cases (both false-positive and false-negative errors) because erroneous polygraph results will be much less likely to result in confirmation⁷. Datasets of confession confirmed cases have produced accuracy estimates that are so close to perfection that they cannot be viewed as representative of the kind of test accuracy and effectiveness to expect from real-world situations that may undoubtedly include unconfirmed errors.

Polygraph questions about *sexual*

6 Jones & Sigall (1971) showed that false information could be reduced in self-report surveys – initially involving racial prejudice – through the use of a fake lie-detector (i.e., a bogus pipeline) because people tend to reduce false answers to avoid incongruity when they believe their answer will be judged by a machine. Whereas bogus-pipeline research is subject to some ethical considerations or controversy because of its reliance on deception with the research participants, it is not regarded as unscientific because no actual attributions or expectations of test effectiveness are made about the bogus-pipeline results.

7 False-positive errors will not be discovered without the correct identification of a true-positive and this is not always possible. The result, when not all false-positive errors can be identified and included in a dataset, is a study sample that is non-representative and underestimates the proportion of true-positive errors. Similarly, false-negative error cases may be systematically excluded from research datasets, without additional evidence, unless an examinee notifies an examiner after producing a false-negative error. It is easy to imagine that some examinees will not be motivated additional to provide this information after such an error has occurred.



thoughts and *fantasies* – independent of behavior – cannot be falsified through information that is completely independent of the polygraph. Verification of thoughts and fantasies that do not manifest in actual behavior will depend on additional information from the examinee, and the examinee’s willingness to reveal information is a function of the polygraph (it is a practical goal of polygraph testing to motivate examinees to disclose information before and after a polygraph)⁸. It is therefore unscientific to attempt to use the polygraph as a test of one’s *sexual thoughts* and *fantasies* when these are not expressed in behavior. Because they are un-falsifiable, polygraph questions about *sexual thoughts* and *fantasies* are indicative of the use of the polygraph as a bogus-pipeline or as an interrogation prop. Any reliance on the test results from polygraph questions about *deliberately concealing sexual thoughts* and *fantasies* from one’s therapist is outside the realm of science.

Concealment and Hiding in the Polygraph Context Are Inherently Deliberate Actions

During the polygraph pretest interview, polygraph examinees are fully informed of the target issues under investigation, and they are advised to report and discuss any information related to the target issues. Any information that remains concealed or hidden through some non-deliberate action could only exist through some mechanism involving the complete and total psychological repression of information beyond any conscious recollection⁹. Although highly unlikely, complete and total repression would be expected to mitigate any deceptive responses to relevant target stimuli. Use of the term “*deliberate*” is therefore redundant and un-necessary. If not

redundant and un-necessary, this use of the term “*deliberate*” would seem to endorse the notion that polygraph can somehow test for information that has been subject to complete and total repression – such that it would be non-deliberately concealed or hidden. At this time the polygraph has not been validated as capable of testing and uncovering repressed memories, nor would there be any reason to expect to provide this capability.

All the issues surrounding the use of the term “*deliberate*” will also apply to synonymous terms such as “*intentionally*,” “*willfully*,” “*knowingly*,” or “*consciously*,” and other terms. The only way to proceed with the notion that polygraph testing can somehow quantify or discriminate “*deliberate concealment*” from either “*truth*” or “*non-deliberate concealment*” is if the polygraph can read minds. It cannot¹⁰.

Polygraph Is Not a Test of *Mens Rea*

There are additional problems with these questionable questions when considering whether we want to endorse the use of the polygraph as a test of *mens rea* (i.e., the degree of culpability). *Mens rea* – the degree of culpability for one’s behavior – is a legal consideration that is ultimately decided by the courts (Martin, 2003). Polygraph is concerned only with determining the truth about behavior – what the examinee has or has not done. Use of the polygraph as a test for *mens rea* would require that we endorse the notion that a person could *conceal* or *hide* information for non-deliberate reasons, for which they are neither culpable nor responsible for the choice to do so. The polygraph test is neither intended to be nor capable of being a test of *mens rea* or culpability. Instead, polygraph examiners have

8 To the extent that past masturbation behaviors present substantial practical barriers to falsification and may be subject to this same concern. However, falsifiability does not imply that we can immediately or easily falsify or verify every case incident. It implies only that some conceivable means exists to develop independent information. The author therefore does not view masturbation questions as unfalsifiable.

9 Repression of psychological information beyond consciousness is a topic that has been subject to some reworking of professional viewpoints in response to emerging research information (Rofé, 2008).

10 Inclusion of the term “*deliberate*” or its synonyms may have one other potential use. It can serve as a posttest interrogation wedge for examinees who show statistically significant reactions to relevant test stimuli, and who may have additional information to disclose. In this case, the word “*deliberate*” or its synonyms, though not necessary to support the logic of the test question, may serve to soften the entry into the posttest interrogation by pretending socially that the concealment or hiding of information may have been un-intentional or non-deliberate.



historically taken a pragmatic approach which holds that careful review and discussion of the target issues under investigation are enough to ensure conscious awareness, and deliberate choice, as to deception and truth-telling in response to relevant target stimuli.

Suggested Questions

To improve the effectiveness of PCSOT examinations, The American Polygraph Association (2009) Model Policy for PCSOT includes suggested targets for different types of PCSOT examinations, including Maintenance Exams, section 8.4.2.3, which address compliance with the requirements of sex offense specific treatment and supervision programs. Section 8.4.2.3 does not include *sexual thoughts* or *fantasies* – which would include both deviant and non-deviant thoughts and fantasies – as a recommended target issue for PCSOT Maintenance Exams. Recommended target issues in section 8.4.2.3 do include behavioral *masturbation to deviant fantasies*.

If professionals wish to use the polygraph to investigate issues of sexual deviancy, and if the polygraph is more than simply an interrogation prop, then the following questions are more consistent with the use of the polygraph as scientific test of deception or credibility.

R1: During the past three months have you masturbated to any thoughts or fantasies of violence?

R2: During the past three months have you masturbated to any thoughts or fantasies of prepubescent children?

Because of the large potential for differences in personal value judgments around the appropriateness or inappropriateness of different types of sexual behavior, the notion of deviancy in this context will be most useful if it is restricted to sexual acts involving underage persons who cannot legally consent to sexual activity, and sexual acts involving violent/non-consensual sexual acts with persons who do not wish to consent to sexual activities.

These suggested questions better illustrate the ongoing presence or absence of observable behavioral problems involving sexual deviancy. These suggested questions are time-delimited to a shorter period, making their interpretation and use more straightforward towards attempting to determine the presence or persistence of sexual deviancy among convicted sex offenders whose offenses already indicate problems with sexual deviancy. These suggest questions are sufficiently behaviorally descriptive that there are conceivable ways to obtain extra-polygraph evidence – completely uninfluenced by the polygraph results – to study the test effectiveness at determining involvement or non-involvement in the behavior.

Both *masturbation* and *sexual fantasies* are somewhat awkward and difficult discussion topics in therapy and in the polygraph test. It is tempting for people to communicate in slang terms that may or may not be correctly understood, and for which there is a corresponding tendency to engage in incompletely detailed discussion of sexual behaviors. There is also some potential for shame and judgment when discussing sexual fantasy and masturbation. The result of these complication is that there is a large potential for confusion when discussing these topics. To improve the clarity and usefulness of information from discussions about masturbation, sexual fantasies, and range of other sexual matters, Section 6 of the American Polygraph Association (2009) Model Policy for PCSOT provides *operational definitions* (i.e., behaviorally descriptive definitions) that attempt to answer the practical question: *what does it look like when someone does that?* Items N. and O. of Section 6 regarding sexual fantasy and masturbation are following:

N. *Sexual fantasy/erotic fantasy*: refers to a deliberate thought or patterns of thoughts, often in the form of mental imagery, with the goal of creating or enhancing sexual arousal or sexual feelings. Sexual fantasy can be a developed or spontaneous story, or a quick mental flash of sexual imagery,



and may be voluntary or intrusive/involuntary.¹¹

O. *Masturbation*: refers to sexual stimulation of one's genitals, often, though not always, to the point of orgasm. Stimulation can be over or under clothing, either manually or through other types of bodily contact, through the use of objects or devices, or through a combination of these methods. Although masturbation with a partner is not uncommon, masturbation for the purpose of this Model Policy refers to self-masturbation.

Sexual Deviancy in PCSOT

Sexual deviancy has been associated with increased risk for sexual recidivism (Hanson & Bussiere, 1998; Hanson & Harris, 1998; Hanson & Morton-Bourgon, 2005). The simplest form of information that can be indicative of sexual deviance may be self-report, such as when one discloses the details of one's deviant sexual behavior to a therapist. A limitation to the value of self-report information is that unlawful sexual behavior is not synonymous with sexual deviancy. Another limitation is that social stigma, personal shame, and potential legal consequences may inhibit self-reporting. Because self-reported information is often incomplete, an absence of self-reported sexual deviancy does not automatically indicate an absence of sexual deviancy. It is for this reason that professionals have sought to develop ways to test for sexual deviancy.

Phallometric testing (Freund, 1991)¹², in which sensors record changes in penile tumescence or circumference in response to various types of sexually themed stimuli, has been used to evaluate sexual deviancy. These tests use sexual arousal to deviant stimuli as an operational, observable, and recordable

proxy for the broader construct of sexual deviancy. Phallometric results have been correlated with increased sexual recidivism risk (Hanson & Bussiere, 1998; Hanson & Morton-Bourgon, 2005). However, significant findings only involve stimuli involving children. Phallometric indices for stimuli involving sexual violence are not significant. Also, Hanson & Harris (1998) found that phallometric differences were not significant for sexual recidivists and non-recidivists as a dynamic indicator of risk, suggesting that pre-treatment phallometric assessment may be more diagnostic than post-treatment assessment.

Phallometric testing has known limitations including imperfect test sensitivity and specificity and potential vulnerabilities to some forms of faking (Freund, 1963; Freund, Watson & Rienzo, 1988, 1991; Laws & Holmen, 1988; Rubin & Henson, 1975; Wilson, 1998). The limitations of sexual deviancy information towards recidivism risk estimation are illustrated by the fact that while phallometric indices for pedophilia have been found to be correlated with recidivism, phallometric indices for rape and violence indices have not been significant. It is also important to recognize that while blood flow to the penis may be a useable proxy for sexual arousal, it is not synonymous with sexual arousal. Penile arousal can occur for a variety of reasons including sexual ideation, tactile stimulation of genitalia, parasympathetic withdrawal during sleep or deep relaxation and other causes. Young males have been known to experience seemingly spontaneous penile erections in response to wide ranging stimuli. For this reason, phallometric testing of juveniles is generally not recommended (Clift, Rajlic & Gretton, 2009). An additional limitation to phallometric testing is that it is somewhat invasive.

11 An anonymous reviewer pointed out that this definition is internally inconsistent because it first defines sexual fantasies as deliberate and then explained that they may occur involuntarily, and defines sexual fantasies as directed to the goal of arousal while unbidden sexual fantasies triggered by an unexpected external stimulus may have no intended goal.

12 Phallometric testing of sexual arousal was developed in post-war Czechoslovakia (now peacefully separated into the Czech Republic and Slovakia since 1993) after the failure of psychoanalytic methods and unstructured professional judgment at discriminating homosexuality from heterosexuality among young adults who may have been claiming to be homosexual to avoid conscription. Kurt Freund later escaped to Canada and continued working on phallometric testing as an assessment instrument for convicted sex offenders.



Sexual interest, in which visual reactions are recorded measured in response to stimuli representing various sexual themes, has also been suggested as a measurable proxy for sexual deviancy (Abel, Huffman, Warberg & Holland, 1998; Abel, Jordan, Hand, Holland & Phipps, 2001; Gray & Plaud, 2005; Harris, Rice, Quinsey & Chaplin, 1996; Letourneau, 2002) among child molesters. Efforts to discriminate violent sex offenders have been less successful. Also, not all convicted sex offenders will have deviant sexual arousal, interest or preferences, and some non-offending persons may have some deviant interest or preference that is not expressed in abusive or unlawful behaviors. Deviant sexual arousal, interest or preferences is itself insufficient to predict sex offender recidivism but can be used together with other data points to construct structured and actuarial risk prediction measures that have been found to discriminate recidivists from non-recidivists. Finally, and in general, the identification of sexual deviancy may contribute to increased risk estimates for sexual recidivism, but the absence of information on sexual deviancy does not equate directly with low risk.

Polygraph questions about sexual deviancy have also been suggested as a proxy for sexual deviancy (Odum, Busby & Nelson, 2016), though these authors also note that the use of the polygraph to test fantasies not connected with behavior is outside the scope of existing polygraph studies. Nelson (2016b) also cautioned that testing of fantasies not connected with behavior is outside the scope of presently established practice recommendation of the American Polygraph Association. There is presently no published literature describing the use or effectiveness of polygraphic information as an indicator of sexual deviancy or sexual recidivism risk. Polygraph is a test of credibility, referred to as a lie-detector as a matter of convenience, for which test results are a probabilistic measurement intended to support a categorical conclusion (Nelson, 2014; 2015). It is unknown whether the developers of structured and actuarial sex offense recidivism measures (Boer, Hart, Kropp & Webster, 1997; Duwe & Freske, 2012; Epperson *et al.*, 2005; Epperson Kaul & Goldman, 2003; Harris *et al.*, 2003; Hanson, 1997; Hanson & Harris, 2000; Hanson, Harris, Scott & Helmus, 2007; Hanson & Thornton, 1999;

2000; 2003; Quinsey, Harris, Rice, & Cormier, 2006; Rice & Harris, 1997) would support the unstudied drop-in use of polygraphic information as a proxy for other information indicative of sexual deviancy and sexual recidivism. What is known is that none of the presently available structured or actuarial risk measures includes polygraphic information as a content item.

Information from the polygraph is used for its clinical value. Although highly useful in the investigation context, clinical and actuarial clinical use of information obtained through coercion may, for ethical and therapeutic reasons, be more circumspect. Meta analytic research has begun to reveal that while voluntary participation in treatment produces significant desirable effects regardless of the setting, coerced treatment has been found to be ineffective, particularly in custodial settings (Parhar, Wormith, Derksen & Beauregard, 2008). Discussion and debate exist in the clinical literature regarding the use of coercion and the importance of maintaining and adhering to clinical ethics (Glaser, 2010; Prescott & Levinson, 2010; Ward, 2010). Although self-reported information is known to be incomplete, information obtained through non-manipulative interviewing and testing methods can be assumed to be less problematic in terms of its authenticity, and clinical and actuarial value.

Clinicians who wish to remain within the bounds of evidence-based practice will want to ensure that the information used for assessment and treatment is obtained through activities that comport with clinical and therapeutic values for humane and ethical treatment of mental health patients. Professionals who use the polygraph to develop self-report or testing information on sexual deviancy can ensure the integrity and usability of the resulting information by using interviewing and testing methods that do not rely upon psychological manipulation and distorted cognitions to obtain information. Although perhaps useful in other contexts, information that is obtained through high-pressure interactions or psychological manipulation may be regarded as insufficient as a basis for clinical work or diagnostic conclusions about sexual deviancy and may serve to interfere with the therapeutic alliance for which emerging evidence suggests



plays a role in recidivism risk (Blasko & Jeglic, 2016). Regardless of how information about sexual deviancy is obtained, it is important to remember that DSM-V (American Psychiatric Association, 2013) differentiates *paraphilias*, which require no psychological or psychiatric treatment, and *paraphilic disorders* which cause social or psychological or distress and therefore require treatment.

Summary

Polygraph questions about *deliberately concealing any sexual thoughts and fantasies* from one's therapist are questionable for several reasons. These questions are without a specified time of reference and appear to refer to a person's entire lifetime. Without reference to the behavioral expression of one's sexual thoughts or fantasies, these questions are unfalsifiable and are therefore outside the realm of science, scientific testing, and the scientific use of the polygraph test. These questions rest on a series of troublesome notions about the polygraph test, beginning with the notion that the polygraph can discriminate deliberate from non-deliberate concealment of information. Other troublesome implications are that the polygraph can function as a mind-reading device, or that the polygraph can serve as a test of *mens rea*, or that the polygraph can measure or detect lies *per se*. All of these are inconsistent with reality and inconsistent with scientific polygraph and credibility assessment testing. Use of these questionable questions depends on rationalizations that compromise the integrity of scientific polygraph testing. Equally important, information from polygraph tests of one's *sexual thoughts or fantasies* is of questionable therapeutic and diagnostic value. Finally, these questionable questions also fail to meet the basic requirements for relevant questions, as described in published field practice policies within the polygraph profession.

Use of the word "*deliberate*" introduces

the dubious implication that one can conceal information non-deliberately, and in doing so produce non-deceptive polygraph results through some mechanism of complete and total psychological repression of the sought-after information (i.e., outside of any conscious awareness). For both practical and linguistic purposes, use of the word "*deliberate*" is redundant. Though its inclusion may be associated with the use of the polygraph as an interrogation tool, to stage the introduction of a post test interrogation, it adds nothing to the logic or information value of the stimuli. Equally concerning, there may be some who might enjoy it if we were to endorse the notion that one may be regarded as truthful if others can be convinced that one has concealed information only non-deliberately through some process involving psychological repression.

Can one completely repress information, beyond any conscious awareness, about sexual thoughts or fantasies? Can the polygraph test for deception and truth-telling around repressed information? Is it possible to be deceptive or truthful about one's *sexual thoughts and fantasies* if they are not expressed in behavior? Can statements about *sexual thoughts or fantasies*, not expressed in behavior, be epistemologically true or false? More simply, what kinds of things can be true? And is it possible to account for one's reporting or concealment of *sexual thoughts and feelings* using a polygraph test? Accounting for one's thoughts is a tricky proposition both philosophically and scientifically. As an example, consider the following statement: "*I did not have a thought about a yellow Volkswagen.*" Or: "*Don't think about a yellow Volkswagen.*" Merely reading, thinking, hearing or stating the sentence involves a thought about a yellow Volkswagen (i.e., the recursive thought about not having thoughts about a yellow Volkswagen)¹³. With this awareness, it will be important to carefully consider whether we attempt to endorse the notion that the completeness of one's reporting of *sexual thoughts and fantasies* can be accounted for as deceptive or

13 This is a variant of the *white bear problem* from *ironic process theory*. The names stem from the fact that it was first described by Fyodor Dostoyevsky in a publication from 1863 (Winter Notes on Summer Impressions). Ironic process theory holds that deliberate attempts to suppress certain thoughts will make them more likely to surface. Another variation of this theory is a game for children, the *white bear story*, whereby we tell children to think of a white bear and hold up their hands, and then put their hands down only when they *stop* thinking about a white bear.



truthful via polygraph testing. As a practical matter, statements and questions about physical phenomena (i.e., physical things and physical events) are more readily falsifiable and more easily conform to intuitively useful notions about truth and deception. Polygraph questions about behavior will also provide clearer intuitive and practical meaning for sex offense specific treatment providers and risk evaluators.

Polygraph questions about *sexual thoughts and fantasies* – not connected with any behavior – will fail to serve the needs of sex offender treatment and supervision program if they are not connected with behavior, are unconstrained as to sexual deviancy, unbounded as to the period of the examinee's lifetime, and unrelated to sex offense recidivism risk. These questionable questions are so broad and unbounded that it would be impossible for a person to ever completely report a lifetime of *sexual thoughts and fantasies* to a therapist. Some thoughtful choices must be made about what to report and what not to report. The notion that a person could fully report all of one's *sexual thoughts and fantasies*, or that any professional could ever fully know all of an examinee's *sexual thoughts and fantasies*, is not merely unscientific – it crosses the boundary into magical thinking. These questions serve only to reduce both the polygraph and sex offender treatment processes to attempted mind reading. They denigrate the treatment and supervision process to a counter-therapeutic shell-game that may ultimately undermine the therapeutic alliance and trust towards professionals whose objectives are to help convicted sex offenders learning to live safer and health lives.

One of the most important aspects of effective relevant questions is the requirement that they are descriptive of the examinee's possible involvement in a behaviorally for which the examinee will know the truth about his or her involvement. This requirement for behaviorally descriptive questions ensures that the relevant questions are *falsifiable*. Falsifiability means that there is some conceivable extra-polygraphic or independent means (i.e., for which it is inconceivable that the other information could in any way be influenced by the test result) to determine if the data and conclusion are correct or incorrect.

Falsifiability does not require that we immediately have access to the independent information; it means only that some conceivable way exists to obtain such information. Questions about *sexual thoughts and fantasies* – not connected with any behavior – are unfalsifiable because we cannot read a person's mind. A requirement for falsifiability ensures that the polygraph is used within the boundaries of science, and a requirement for behaviorally description questions will help to ensure that polygraph questions are likely to provide useful interpretable meaning regardless of whether the answer is deceptive or truthful. Questions about *deliberately concealing any sexual thoughts and fantasies*, independent of behavior, are associated with the use of the polygraph as a bogus-pipeline or interrogation tool instead of as a scientific test.

Questions about *deliberately concealing sexual thoughts and fantasies* cannot provide useable intuitive meaning because it can be assumed that many people will not fully report all their *sexual thoughts and fantasies* during any unbounded time period. In other words, if we attempt to interpret test results as categorically negative for the presence of deliberately concealed *sexual thoughts and fantasies*, then it cannot be reasonable assumed when a person has reported *all sexual thoughts or fantasies*. Truthful polygraph test results, concerning questions about deliberate concealing of *sexual thoughts and fantasies*, are meaningless. It would be clinically unwise and naive for any therapist to ever assume that a convicted sex offender has reported *all sexual thoughts and fantasies*, or that we can somehow know everything in this area. All persons in sex offense specific treatment can be expected to make thoughtful and deliberate choices as which *sexual thoughts and fantasies* to discuss and which not to discuss. There will be additional deliberate choices about how to discuss and view those *sexual thoughts and fantasies* that are selected for discussion. Wise and experienced mental health professionals and sex offense specific treatment providers will always remain aware that we cannot humanly know everything about another persons' *sexual thoughts and fantasies*.

Fortunately, it is not clinically or therapeutically necessary, or desirable, for a person to report all *sexual thoughts and fantasies*.



All that is necessary is for a clinician and risk evaluator to obtain enough information to determine the presence, or reasonably confirm the absence, of problems involving sexual deviancy. Once identified, it is doubtful whether things like sexual deviancy, paraphilias and paraphilic disorders can ever be completely removed or eliminated. A more likely therapeutic objective is to manage and reduce the level of problems and distress that these may cause.

In contrast, polygraph questions about recent or ongoing *masturbation* to deviant *sexual thoughts and fantasies* (i.e., masturbation to *sexual thoughts and fantasies* involving violence or prepubescent children) can provide clearer intuitive meaning when a polygraph test result is indicative of deception or truth-telling. These questions provide some conceivable means of falsification. From a clinical perspective, ongoing masturbation to deviant sexual thoughts and fantasies may be an indicator of continued reinforcement of a propensity for other sexually deviant behavior or may indicate either inability or unwillingness to curtail and reduce these behaviors. A requirement for falsifiable behaviorally-descriptive questions will help to prevent the attempted use of the polygraph as a pseudoscientific mind-reading or fortune-telling device.

Presently, there is no published scientific information suggesting that sexual deviancy or dangerousness can be measured as a function of proxy data in the form of polygraph results to questions about *deliberately concealing any sexual thoughts or fantasies*. However, self-reported information about deviant sexual thoughts or fantasies may be used in risk assessment. Information that is coerced or manipulated may be of far less therapeutic and forensic value. Polygraph results – if the test results themselves are ever to be viewed as useful (i.e., not useless) – should address issues of sexual deviancy that are expressed in behavior such as masturbation, illegal forms of pornography (child pornography, revenge pornography, voyeuristic pornography, etc.) or unlawful/abusive behavior.

The polygraph test, like all tests, is ultimately a matter of stimulus and response. The test is conducted by presenting the test stimuli and then observing, recording and quantifying the response. Tests work as a

function of proxy or substitute data sources for which observable and recordable response have been shown to have some statistical relationship or correlation, with the phenomena of interest, though the test data are not themselves the phenomena of interest. Studying and defining the proxy relationship requires that there is some criterion, known with reasonable certainty, with which we can calculate the relationship between the recorded data and the criterion. In the case of *sexual thoughts and fantasies* no suitable criterion exists when these thoughts and fantasies are not expressed in behavior.

Finally, it should be remembered that this paper is a position paper that is not based on empirical study. The author reminds the reader that the acceptance of any field practice without evidence may be a hazardous and surprising adventure. Surely there will much more that can be learned when time and resources are made available to address these interesting and important discussions with actual data analysis. Until then, the author invites alternative viewpoints and cautions that best practices will restrain the use to the polygraph to within the scope of questions and targets issues for which our present existing knowledge base is extensible and generalizable.



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