

## Frequently Asked Questions about Validated Techniques and the Meta-Analysis

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## **Frequently Asked Questions about Validated Techniques and the Meta-Analysis**

### **1. Is the list of validated techniques to be considered a standard of practice?**

No. The list of validated techniques is the result of a meta-analysis, which is an analysis of the published scientific literature.

### **2. What is a meta-analysis and why do we need it?**

A meta-analysis is a scientific and statistical analysis of the results of other scientific studies. This meta-analysis is intended to assist APA members and others who may want a reference document to make informed decisions about the selection and use of polygraph techniques. The meta-analysis can also help answer questions and anchor discussions about the validity and reliability of polygraph techniques.

### **3. Are the results of the meta-analysis an official list of approved techniques?**

No. The APA does not "approve" techniques. The APA has, over time in its publications, summarized the existing research on a variety of techniques for the convenience of members. Examiners who use techniques not included in the meta-analysis should be prepared to provide published research reports that support the validity of their methodologies independent of the APA's publications. The meta-analysis is intended to relieve others from the task of reading and analyzing and summarizing the scientific literature for themselves, though nothing prevents others from doing so and offering their own conclusions.

### **4. Why do we need validated techniques?**

The use of polygraph techniques that cannot be supported with scientific evidence does not serve the interests of the public, the client, the examinee, or the future of the polygraph profession and the APA. It is in the interests of everyone, save perhaps opponents of the polygraph, that APA members embrace the need to use validated techniques.

### **5. Who decides what is valid?**

Validity is not a decision. It is merely estimated from the published scientific reports. It can be done by anyone competent in evaluating research. In a scientific sense, a test is valid if the accuracy of the test is significantly greater than chance or if the decision-support value of the test information adds incremental validity to decisions made by consumers of test results.

### **6. What is reliability and validity and how they measured?**

Reliability refers to whether a test will give the same result when the test is repeated or when the data are re-evaluated by another professional. Tests that are not reliable (i.e., do not give the same results each time) have weak generalizability. Several measurements have been used to describe polygraph

reliability, the simplest of which is the proportion of decision agreement between scorers. Kappa statistics are a chance-corrected metric of agreement for categorical decisions. Pearson correlation coefficients are a measurement of the similarity and differences of the numerical scores.

Validity refers to many different aspects pertaining to a scientific idea. Criterion validity is the question of interest to the meta-analysis, and refers to the ability of the test to correctly determine the truthful or deceptive criterion category to which an examination belongs. Scientific validity is often measured in terms of the “effect size,” which describes the improvement over chance results. Effect sizes for criterion validity of polygraph exams are often described in terms of the proportions of correct, incorrect and inconclusive results. Tests cannot be regarded as valid if they are not reliable. Therefore, although there is no direct correspondence between reliability and validity statistics, reliability is said to influence the upper limit of validity.

### **7. What is generalizability and how is it measured?**

Generalizability refers to whether a test that works on sample data will also work on other cases in the field. Generalizability depends on the representativeness of the sample subjects (i.e., whether the sample scores were obtained from persons who represent or express the normal functional characteristics of the population of interest), and on whether the sample exams were conducted and interpreted with the same procedures. Study results are generalizable if the sample data is representative of the population. All research samples are biased in some way because they are imperfect representations of the population. Sample representativeness can be achieved by random sampling, which is intended to minimize sample bias. Statistical comparison of samples with the population is often impossible. However, different research samples can be analyzed using multi-variate ANOVAs. There should be no significant difference in sample scores if the samples were drawn from the same population (i.e., without sampling bias) and if the examinations are conducted and interpreted using the same procedures.

### **8. How were techniques and studies selected for inclusion and exclusion in the list reported in the meta-analysis?**

Polygraph techniques were included if supported by two or more published studies that provide evidence of reliability and validity. Polygraph techniques were identified through published descriptions of the constructions, structure, and administration of the test question sequence, and published descriptions of the procedural model for test data analysis. Techniques were excluded if it was not possible to locate two published studies that support their validity, or if the reported accuracy or inconclusive rates exceeded the APA boundary requirements for evidentiary testing, paired testing, and investigative testing. Studies were accepted if they were published in a peer-reviewed scientific journal, edited academic text, or government funded research report. Studies were excluded if they did not provide the statistical data of interest to the meta-analysis. Studies were also excluded if the testing procedures did not conform to published descriptions of an identifiable polygraph technique or test data analysis method. Because the results of individual studies are of little scientific value, there was no requirement than individual studies produce accuracy compliant with the APA boundary requirements. The data analysis was completed and the report was drafted before the modification of the APA standard which now requires that research demonstrates that valid screening tests provide accuracy

rates that are significantly greater than chance.

**9. What is the difference between independent and non-independent criterion variance?**

Criterion variance is whatever condition, external to the test (e.g., the examinee's past behavior), causes the examinee's statement of denial to be either truthful or deceptive. Independence, in scientific testing, refers to assumptions about whether the external factors affect the criterion state of each question are assumed affect the criterion state of other questions. In polygraph testing, the results of multi-facet and multi-issue exams are interpreted with decision rules based on the assumption that the criterion variance of the test questions is independent (i.e., behaviors that affect each question do not affect the other questions). In contrast, the results of event-specific single-issue examinations are more often interpreted with decision rules based on the assumption of non-independence.

**10. My technique is not on this list. Is it “invalid”?**

If there is sufficient research to support it, a technique would be considered valid irrespective of appearing on any list. If the research shows, however, that the technique has poor or no accuracy, it would be invalid. Some polygraph techniques are merely un-validated, that is, there is no research to support them either way.

**11. Are there any valid techniques that are not on this list?**

Possibly. Though the Committee attempted to obtain all of the available evidence, there may be other research that did not come to the Committee's attention.

**12. What will happen to me if I use a technique that is not on this list?**

In the event of a complaint an APA member would likely receive a letter of inquiry requesting information on what technique was used and what published research supports its validity. Examiners who use techniques not supported by research are likely to be deemed out of compliance with APA standards.

**13. How did these techniques get included in the meta-analysis and onto the list?**

The meta-analysis report specifies the criteria for selection in its analysis. That criteria included requirements for testing procedures that clearly reflect field practices, including instrumentation and component sensors, a published description of a test question sequence and rules for target selection and test question construction, and a published description of the method for test data analysis. Also required were information about interrater reliability, and sufficient information to calculate a complete dimensional profile of criterion accuracy. Minimally this required information about the sample sizes for deceptive and truthful cases, and the proportions of correct decisions, inconclusive results and errors for deceptive and truthful cases. Sampling distribution parameters also were required to accomplish a statistical calculation of the generalizability of the study results. All studies were included if they met this criteria. Polygraph techniques were included if supported by two or more published studies that provided sufficient information for inclusion in the meta-analysis.

**14. When will this list be revised?**

This will depend on the will of a future APA Board.

**15. Must I use only those techniques on the list, and what happens if I don't?**

Members need only use methods they can defend as valid using published research. If they choose to use invalid or un-validated methods, they may be subject to the APA grievance process if there is a complaint by a party in standing (i.e., client, examinee, APA member). A grievance that is substantiated by the Grievance Committee can lead to sanctions, including loss of membership for the most egregious violations.

**16. Will the APA defend me in court for using one of these techniques?**

The APA provides informational support to assist examiners in court, but the APA does not have the resources to provide testimonial support for its members.

**17. Will the APA testify against me if I do not use one of these techniques?**

Although members of the will have to comply with any lawful summons or subpoena, the APA does not offer resources to provide testimonial support of this type.

**18. Will I be out of compliance with APA standards if I use a technique with published research that is not on this list?**

Any credible research that shows a technique having an accuracy meeting the APA By Laws will be sufficient to remain in compliance with the APA 2012 standards?

**19. Some techniques have reported accuracy over 99%. Are these better than the others?**

A careful reading of the meta-analysis report will show that techniques with reported accuracies over 95% are supported by studies that were conducted by developers or devotees of those proprietary techniques. These advocacy studies have design and procedural characteristics that are very different from independent studies, and raise imposing questions about the results. It may be that these techniques are actually better than others, but a more reasoned view would be that the remarkable accuracies of those studies are less reliable than others.

**20. What constitutes a polygraph technique?**

The meta-analysis was completed using the APA standard definition for a polygraph technique which includes a specified structural model for a test question sequence, including structured rules for target selection and question formulation, along with a structured model for test data analysis. The two activities are fundamental to the effectiveness of any test: obtaining diagnostic information, and interpreting the information effectively.

## **21. How many different validated techniques are there, and which technique is the best?**

Fourteen validated techniques were included in the results of the meta-analysis. These techniques are, in alphabetical order: the AFMGQT with seven-position TDA and ESS, the Backster You-Phase technique, the Concealed Information Test, The DLST/TES with seven-position TDA and ESS, The Federal You-Phase technique with seven-position TDA and ESS, the Federal ZCT with seven-position TDA and seven-position TDA and evidentiary decision rules, the IZCT (event-specific only), the MQTZCT, the Utah ZCT (three-question), and ZCT variants scored with the ESS. Because, research is an ongoing and continual process and the results of the meta-analysis may be obsolete in a short period of time.

The scientific evidence available at this time is not sufficient to support a claim that any technique is better than others. That is, excluding statistical outliers that are not accounted for by the available evidence, differences in accuracy among validated techniques are not statistically significant. However, these technique have different purposes, such as evidentiary testing, paired testing, and investigative testing. In a more general sense, polygraph techniques can be thought of as intended for event-specific diagnostic testing and multi-issue screening. The "best" technique will depend on the customer's tolerance for error. Some methods are better at detecting deception, others at detecting truthfulness, and still others minimize inconclusives. It is important to match the client's error tolerance with the chosen polygraph methods.

## **22. What is a statistical outlier?**

A statistical outlier is a result that differs from the pattern of other results, assuming a random and representative sample, in a markedly unexpected way. Outliers are troublesome in research because they can distort the results or expectations from a study. Scientific results are more likely replicatable and generalizable when outliers are excluded from analysis.

## **23. What is the accuracy of the polygraph?**

There are many factors that appear to affect polygraph accuracy. Among these factors are: the testing technique, number of charts, number of relevant questions, independence or non-independence of the relevant questions, ambiguity of the relevant questions, feature selection, scoring rules, decision rules, use of the "successive hurdles" model, examiner competency, use of a "stim test", CIT or CQT, and other factors. The use of best practices will allow maximal accuracy.

Questions about polygraph test accuracy are measurement issues involving several dimensions of concern, including correct decisions, errors, and inconclusive results. Bayesian methods for measuring and estimating test accuracy, while easily understood are non-resistant to differences in base-rates or prior probabilities. Accuracy estimations based on inferential statistics will be more resistant to base-rate differences.

Although there is no single statistic for characterizing polygraph accuracy, the meta-analysis compared the accuracy of validated polygraph techniques using the unweighted average of correct decisions,

excluding inconclusive results, for confirmed deceptive and confirmed truthful cases along with the unweighted inconclusive rates for deceptive and truthful cases. Because it is impossible to conduct every possible test on every possible person, answers to questions about polygraph test accuracy are always estimates and always depend on the representativeness of the sample data. Scientific calculations of test accuracy include estimates of the range of error, in the form of 95% confidence intervals that indicate the predicted range of test accuracy if it were possible to complete numerous additional replications of the accuracy studies.

The 95% confidence interval for unweighted accuracy was .798 to .940, with a mean of .869. The confidence interval for the unweighted average inconclusive rate was .068 - .187, with a mean of .128. Event-specific diagnostic techniques, conducted around a single known or alleged problem, have accuracy levels higher than the unweighted average. Multiple issue screening techniques, involving several independent target questions in the absence of any known or alleged problem, have accuracy levels lower than the unweighted mean along with higher inconclusive rates.

#### **24. What is the reliability of the polygraph?**

The 95% confidence interval for available Kappa reliability statistics was .443 to .842, with a mean of .642. The confidence range for inter-rater decision agreement, excluding outlier results and excluding inconclusive results, was .741 to .999, with a mean of .901. Pearson correlation coefficients produced a confidence interval of .649 to .999 with a mean of .876. All of these are interpreted as good, if imperfect, reliability coefficients.

#### **25. Which techniques are suitable for evidentiary testing?**

Evidentiary testing is defined by the APA as those circumstances in which the test results are stipulated or agreed upon in advance as intended for use as evidence in a judicial proceeding. Published and replicated studies indicate that five polygraph techniques produce mean accuracy rates over 90% with mean inconclusive rates lower than 20%. Those techniques are: the Federal You-Phase technique scored with the ESS, the IZCT, the MQTZCT, the Utah ZCT, and ZCT variants scored with the ESS. Two of these techniques, the IZCT and the MQTZCT, produced outlier results that warrant additional independent research before accuracy estimations can be assumed to be generalizable.

#### **26. Which techniques are suitable for paired testing?**

Paired testing is the practice of combining statistically the results of two different exams conducted by two different examiners on two different examinees who intend to provide opposing testimony for a judicial proceeding. If the exams were completely independent (i.e., both examiners were unaware of the results of the other exam at the time they conducted and interpreted each test), and if the results of both exams agree that one examinee was truthful and the other was not, then the statistical likelihood that both exams are wrong is considered very low even if each exam has an accuracy rate of 86%. Published and replicated studies indicate that five polygraph techniques produce mean accuracy rates over 86% with mean inconclusive rates lower than 20%. Those techniques are, in alphabetical order: the Backster You-Phase technique, the Federal You-Phase technique scored with the seven-position TDA model, the Federal ZCT scored with the seven-position TDA model and scored with evidentiary

decision rules, and the AFMGQT scored with the ESS.

**27. Which techniques are suitable for investigative testing?**

Investigative testing includes any form of polygraph testing for which the results are intended to be used in the context of an investigation (e.g., background, screening, incidental or criminal investigations) but are not stipulated or intended to serve as evidence in a judicial proceeding. Published and replicated studies indicate that four polygraph techniques produce mean accuracy rates over 80% with mean inconclusive rates lower than 20%. Those techniques are, in alphabetical order: the AFMGQT scored with the seven-position TDA model, the Concealed Information Test, the DLST/TES scored with the seven-position TDA model, and the DLST/TES scored with the ESS.

**28. Can I use an evidentiary testing technique in a paired-testing context? Can I use an evidentiary or paired testing technique in an investigative context?**

Yes. There is nothing wrong with using a polygraph technique that exceeds the APA's requirements for average test accuracy.

**29. What is the difference between investigative testing and screening?**

Screening tests are any test conducted in the absence of a known problem or known incident. In the medical and psychological professions screening tests are conducted in the absence of any known symptoms. Screening tests are intended to gather a range of information and therefore may be conducted regarding multiple independent target issues. Screening tests may also address a single issue of concern (in the absence of a known problem). Investigative testing is a more general term that refers to any polygraph test conducted in the context of an investigation, whether background, incidental, criminal investigation or screening.

**30. Are there significant differences in the accuracy rates of polygraph techniques that satisfy the different APA standards?**

No. Excluding outliers that are not accounted for by the presently available evidence, there are no significant differences in the accuracy of any of the polygraph techniques included in the meta-analysis. This includes techniques that satisfy the APA requirements or evidentiary testing, paired testing, and investigative testing. In a scientific sense this means that the APA categories are not meaningful. In practical terms this means that examiners may not notice differences in the accuracy rates of these techniques, and that real differences may have more to do with the pragmatics of event-specific diagnostic and multi-issue screening exams.

**31. If the difference in accuracy levels for validated polygraph techniques is not significant then why are the APA validation categories important?**

APA validation categories serve the important role of ensuring the community and consumers of the polygraph that field examiners are using techniques that meet certain high levels of accuracy. These standards provide an authoritative basis for deprecating the use of sub-optimal or un-validated

techniques, and for excluding them from present-day accuracy estimations. Inclusion of substandard methods into accuracy estimation would be the equivalent of attempting to answer an automobile industry question regarding corporate fuel economy while including all makes and models from the 1960s and 1970s gas-guzzling era into calculations of present day economy.

### **32. How accurate are the results of event specific diagnostic tests?**

Validated polygraph techniques for event-specific diagnostic tests, for which the test questions and results are scored and interpreted with the assumption that the criterion variance of the relevant questions is non-independent, produced a 95% confidence interval of .829 - .951, with aggregated unweighted accuracy level of .890. The 95% confidence interval for inconclusive results was .047 - .173 with an aggregated unweighted inconclusive rate of .110. Validated techniques suitable for evidentiary testing have been shown to have mean accuracy rates over .900, and event-specific diagnostic techniques suitable for paired testing have been shown to have mean accuracy rates over .860. These differences are not statistically significant. Refer to the meta-analysis report for a more complete dimensional profile of criterion accuracy for individual polygraph techniques and for aggregated results.

### **33. How accurate are tests that are scored and interpreted with the assumption of independence among the relevant questions?**

Validated polygraph techniques that are scored and interpreted with the assumption of independent criterion variance among the relevant questions (i.e., it is conceivable that a person could be lying to questions about involvement in one or more behaviors while being truthful to other questions) produced a 95% confidence interval of .773 to .926 with a mean unweighted accuracy rate of .850. The 95% confidence interval for inconclusive results of these techniques was .068 to .183 with a mean of .125. These studies and techniques included multi-facet and multi-issue exams, both of which are scored and interpreted with the assumption of independent criterion variance among the relevant questions.

### **34. Is there a difference in the accuracy of multi-facet and multi-issue examinations? Is research evidence applicable to both?**

This has not been studied sufficiently to provide a definitive answer. As a practical matter, multi-facet exams are event specific examinations for which the relevant questions are intended to describe the examinee's involvement in different behavioral roles or different levels of involvement in a known issue. In contrast, multi-issue exams are constructed with relevant questions that describe the examinee's possible involvement in several different behaviors for which there is no known incident. Some polygraph techniques are suitable for both types of testing.

Research has not supported the notion of independence regarding multi-facet exams, and there is indication these exams may be more accurate when scored with the assumption of non-independence. Additionally, field examiners have sometimes noted that the relevant questions of multi-issue screening exams may not always be independent (e.g., questions about serious crimes may be non-independent from question about illegal drugs or unlawful sex acts). Therefore the independence and dependence of questions in both of these approaches remains hypothetical. If the relevant questions for both types of

exams are sufficiently clear and descriptive that one knows the truth about one's past behavior, then it is hypothesized that accuracy estimations are generalizable among these two types of exams.

For the purpose of this meta-analysis, results from both multi-facet and multi-issue exams are scored and interpreted with the assumption of independent criterion variance among the relevant questions, representing pragmatic acceptance of the hypothesis of independence. Accuracy estimations are therefore regarded as generalizable to both types of exams. Additional research is needed in this area.

**35. What techniques are suitable for screening (i.e., pre-employment, PCSOT, government)?**

As of this writing, the RI (US government version), DLST, TES, and any testing and analysis technique similar to the AFMGQT are suitable for screening.

**36. Why is the RI technique not included in the meta-analysis? Is the RI technique not validated? Why is the RI technique now considered approved?**

The meta-analysis was completed according to the pending 2012 standards of practice as of March 2011. As of this writing there is one published study on the RI technique that met the requirements for inclusion in the meta-analysis. Studies included in other systematic reviews did not meet the requirements for inclusion in this meta-analysis. However, citations exist in previous systematic reviews indicating that other studies may exist in unpublished form. APA standards were modified during December 2012 to include as valid for screening any polygraph technique which research indicates as providing accuracy that is significantly greater than chance, and the available evidence indicates that the RI technique is capable of satisfying this requirement. In a scientific sense, any test is valid if capable of providing accuracy that is significantly greater than chance.

**37. What about Searching Peak of Tension tests, Yes-tests, and other supplemental techniques: are these valid?**

Although validity is always a matter of scientific evidence, the APA standards permit the use of adjunct techniques that do not themselves lead to a decision of deception or truthfulness.

**38. Is the Reid technique valid? Why is it not included in the meta-analysis?**

There is no doubt that the polygraph profession owes a great deal of its heritage to the work of John Reid and the Reid control question technique. A number of published studies were reviewed in support of the Reid technique. Unfortunately most of those studies could not be included in the meta-analysis. The reasons for their exclusion include serious sampling confounds, insufficient information to calculate all of the statistics of interest to the meta-analysis, use of test-data-analysis models that differ substantially from the Reid method, and the use of instrumentation and testing procedures that differ substantially from actual field practices. Many, if not all, of the studies on the Reid technique were also not included in previous systematic reviews of polygraph validity. One published study did meet the requirements for inclusion. As noted in the meta-analysis report, although the results described in the published literature on the Reid technique, and the data available to the committee, do not permit the statistical treatments applied to all of the other methods, the average accuracy level of studies on the

Reid technique was not significantly different than the results of this meta-analysis.

**39. Is the Arther technique valid? Why is it not included in the meta-analysis?**

The Arther technique could not be included in the meta-analysis because there is only one published study that met the requirements for inclusion. APA members who have relied on this technique in the past may want to consider receiving training in a comparison question technique for which there are multiple published studies that describe the criterion accuracy.

**40. Is the Marcy technique valid? Why is it not included in the meta-analysis?**

The Marcy technique could not be included in the meta-analysis because no published studies could be located that satisfy the requirements for inclusion. A presidential order was given to the APA grievance committee to stand-down on action regarding any complaint pertaining to the use of the Marcy technique while the results of two research samples are analyzed.

**41. What about three-position TDA: is it valid?**

Results of the meta-analysis showed that criterion accuracy of polygraph techniques scored with the three-position TDA model was not significantly different than that of the same techniques scored with the seven-position TDA model. The three-position TDA model is valid in a scientific sense, but was excluded from the the meta-analysis because the inconclusive rates consistently exceed the 20% boundary imposed by the APA standards of practice. Therefore, three-position TDA can be used in field settings when field practices require that the results of inconclusive tests are re-evaluated using another validated TDA model.

**42. What about the Positive Control Technique: is it valid?**

Studies were reviewed on the Positive Control Technique. These were not included in the meta-analysis because the inconclusive rate exceeded the boundary requirements of the APA standards of practice. In general this technique produce accuracy rates that do not differ significantly from the results of other methods for event-specific exams.

**43. What about Rank Order Scoring: is it valid?**

Studies on one rank order scoring model, the Horizontal Scoring System (HSS), used with the IZCT, were included in the meta-analysis. Aside from this proprietary model, other studies on the Rank Order Scoring System (ROSS) were not included because the inconclusive rate exceeded the boundary requirements of the APA standards of practice. In general, rank order scoring models produce accuracy rates that do not differ significantly from the results of other methods for event-specific exams. Rank order scoring models are therefore valid in a scientific sense, though they were not included in the meta-analysis. However, because the variance of nonparametric rank scores are mathematically non-independent (i.e., each rank score affects the other scores), there are non-trivial statistical complications when attempting to apply rank scoring models to examinations conducted on exams constructed of questions for which the criterion variance of the relevant questions is assumed to be independent.

#### **44. Why do some techniques have an exception to the APA standard?**

Although the APA standards was adopted during 2007 to require validated techniques beginning 2012, the results of the meta-analysis were not available until very recently. A presidential order was given to the APA grievance committee to stand-down on action regarding any complaint pertaining to the use of the Marcy technique and the RI technique for the next year. This order was extended to the Backster exploratory technique. The basis for the stand-down order was that developers and proponents of these techniques have enacted plans of action to complete additional validation studies on these techniques.

#### **45. Is evidence of validity generalizable to variants of a technique?**

Sometimes. And sometimes no. Validation evidence is generalizable to variants of a technique so long as the structural sequence of scored and interpreted test questions is substantially similar, and so long as the purpose of the test (i.e., diagnostic or screening) remains the same, and so long as model for scoring and interpreting the test results remains the same as a validated techniques. For example: the test questions sequences for the LEPET and the Utah MGQT are structurally nearly identical to the AFMGQT. Therefore validation evidence for the AFMGQT is generalizable to the LEPET and Utah MGQT so long as the data are scored and interpreted with a validated TDA model.

Generalization of validity is not warranted when structure or intended use of the test variant differ from a validated model to the extent that the distributions of scores can be expected to differ. For example: validation evidence for event-specific diagnostic variants of a technique (interpreted with the assumption of non-independent criterion variance of the relevant questions) cannot be generalized to multi-issue screening variants of these techniques that are scored and interpreted with the assumption of independent criterion variance. Another example is when differences in the the number of RQs affects the mean total score.

#### **46. Why not rely on the NRC (2003) report for accuracy estimations? Why do we need this new study?**

The results of this meta-analysis do not differ from those of the NRC (2003) report regarding polygraph accuracy and validity. However, the results of the present meta-analysis are expected to be more useful to field examiners, program administrators, and others than previous systematic reviews because these results more directly address polygraph techniques as they are used in field settings.

#### **47. The results of this meta-analysis suggest that the polygraph is less accurate than previously reported? Has the polygraph become less accurate? Why has the polygraph not improved?**

It is unlikely that the polygraph has become less accurate over time. A more likely possibility is that the results of earlier systematic reviews were confounded by sampling methodologies that led to an overestimation of test accuracy as a result of the systematic exclusion of error cases that could not be confirmed. Many improvements have been made to the polygraph. However, it is difficult to measure any improvement of present day accuracy estimates against those of the past because the meaning of previous systematic reviews is obscured by sampling and methodological confounds that may have

overestimated test accuracy. It is hoped that continued improvements in research methodologies will provide more information on this in the future.

**48. If there is no significant difference in the criterion accuracy of any of the validated techniques, does it matter which technique I use? Can I use any technique on the list for any purpose?**

Selection of a polygraph technique should not be a matter of random choice, but should be guided by the purpose of the test. Examiners should engage in and make use of continued education that will permit them to select and use techniques for optimal test accuracy according to the informational and decision-support needs of the consumer.

**49. Are the views and opinions in the meta-analysis report to be interpreted as the views and opinions of the APA?**

No. The views and opinions expressed in the meta-analysis report are those of the authors and the ad-hoc committee that was tasked with reviewing the scientific literature? The report is intended only for information and discussion, and to assist people who wish to avoid the task of reviewing, analyzing and synthesizing the results of the scientific literature for themselves. To convert a report to a policy would take a vote that explicitly says so.

**50. Are the views and opinions in this FAQ to be interpreted as the views and opinions of the APA?**

Yes.