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A FIELD VALIDATION STUDY

OF THE

QUADRI-ZONE COMPARISON TECHNIQUE

By

James Allan Matte and Ronald M. Reuss

ABSTRACT

This field study tested and demonstrated the validity and reliability of the Polygraph Quadri-Zone Comparison Technique designed for Specific-Issue tests, using one hundred and twentytwo confirmed real-life cases from a Metropolitan Police Department and a Private Polygraph firm. The Quadri-Zone's unique Fourth Zone accurately identifies and remedies the major cause (Fear/Hope of Error) of false Positive/Negatives and Inconclusives in Specific-Issue tests. The Quadri-Zone Comparison Technique correctly identified 91% of the Innocent as Truthful and 9% as Inconclusive, with no errors. It further correctly identified 97% of the Guilty as Deceptive and 3% as Inconclusive, with no errors. Inconclusives excluded, the Quadri-Zone Comparison Technique was 100% accurate in the identification of the Innocent and the Guilty. Inconclusives included, the utility rate was 94%. Blind Scoring of polygraph charts showed extremely high correlations for the individual and total chart scores with no errors.

This article is condensed from a Doctoral dissertation entitled "Validation Study on the Polygraph Quadri-Zone Comparison Technique" by James Allan Matte with Dr. Reuss as Mentor and Faculty Advisor. The dissertation is available at \$18.00 per copy from Dr. Matte at Suite 321, Statler Towers, Buffalo, New York 14221.

Dr. Matte has a Ph.D. in Criminology and Polygraph Science, is President of Matte Polygraph Service, Inc., at Buffalo, N.Y., and is the author of a book and several technical articles on the polygraph including prior articles in <u>Polygraph</u>. He is a member of the APA. Dr. Reuss is a Professor of Biology and Instructor in Anatomy and Physiology at the State University College at Buffalo, N.Y., who holds an Ed.D. degree. The polygraphists in this field study were James Allan Matte, Detective Thomas E. Armitage, and Detective F. LaCorte. (Ed.)

BACKGROUND

This field study is the first published research on the Polygraph Quadri-Zone Comparison Technique. Its theory and methodology was published in <u>Polygraph</u> in December 1978 and in a textbook in 1980 (Matte). The Polygraph Quadri-Zone Comparison Technique is a modification of the Backster Tri-Zone Comparison Technique which was validated in the Utah Study in 1978 (Raskin). The Quadri-Zone Comparison Technique has been taught at some polygraph schools, and used locally but has not been in common use around the country. It is a technique that requires much technical knowledge including the memorization of a 23-reaction combination guide which must be applied after the conduct of each polygraph chart. The results of this study apply only to the Quadri-Zone Comparison Technique when used in its pure form without deviation. The Quadri-Zone Comparison Technique is a polygraph technique used exclusively for single-issue tests.

There are basic similarities between the Backster, U.S. Army, and the Quadri-Zone Techniques in that all three zone comparison techniques contain a neutral question, a weak relevant (preparatory) question, a symptomatic question, an exclusive control question, a strong relevant question, another exclusive control question, another relevant question (dealing with same issue), and another symptomatic question. However the Army added another exclusive control question followed by a medium strength relevant question. The Army further permits the addition of the three SKY questions (Backster SKY) to their Zone Comparison test. Unlike the Backster and Army Zone Comparison Tests, the Quadri-Zone Technique compares each strong relevant question only to the neighboring control question preceding it. But like Backster, each relevant question is switched in position after each chart, permitting each relevant question to be compared to each control question. All three Zone Comparison Techniques use the seven position scale and zero to three scoring system when comparing the control to the relevant question. However only the Quadri-Zone and the Backster Tri-Zone Techniques use an increasing threshold when tallying the scores obtained from each polygraph chart, whereas the Army Zone Comparison Technique uses a fixed threshold of +-6 regardless of the number of charts conducted. The Quadri-Zone threshold increases more rapidly than the Backster threshold. All three systems use the same scoring procedure when evaluating the control versus the relevant questions. However the Quadri-Zone departs from the other two systems when evaluating a control versus a relevant question when both display strong but equal response either in the pneumograph tracing or the cardiograph tracing. While Backster and the Army would score this comparison with a zero, the Quadri-Zone would score it with a minus one, but would score it with a zero when the responses are equal in magnitude but weak. The major difference between the three techniques is that only the Quadri-zone contains a "Fear of Error" control question which is compared against a "Hope of Error" relevant question.

This "Fear/Hope of Error" question pair form an additional zone of comparison which is located after the two traditional control versus relevant questions. The "Fear of Error" question is a control question which is designed to determine the degree of fear that an examinee may have that an error will be made on the test regarding the target issue that only an innocent examinee should experience. Conversely, the "Hope of Error"

question is a relevant question which is designed to determine whether or not the examinee is hoping that an error will be made on the test regarding the target issue which only a guilty examinee should experience.

TABLE 1 - COMPARISON OF SCORING GUIDES FOR ZONE TESTS

1. Matte Quadri-zone Scoring Guide: (minimum is 2 charts)

Minimum scores required:	TRUTH	DECEPTION
For 1 chart	+ 4	- 5
For 2 charts	+ 8	- 10
For 3 charts	+ 12	- 15
For 4 charts	+ 16	- 20

2. Backster System Scoring Guide: (minimum is 2 charts)

Minimum scores required:	TRJIH	DECEPTION
For 1 chart	+ 3	- 5
For 2 charts	+ 5	- 9
For 3 charts	+ 7	- 13
For 4 charts	+ 9	- 17

3. Federal School Scoring Guide (Barland study): (minimum is 2 charts)

Minimum scores required	to confirm: TRUTH	DECEPTION
For 2 charts	+ 6	- 6
For 3 or 4 charts	+ 6	- 6

4. Canadian System Scoring Guide: (minimum is 3 charts)

	TRUIH	DECEPTION
For 3 or more charts	+ 6	- 6

The "Fear of Error" question purportedly compensates for the ineffectiveness of the control questions in competing with threatening relevant questions which were caused by the "Fear of Error."

The author (Matte) theorized that an innocent examinee's fear that an error will be made on his polygraph test will make the relevant questions inordinately threatening, causing a physiological response that will complete with the control questions causing inconclusive or false positive results. Those false positive minus scores are offset by the plus scores produced by the "Fear of Error" question. The author further theorized that a guilty examinee's "Fear of Detection" may be rechanneled into "Hope of



Quadri-Zone Comparison Technique



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TABLE 2 QUADRI-ZONE TEST STRUCTURE

Error" or hope of beating the test, which will be manifested by his response to the "Hope of Error" question which will then be used to adjust scores.

Additionally, the Fourth Zone's "Fear/Hope of Error" questions provide the Polygraphist with the means of determining whether a control question should be strengthened or weakened when there is equal response to both control and neighboring relevant question. This choice is not available to other zone comparison tests.

Interestingly, the Office of Technology Assessment's Report entitled "Scientific Validity of Polygraph Testing" published in 1983, evaluated both analog and field studies conducted on polygraph tests pertaining to specific-incident criminal investigations and found that in analog studies, false positives averaged 14.1 percent and false negatives averaged 10.4 percent. In field studies false positives averaged 19.1 percent and false negatives averaged 10.2 percent. However it must be noted that in the review of these studies, OTA recomputed the data to include inconclusive results as errors. Exclusion of inconclusives would reduce aforementioned error rates. The OTA stated that the preponderance of research evidence does indicate that, when the control question technique is used in specific-incident criminal investigations, the polygraph detects deception at a rate better than chance, but with error rates that could be considered significant.

The Polygraph Quadri-Zone Comparison Technique's Fourth Zone (Fear/Hope of Error) was designed to address and remedy aforementioned weaknesses in the Zone Comparison Test.

PROCEDURE

A study of existing literature (Ansley 1983) on polygraph validity revealed that twice as many studies were conducted on the validity and reliability of the polygraph in a laboratory setting than those using reallife cases. Research conducted in a laboratory setting using mock paradigms lack two very important elements that are present in real-life situations, namely "Fear of Detection" by the guilty examinee, and "Fear of Error" by the innocent examinee. Since the Polygraph Quadri-Zone Comparison Technique specifically addresses the innocent examinee's "Fear of Error" and the guilty examinee's "Hope of Error" it was essential that this study use data obtained from polygraph charts acquired in real-life cases.

All polygraph specific-issue tests conducted with the Quadri-Zone Comparison technique at the Buffalo Police Department from January 1985 through December 1987 were reviewed. There were 113 cases of which 32 were later solved by confessions, investigations, convictions, and combinations of these methods. In addition, all of the specific-issue tests conducted with the Quadri-Zone Comparison Technique at Matte Polygraph Service, Inc., from January 1986 through April 1987 were reviewed. There were 145 cases of which 90 were subsequently solved by one or more of the previously mentioned methods. Thus, 122 of the total of 258 available cases (47%) were subsequently solved, providing a base of confirmed cases for study.

The Polygraphists' decisions at the end of these 122 cases were: 62 deception indicated (DI), 53 no deception indicated (NDI), and 7

inconclusive (Inc). Of the 7 inconclusive cases, 5 were solved as innocent and 2 as guilty.

In the order of preference for establishing ground truth, confessions are considered the best, convictions the next, and investigative results the least reliable. While there is often overlap, confession and conviction, investigation and conviction, we have separated them by the most to the least reliable method. Of the 122 cases, 85 (70%) were solved by confessions, 11 (9%) by convictions, and 26 (21%) by investigative results.

TABLE 3

FIELD SOLUTION OF 122 CASES

Guilty Persons (64 cases). Confirmed by:

Investigative Results Confessions Convictions 57 (89%) 6 (9%) 1 (2%) Innocent Persons (58 cases). Confirmed by: Investigative Results Confessions Convictions (of others) (of others) 28 (48%) 25 (43%) 5 (9%) Total Persons (122 cases). Confirmed by: Convictions Confessions Investigative Results

85 (70%) 11 (9%) 26 (21%)

The subject population of the 122 cases included 64 men and 58 women. There were 84 white persons, 37 black persons, and one American Indian. The age range was 16 to 60 and averaged 32. The educational level ranged from 8 years to 16 years and averaged 13 years. The average education level for the guilty was 13 years and the innocent 12 years. There were 85 crimes against property, 37 against persons.

The three Polygraphists who participated in this research were James Allan Matte, Ph.D., Certified graduate of the Backster School of Lie Detection (1972) who developed and has been using the Quadri-Zone Comparison Technique since 1977; Detective Thomas E. Armitage, Polygraphist, Buffalo Police Department, Certified graduate of the New York School of Lie Detection (1979) has been using the Quadri-Zone Comparison Technique since 1980; Detective Ciro F. LaCorte, Polygraphist, Amherst Police Department, Certified graduate of the Backster School of Lie Detection (1977) has been using the Quadri-Zone Comparison Technique since 1979.

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Of the 32 confirmed cases conducted at the Buffalo Police Department, Detective Armitage conducted 29 of those polygraph tests, and Detective LaCorte assisted Detective Armitage and conducted 3 of them. Dr Matte conducted all of the 90 confirmed cases at Matte Polygraph Service, Inc. For the purpose of this study all confirmed tests conducted at the Buffalo Police Department used in this study will be referred to as Armitage cases.

The polygraph instrument used at Matte Polygraph Service in the year 1986-1987 was a Stoelting fully electronic four-pen, double pneumograph, Ultra-Scribe, and the polygraph instrument used at the Buffalo Police Department in the year 1985-1987 was a Stoelting fully electronic four-pen, double pneumograph Polyscribe.

In this research we compared the Polygraphist's original decision with the results of following activities which solved the cases, to determine how many false positives occurred, how many false negatives occurred, and the inconclusive rate. the latter as a measure of utility, not accuracy.

We also collected the scores from each polygraph chart on each spot where a comparison was made between a control and a relevant question to determine the effect that Zone Four (Fear/Hope of Error) had on the results of each polygraph test.

In addition, the polygraph charts for the 122 cases totalling 311 were read and numerically scored blind by the two Polygraphists who did not conduct the examination. The blind reviewers did not have any case information. They worked separately and at different times.

RESULTS

The base rate of deception was 64 out of 122 (52%). Of the 64 confirmed deceptive subjects, the Polygraphists' decisions were DI in 62 (97%), NDI none, and Inconclusive in 2 (3%). Of the 58 confirmed nondeceptive subjects, the Polygraphists' decisions were DI none, NDI 53 (91%), and Inconclusive in 5 (9%). The Polygraphists were correct in 115 or 122 cases (94%), wrong in none of the cases, with inconclusive results in 7 cases (6%). When the inconclusives were excluded, the Polygraphists made 100% correct decisions. The seven inconclusives and no errors gave a utility rate of 94%. There were twice as many truthful inconclusives (n.5) as deceptive (n.2), but the number is too small to be significant.

Comparisons of the data for the Innocent and Guilty show that the mean Tri-zone chart score for the Innocent Armitage case was +5.7 and Matte +6.1. The mean Quadri-Zone case scores for the Innocent Armitage cases was +13.2 and Matte +13.1. The mean Tri-Zone chart score for the Guilty Armitage cases was -9.1 and Matte -9.6. The mean Quadri-zone case scores for the Guilty Armitage cases was -21.6 and Matte -26.6. In general, both the Innocent and Guilty mean chart scores and mean case scores for Matte were slightly higher than the Armitage scores but not statistically significant. This tends to show that the Quadri-Zone Comparison Technique yielded consistently similar scores from the two different samples.

TABLE 4

ACCURACY OF POLYGRAPH OUTCOME COMPARED TO GROUND TRUTH

Percent outcome for the Polygraph Decisions separately for Innocent Cases and Guilty Cases <u>including</u> Inconclusives compared to known confirmed cases. The Matte Quadri-Zone Comparison Technique was used to reach the decisions.

Matte Scoring Guide

Polygraph Outcome

	Tr	uthful NDI	Deceptive DI	Inconclusives INC	TOTALS
Innocent	A	16 89 x	o ox	2 11 x	18 100x
NDI	н	37 93 %	0 0%	3 7x	40 100x
	Total	53 91%	o ox	5 9%	58 100 %
Ground					
Truth				· · · · · · · · · · · · · · · · · · ·	
	٨	0 0%	13 93x	1 7x	14 100%
Guilty DI	н	0 0 x	49 98%	i 2×	50 100%
	Total	0 0x	62 97 x	2 3%	64 100 %
Summary T	otals			Accuracy of Dec:	lsions:
			Total cases	12:	2

	IUTAI CASES	L C. C.
	Correct	115
x	Correct	94%
	Error	0
x	Error	0%
	Inconclusives	7
×	Inconclusives	6X

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TABLE 5

ACCURACY OF POLYGRAPH DECISIONS COMPARED TO GROUND TRUTH

Percent outcome for the Polygraph Decisions separately for Innocent Cases and Guilty Cases <u>excluding</u> Inconclusives compared to known confirmed cases. The Matte Quadri-Zone Comparison Technique was used to reach the decisions.

Matte Scoring Guide

Polygraph Outcome Truthful Inconclusives TOTAL Deceptive DECISIONS NDI ĎΙ INC 16 0 2 16 0% 11% A 100% 100% Innocent NDI 37 37 0 з Ħ 100% 0% 7% 100% 53 0 5 53 Total 100% 0% 9% 100% Ground Truth . 0 13 13 1 0% 100% -7% 100% Guilty 0 49 49 1 DI M 0% 100% 2% 100% 0 62 2 62 Total 0% 100% 3% 100%

Summary Totals

Accuracy of Decisions:

	Total cases	122
	Total decisions	115
	Correct Decisions	115
*	Correct	100%
	Error	0
*	Error	0%
	Inconclusives	7
x	Inconclusives	6%

Quadri-Zone Comparison Technique

The Zone Four (Fear of Error) factor generated an adjustment to the 58 Innocent case scores by increasing the scores an average of +7.3 per case. The average total score per Innocent case without the Zone Four adjustment was +5.89 and with the Zone Four adjustment was +13.1. This shows that the "Fear of Error" factors is extremely significant and cannot be ignored in the scoring of Innocent cases.

The Zone Four (Hope of Error) factor generated an adjustment to the 64 Guilty case scores by decreasing the scores (increasing the value) an average of -5.4 per case. The average total score per Guilty case without the Zone Four adjustment was -19.7 and with the Zone Four adjustment was -25.1. This shows that the "Hope of Error" is a significant factor, increasing the Guilty case score by 27%.

The accuracy of the Quadri-Zone Comparison Technique with and without the use of Zone Four is compared in Table 6. With the Zone Four, the Quadri-Zone scoring System found 91% of the Innocent cases as Truthful, none Deceptive and 9% Inconclusive. Without the Zone Four the Matte Scoring System would have found 43% of the Innocent cases as Truthful, 5% Deceptive and 52% Inconclusive. Therefore Zone Four prevented a 5% False Positive error rate and reduced the Inconclusives from 52% to 9%. With Zone Four the Quadri-Zone System found 97% of the Guilty cases as Deceptive, none Truthful and 3% Inconclusive. Without the Zone Four the Quadri-Zone System would have found 81% of the Guilty as Deceptive, 2% Truthful and 17% Inconclusive. Therefore the Zone Four prevented a 2% False Negative error rate and reduced the Inconclusives from 17% to 3%. This comparison shows that the Zone Four is important in reducing the number of Inconclusives and in reducing the number of errors when the Matte Quadri-Zone Comparison Technique is used.

The Blind Scores show extremely high correlations fro the individual chart scores (.97 to .99) and for the total scores (.99). This shows the reliability and validity of the scoring process. A properly trained individual can score the chart responses accurately and will arrive at the same decisions as any other similarly trained Polygraphist. In terms of reliability of chart interpretation, the blind reviewers who applied numerical scoring to the quadri-zone chart sets came to the same decision as the original Polygraphist in all 311 polygraph charts of the 122 cases. Blind reviews did not change any decisions of DI or NDI to inconclusive or to opposite decisions.

DISCUSSION

Barland (Barland 1985) in his mock paradigm cases found 35% Inconclusives for Innocent cases, 26% Inconclusives for Guilty cases, and 32% Inconclusives overall. In this study using the Matte scoring system without the Zone Four we found 52% Inconclusives for Innocent cases, 17% Inconclusives for Guilty cases and 34% Inconclusives overall. We notice that the number of Inconclusives for the "real" Innocent is larger than for the "mock" cases. This could be expected and explained mainly by the rising threshold found in the Matte scoring system. However, for the Guilty cases there was a significant drop in Inconclusives.

TABLE 6SUMMARY TABLE COMPARING ACCURACY OF THE MATTE
QUADRI-ZONE COMPARISON TECHNIQUE SCORING METHOD
FOR THE VALUE OF THE ZONE 4 IN ARRIVING AT
DECISIONS

Comparing Matte Scoring Guide with (WI) Zone 4 and without (WO) Zone 4 (23-24).					
POLYGRAP	H DECISION 9	K			
Truthful	Deceptive	Inconclusives			
91%	ox	9 x			
ox	97%	3%			
43%	5%	52%			
2%	81%	17%			
	Scoring Guid (WO) Zone 4 (POLYGRAP Truthful 91% 0% 43% 2%	Scoring Guide with (WI) 2 (WO) Zone 4 (23-24). POLYGRAPH DECISION 9 Truthful Deceptive 91% 0% 0% 97% 43% 5% 2% 81%			

2. Percent data excluding the Inconclusives Comparing Matte Scoring Guide with (WI) Zone 4 and without (WO) Zone 4 (23-24).

GROUND TRUTH	POLYGRAP	H DECISION	
	Truthful	Deceptive	Inconclusives
Innocent	100%	0 %	9%
Guilty	ox	100%	3%
Innocent Without Zone 4	89%	11%	52%
Guilty	2%	98%	17%

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topic of psychodynamics, Barland suggests that "the On the psychodynamics of actual criminal suspects undergoing polygraph examinations are no doubt quite different" (Barland 1985). The drop in the Inconclusive for the Guilty cases is a possible outcome due to the involvement of the persons in real situations. There has been a consistent criticism of the "mock crime" cases where the persons may not react the same since they have no true involvement. In real cases the accused person is really either guilty or innocent and has stronger reactions. We found that the psychodynamics may be a true factor for the Guilty. A comparison of the data from Barland (mock) and this study (real-life) shows a significant drop in the Guilty Inconclusives even with the increasing threshold. This shows that for the "real-life" Guilty, their physiological responses are much stronger, allowing the Polygraphist to make more frequent definite decisions.

When the Zone Four adjustment is added for the Matte Quadri-Zone system, the Inconclusives are significantly reduced to 9% for the Innocent cases, 3% for the Guilty cases, and 6% overall. This shows that a major psychodynamic factor is the "Fear of Error/Hope of Error" factor as measured by the Zone Four. This factor would be expected to be greater for the "real-life" cases over the "mock" cases and appears to be a significant measurable psychodynamic factor leading to the large number of Inconclusives especially for the Innocent cases.

As noted by Barland (Barland, 1985), an extreme score is more accurate in making a decision and a score nearer zero has a greater possibility of an error, if a decision is made. Increasing the threshold with each chart run, is a method which is consistent with this statement. It guards against accumulating enough small scores to reach a fixed threshold.

Barland developed a predictive table based on the mock data which could be used as a model for developing a similar table based on real cases. In comparing our real case results with the mock data results we found some similarities and some differences. Barland predicted (Barland, 1985) that 80% of the time a Guilty subject will score minus 15 or higher for 3 charts. For our Guilty subjects, without the Zero Four the scores were this high or higher 81% of the time with 19% (12 cases) not scoring this high showing that the probability is about the same for the "real" cases as the "mock" cases. However, when the Zone Four adjustment is added to the scores then the subjects score this high or higher 97% of the time and only 3% (2 cases) (see Table 6) did not show this much reaction, showing that the probability is much greater when the scores are adjusted for the Hope of Error factor.

Barland also predicted a 1% probability for an Innocent subject to fall in this "Guilty range." We found 5% (3 Innocent cases) (see Table 6) that fell in this range. When the scores were adjusted for the "Fear of Error" factor, the cases were called Inconclusive and the False positive errors were avoided.

As noted by Barland, as one approaches the appropriate tail of each curve, the estimated probability of an error approaches the infinitesimal. this study, using the rising threshold, uses this concept in the decision making and shows the increased accuracy in the Truthful and deceptive

decisions. However, one might expect a greater number of Inconclusives due to the wider range before threshold. Without the Zone Four this is the case (Table 6-1) with 52% of the Innocent cases and 17% of the Guilty cases being called Inconclusive. With the Zone Four this is significantly controlled with only 9% of the Innocent cases and 3% of the Guilty cases being called Inconclusive.

The Quadri-Zone adjustment of scores increases the accuracy and reduces the errors as well as the Inconclusives. False Positive and False Negative errors were eliminated (the accuracy increased) (Table 6-2) by adjustment the scores using the Quadri-Zone. In Barland's study, the decision was correct in 96% of the Truthful cases supporting the accuracy of a decision based on a smaller score in the Truthful cases. The decision was correct in only 88% of the Deceptive cases showing the need for a stronger criterion (higher threshold) for the deceptive cases. The Matte Scoring Guide uses this concept in setting the thresholds, and this study suggests that this is a valid concept.

To obtain the high percentage of accuracy in the result, Barland had to eliminate the Inconclusives for his tally. Without the Zone Four we would have been correct (Table 6-2) in 89% of the Truthful (Innocent) cases and 98% of the Deceptive (Guilty) cases showing that the real case data is similar to the mock crime data. However, the Zone Four adjustment increases the accuracy to 100% (Table 6-2).

Using the Matte Quadri-Zone Comparison Technique, there was a greater accuracy in decision making not only in the finding of Truth-Deception, but in reducing the number of Inconclusives. Barland had to eliminate the Inconclusive cases in order to get a high accuracy rate, but we found so few Inconclusives that we could state our accuracy while including all the cases, increasing the utility of this technique for use in criminal investigations.

The Office of Technology Assessment's 1983 Report evaluated both analog and field studies conducted on polygraph tests pertaining to specific-incident criminal investigations and found that in the field studies examined, false positives averaged 19.1 percent and false negatives averaged 10.2 percent. However a review of field validation studies of the Zone Comparison Technique revealed significant difference in their results. In Bersh (1969) where a panel of attorneys reviewed the evidence and their conclusions were compared with the examiner's decisions (real cases), with a 10.5% false negative, and the innocent were correctly identified 94.1%, with a 5.9% false positive, no inconclusives. In Barland and Raskin (1975) when ground truth was determined by a panel the Guilty were correctly identified 91.5% with no error and an 8.5% inconclusive. The Innocent were correctly identified 29.4% with a 52.9% false positive and 17.6% inconclusive. When ground truth was determined by judicial outcome the Guilty were correctly identified 90.9% with no error and a 9.1% Inconclusive. The Innocent were correctly identified 12.5% with a 75.0% false positive and a 41% Inconclusive. Judging from the findings obtained in analog and field studies, there appears to be a greater potential for making errors against the Innocent than against the Guilty examinee.

In this study we used confirmed cases from two separate entities; the Buffalo Police department and Matte Polygraph Service. While both entities used cases from the approximate same period, the Buffalo Police Polygraphist (Armitage) had to extent that period because for a period of time he was overwhelmed with the conduct of Pre-Employment polygraph tests on police applicants during which period he did not conduct any Quadri-Zone tests. Furthermore, Armitage found it more difficult to obtain confirmed cases, i.e., (113 cases, 32 confirmed), then Matte (145 cases, 90 confirmed. 39 of the 90 confirmed cases were for defense attorneys wherein a confession is protected by privilege communication. Those Matte cases where the results were confirmed by investigation (21%) were only accepted as verified after the Director of Security of that agency produced credible evidence supporting his findings. Cases verified by confession are most credible because of the manner and circumstances in which they are obtained. The Quadri-Zone Technique requires that there be absolutely no accusatory or interrogative approach used in any portion of the pre-test interview or between the administration of polygraph charts, or else the test is invalidated. A post-test interrogation is only conducted when the scores tallied from the examinee's polygraph charts conclusively show deception. All post-test interviews/interrogations were videotaped with the consent of each examinee showing that all of his rights were observed. The likelihood of a false confession in the sample of this study is improbable. In fact, the law in Erie County where all of the aforementioned polygraph examinations were conducted, specifically requires that at the request of the examinee a tape recording of the entire examination will be maintained for a period of 45 days for review by authorities or the examinee's representative, and this right is included in the release form presented to the examinee. Both the Buffalo Police Department and Matte Polygraph Service videotape all polygraph examinations with the consent of the examinee, and the tapes are maintained for at least one year.

We noted no significant difference in the number of inconclusives between the confirmed and unconfirmed cases. We fail to see any difference in the subjects whose cases were unconfirmed and the confirmed cases appear to be a representative sample of the total cases.

The decisions of the Polygraphists in 122 confirmed cases were correct in every case in which they made a decision of truth or deception. The blind reviews of the charts were consistent with the original decisions. There were no errors, and the inconclusive rate was only 6 percent. These results are from the cases of three polygraphists of which two are Police Polygraphists who conducted polygraph tests for the Buffalo Police Department, and one is in private practice, all trained and experienced in the Quadri-Zone Comparison Technique.

We further collected data from each of the 311 polygraph charts to determine the following which will be reported in future articles in <u>Poly-graph</u>:

A. Data was collected from each polygraph chart to determine the most productive pneumograph tracing, the most productive overall tracing, most productive tracings for males and females, and the most productive tracings of innocent versus quilty subjects.

B. Countertrend scores were gathered to determine the effect and best positional use of the Stimulation Test.

C. A Predictive Table was developed for Estimating Error Rates based on data from this study for use by Polygraphists, Attorneys and the Courts.

D. The mean scores were collected from polygraph charts of guilty subjects polygraphed by the Police versus the mean scores of subjects polygraphed for Defense Attorneys, and Commercial cases, to determine whether the "Fear of Detection" factor is significantly different for any of the aforementioned groups and tests the "Friendly Polygraphist" concept.

E. A comparison of scoring methods; Army Zone Comparison, Backster Zone Comparison, and Quadri-Zone Comparison; to determine the efficiency of each scoring system with fixed and increasing score thresholds in identifying the innocent and the quilty.

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Quadri-Zone Comparison Technique

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A COMPARISON BETWEEN THE PREDICTIVE VALUE OF TWO COMMON PREEMPLOYMENT SCREENING PROCEDURES

By

Brian C. Jayne

The Employee Polygraph Protection Act became effective December 27, 1988, virtually eliminating the use of the polygraph technique as a preemployment screening aid for almost all private employers. As a result, those businesses which have placed a great deal of reliance on the polygraph test as a means of identifying those applicants who have engaged in job related acts of dishonesty or misconduct, are searching for alternative selection procedures. Unfortunately, with the loss of the preemployment polygraph test, the market place is being inundated with a myriad of "new" screening tests, the validity of which in many cases may be highly suspect.

There are basically two different types of screening procedures. One type of preemployment screening procedure evaluates the applicant's past behavior either directly from the applicant, or indirectly through reference or record checks. The information developed relates specifically to the applicant's past acts and dishonesty; e.g., the applicant was fired from his last employer because he stole a \$2,000 deposit and has two convictions for shoplifting. On the other hand, a second type of screening procedure measures the applicant's psychological characteristics which purport to predict future behavior. A psychological assessment, for example, may indicate that a particular applicant has a poor attitude towards honesty and therefore presents a high risk of stealing from the employer if the applicant is hired. The basic question to answer is which type of screening procedure best predicts an applicant's future behavior -- evaluating what the applicant has actually done, or evaluating psychological characteristics about the applicant.

In an effort to answer this question, a study was conducted using data from the files of John E. Reid and Associates. Reid and Associates is nationally recognized for their expertise in detection of deception, interviewing, and interrogation techniques. In 1951, John Reid also developed one of the first written psychological honesty tests, the Reid Report.

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The author is a Member of the American Polygraph Association and the author of an article previously published in <u>Polygraph</u>. [ed.]

METHOD

To gather data for this study, the files of John E. Reid and Associates were sequentially inspected to randomly select 200 individuals who had been administered a preemployment polygraph screening examination and who were also, given a specific issue polygraph examination. The specific issue examinations typically investigated a theft of money or merchandise from their place of employment. The subjects included in this study met one of two conditions. If the original preemployment screening examination results were favorable (indicating that the applicant had not engaged in significant past acts of dishonesty) the specific issue examination was usually conducted on behalf of the company who had hired the applicant after the initial preemployment polygraph examination.

The second condition consisted of applicants whose preemployment polygraph results were not favorable (the applicant had admitted significant past acts of dishonesty) and, therefore, in general, were not hired by the company requesting the screening examination.¹ However, these applicants eventually were hired by a different company who did not screen the individual through John E. Reid and Associates, but did later request us to administer a specific issue polygraph examination when the individual became a suspect in an internal investigation. The average time between the preemployment examination and the specific issue examination was 2 years.

To summarize, 163 individuals had been given a preemployment polygraph examination and a specific issue examination for the same employer, whereas 37 individuals were given a screening examination for one employer, and a specific issue examination for a different employer.

Furthermore, out of these 200 individuals, 162 of them had also been administered a Reid Report in conjunction with the preemployment polygraph screening examination. The Reid Report provides a numerical score that predicts the likelihood that the individual would engage in future acts of dishonesty or misconduct if hired. 103 applicants received "passing" scores on the Reid Report and 59 received "failing" scores. However, in those situations when an applicant completed the Reid Report and took a preemployment polygraph examination, the final preemployment recommendations for all of these applicants were based strictly on the admissions they made during the preemployment polygraph examination. As a result, 17 applicants who received "passing" scores on the Reid Report were, in the final analysis, "not recommended" because they made significant admissions during their preemployment polygraph examination. In addition, 40 applicants who failed the Reid Report were none-the-less "recommended" for employment because they made no significant admissions during their polygraph examination. The following chart may help visualize this sample:

This collection procedure resulted in two different variables within the same sample; one variable investigated past behavior as a predictor of future honesty (the applicant's admissions during a preemployment polygraph examination) and the second variable investigated the applicant's attitudes toward honesty (the paper and pencil honesty test) as a predictor of future honesty. Brian C. Jayne

SCREENING CATEGORIES	SCREENING RESULTS
Polygraph without written test - 38	Recommended - 30 Not Recommended - 8
Passing written test - 103	Recommended - 86 Not Recommended - 17
Failing written test - 59	Recommended - 40 Not Recommended - 19

If a screening procedure was perfect in predicting dishonesty, one would expect that every applicant screened as "honest" before he was hired would predictably be innocent if he became a suspect in a specific incident investigation. Conversely, every applicant screening as "dishonest" would predictably be guilty if he became a suspect in a specific incident.

FINDINGS

Out of these 200 individuals, 135 were found to be telling the truth and 65 were found to be deceptive during their specific issue polygraph examinations; fifty of these results were verified as correct through a corroborated confession. Table A lists the results of the specific issue investigation for the 200 applicants whose recommendation for employment was based on the applicant's statements regarding past acts of dishonesty (behavior). Within this group, 162 made no significant admissions during their preemployment screening examination, and were therefore "recommended" for employment. The remaining 38 applicants did make significant admissions during their preemployment examination and consequently were "not recommended" for employment. Table B, on the other hand, lists the results of the specific issue investigation for those 162 applicants who were administered a paper and pencil honesty test as part of their preemployment screening. One hundred and three of these applicants were determined to have a favorable attitude towards honesty while the remaining 59 applicants were judged to have a poor attitude towards honesty.

TABLE A SPECIFIC ISSUE RESULTS COMPARED TO APPLICANT'S BEHAVIOR

Preemployment Result	Innocent	Guilty
No Significant Admissions	126 (78%)	36 (22%)
Significant Admissions	9 (24%)	29 (76)

TABLE B SPECIFIC ISSUE RESULTS COMPARED TO APPLICANT'S ATTITUDE

Preemployment Results	Innocent	Guilty
Passing Score Failing Score	71 (70%) 33 (56%)	32 (30%) 26 (44%)
	203	

RESULTS

One hundred and sixty-two of the applicants included in this study made no significant admissions of past acts of job related dishonesty or misconduct during their preemployment polygraph examination. Therefore, all 162 of these applicants should have been innocent of the specific theft for which they later became a suspect -- 126, or 78% were innocent whereas 36, or 22% were found to be guilty.

On the other hand, 38 applicants made significant admissions about past job related acts of dishonesty or misconduct during their preemployment polygraph examinations. Consequently, all 38 should have been guilty of the specific theft for which they became a suspect -- 29, or 76% of these applicants were found to be guilty of the specific act while 9, or 24% were found to be innocent.

In summary, evaluating the applicant's past behavior as a predictor of future behavior was correct in 155 of the individuals studied which resulted in an average predictive accuracy rate of 77.5%. Using a goodness of fit test, comparing correct vs. incorrect recommendations, this finding is statistically significant at $p < .01 (x^2 = 30.9 v = 1)$.

With respect to those individuals who completed the paper and pencil honesty test, 103 received a passing score. Therefore, all 103 individuals should have been innocent when they became a suspect in a subsequent investigation. Seventy-one, or 70% of these individuals were found to be innocent, and 32, or 30% were found to be guilty.

Fifty-nine individuals included in this study received a failing score on their paper and pencil honesty test. Therefore, all 59 of these individuals should have been guilty when they became a suspect in a specific theft -- 26, Or 44% of this group, in fact were found to be guilty, but 33 employees, or 56% of this group, were found to be innocent.

In this study, the evaluation of a job applicant's attitude towards honesty did not predict the individual's future honesty above chance levels at p < .05 ($x^2 = 2.4 v = 1$). In fact, the predictive value of an applicant's attitude towards future honesty was only 60%.

This finding clearly indicates that an applicant's attitude towards honesty does not statistically predict the individual's future honesty. In other words, the assumption that a person who has a poor attitude towards honesty (as measured by a paper and pencil honesty test) has a higher likelihood of stealing from an employer than a job applicant with a good attitude towards honesty is not supported by this data. On the other hand, evaluation of an applicant's past behavior is a relatively good predictor of future acts of misconduct or theft.

CONCLUSIONS

The methodology selected for this study eliminates the bias found in other predictive studies which tend to evaluate only job applicants who passed a paper and pencil written honesty test.² This study, which

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investigated the future honesty of applicants who passed, as well as applicants who failed a paper an pencil honesty test, clearly demonstrates that an applicant's attitude towards honesty is not as accurate a predictor of future behavior as the applicant's past behavior. While paper and pencil honesty tests are inexpensive and have a high reliability (the ability to reproduce consistent findings), the relationship between attitudes and future behavior is unclear. Indeed, a paper and pencil honesty test may be a very good measure of an applicant's attitude towards honesty; however, the correlation between a job applicant's attitude towards honesty and the likelihood that the applicant will engage in future acts of dishonesty is not strong enough to justify using the applicant's attitude towards honesty as the sole criteria upon which to base a hiring decision.

Footnotes

¹ Seven applicants who made significant admissions during their preemployment polygraph examinations, and were therefore "not recommended" for employment, were still hired by the company requesting the polygraph screening test. All 7 of these applicants were found to be guilty of the specific theft under investigation, and 5 of the 7 subsequently confessed to the theft.

² For a comprehensive review of research conducted on paper and pencil honesty tests see Sackett, P., Burri, L. & Callahan, C. (1989) "Integrity testing for Personnel Selection: An update." <u>Personnel Psychology</u>, p. 42.

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EVALUATING INVESTIGATIVE POLYGRAPH RESULTS

By

Ronald M. Furgerson

Suppose your department receives a report from an obviously distraught young mother who said she was in a neighborhood convenience store for a couple of minutes to buy milk when her one-year-old daughter was kidnapped from her car. Suppose further investigation confirms certain details of the mother's account, but that other aspects of the case were troublesome and just didn't "ring true." How can you "weed out" the deceptive statements from the ones that are true?

Law enforcement agencies have found the polygraph to be a highly successful and useful technique to resolve such investigative dilemmas. Frequently, in such cases, important managerial and investigative decisions must be based primarily on the results of the polygraph examination and the examiner's evaluation of the charts, when there is no confession or other credible evidence to fully confirm the examiner's opinion.¹ Should the investigation continue? If so, should the focus of the investigation change or remain the same? Should additional resources be allocated to the case? While there are no clear-cut rules to govern the manager's decision, there are certain factors which may be useful in assessing the level of confidence given to an examiner's opinions on a case-by-case basis.

This article discusses the many factors which influence polygraph accuracy. It will also enable law enforcement managers and investigators to better determine the weight which should be given to polygraph examination results and examiner conclusions. Further, the information discussed may prove useful in determining whether an examination should be given at all, and if so, what might be done to improve the probability of accurate results.

ACCURACY FACTORS

A polygraph examination is a process which consists of many variables. Credible research concerning polygraph validity indicates that accuracy levels exceed 90 percent for certain investigative polygraph methods.² However, this does not mean that 90 out of 100 examinations conducted by every examiner in every situation will be correct.

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Since polygraph examinations are not infallible indicators of fact, examiner conclusions must always be viewed with a degree of caution. Policy within the Federal investigative and intelligence communities specifies that examiner conclusions, based on chart interpretation alone, should not be a determiner of investigative fact and should not be used to exclude other evidence. Examiner opinions constitute but a single element of all the information which becomes available during a complete and thorough investigation.³

Contributing factors to the accuracy level of the polygraph can be grouped into four major categories -- the examiner, the examinee, the investigation, and the examination conditions. Quality control reviews may also be useful in assessing polygraph results.

The Examiner

Without a doubt, examiner skill contributes greatly to polygraph examination accuracy. Of course, most investigators who have worked with a number of different examiners over time realize that all examiners are not the same and do not achieve the same results from the examinations. Some examiners are far more successful and capable than others in solving cases. They are the ones who usually "get the confession" or somehow cause things to happen to clarify or to advance the investigation.

However, it is prudent to exercise caution when an examiner's opinion is based solely on the charts. The same "people skills," or interrogation ability, which produces confessions are not necessarily the same skills which result in proper chart analysis.

A key factor when attaching weight to an examiner's opinions is the quality of their training. Generally, most qualified examiners will have been trained at a reputable polygraph school or through a course accredited by the American Polygraph Association, which does not place primary emphasis on an examinee's behavior and body language as a sign of deception. The best examiners will be proficient in at least one and preferably in a variety of recognized polygraph techniques⁴ which have been demonstrated, through competent research, to have a high level of validity. Further, they will have been trained in and use the "numerical analysis" method of chart interpretation, which promotes objective chart evaluation, has been validated by competent research, and which probably contributes to overall accuracy.⁵

In addition to their initial examiner training, the most qualified examiners will have received refresher training within the last year as an aid to retaining proficiency and adhering to recognized standards and procedures.⁶ They should also demonstrate professionalism by showing an interest in current research, maintaining membership in professional associations, and following current developments in the polygraph field through journal articles and newsletters.

Another factor which contributes to examiner competency is experience. Qualified examiners will have accumulated considerable experience in polygraph usage and may have even completed an internship under the supervision of a senior examiner. They will also be in positions to use their polygraph skills often, so that their skills will not erode through neglect or inactivity.⁷

An experienced examiner will also be better able to establish rapport with examinees, to determine if examinees are proper candidates for examination at that time, and to select the interview technique most likely to properly prepare examinees for examination (and subsequent interrogation if deception is indicated). Also, they should be able to detect the presence of any countermeasure an examinee may use in an attempt to thwart the examination process.

The case facts may be highly complex, requiring examiners to resolve a number of issues and sub-issues. Therefore, experience as an examiner and an investigator, or other experience involving the analysis of criminal activity and behavior, is helpful in identifying the issues to be addressed during the examination and how to best structure polygraph examinations to do so.

An examiner's personal integrity and moral courage have great significance. A professional examiner will not be intimidated to reach popular opinions or just to substantiate opinions of previous investigators. Professional examiners will not test candidates who are unfit for examination and will not conduct examinations under unsuitable conditions, with inadequate preparation time, or with insufficient background information on the case. Their examinations will always be directed at solving the case and/or addressing all the issues under investigation. They will not simply try to find some question the examinee can answer truthfully, or is sure to fail. Finally, ethical examiners, whose opinions are valued, will not view the polygraph as merely an interrogation tool. Rather, they will take polygraph science seriously and will conscientiously strive to ensure that their opinions have value, even when there is no confession.

The Examinee

A second major factor bearing on the accuracy of polygraph examiner opinions is the examinee. The investigator or law enforcement manager can evaluate the accuracy of polygraph results by discussing the examinee knowledgeably with the examiner and by evaluating the conditions affecting the examinee.

The most obvious factors influencing examinees are their physical and emotional conditions. People who have not had regular food or rest, or who are clearly under great emotional stress, are poor candidates for examination. Therefore, it is unwise to examine subjects who have just undergone an intensive or prolonged interview or interrogation, who have just been injured, who are physically fatigued, or who have just undergone significant emotional shock, such as the loss of a loved one or personal trauma. However, people who are under a relatively high level of stress normally associated with police-related interviews and interrogations are proper candidates for examination. This type of stress is common to examinees, does not adversely affect examination results, and can be compensated for by using various controls in well-structured examinations. However, examinees subjected to lengthy and/or intense accusatory interrogations may become sensitized to relevant questions, thereby detracting from the accuracy of the exam.

Psychological factors also greatly influence polygraph accuracy. When the intensity of the issue under investigation is personally significant to the examinee, accuracy is likely to be greatest, irrespective of whether the examinee is truthful or deceptive. This situation exists when the consequence is not advantageous to the examinee, e.g., when the results of the polygraph examination will cause investigators to question or disbelieve the examinee's statements. Personal involvement helps to ensure that examinees are alert and psychologically "tuned in" to the examination process, and that extraneous thoughts or concerns do not interfere with the examinee's concentration on the interview.

Polygraph examinations can only determine if examinees are reporting what they believe to be true, or whether they are being intentionally deceitful. If examinees honestly believe that they are telling the truth, a properly conducted polygraph examination is likely to reflect that belief. However, examinees can be honestly mistaken about what they believe, which is why, in evaluating an examiner's opinions, investigators must assess the likelihood that examinees accept their statements as the truth.

No research has been conducted which correlates age with polygraph accuracy. However, based on experience, if the examinee is unable to adequately distinguish between a truth and falsehood, or will suffer no significant consequences if discovered to be deceptive, then age becomes a critical factor.

Accurate polygraph testing demands that examinees be psychologically fit. They must be able to distinguish between reality and fantasy and must be mentally competent to comprehend and participate in meaningful dialogue with the examiner. Their ability to comprehend events during the examination process, and to respond physiologically, must not have been adversely impaired by mental illness, drugs or alcohol or, as stated previously, by physical or emotional exhaustion.

The polygraph examiner, sometimes based on consultation with a physician or psychiatrist, should determine if a person is a suitable candidate for polygraph testing. Even when the examinee's condition is far from optimum, operational exigencies and circumstances surrounding an investigation may dictate conducting an examination. When that happens, and no credible evidence is developed to support the examiner's opinions concerning the examinee's truthfulness, the examinee's condition may degrade the accuracy. By observing an examinee's behavior and analyzing case facts concerning the examinee's access to and ability to comprehend the truth about statements made, and through discussion with polygraph examiners, investigators and officials can make more informed decisions concerning the likelihood that the examiner's opinions are well founded, or conversely, may have been adversely affected by the examinee's condition.

The Investigation

Polygraph examinations given in the law enforcement environment are not isolated events, but are part of an investigation. Therefore, the structure of the polygraph examination and the examiner's strategy for administering it are largely dependent on the information developed during the investigation.

The quality of the investigation that precedes a polygraph examination is critical to examination accuracy, which is why the investigation should be as thorough and as comprehensive as possible. The examiner's strategy for the entire polygraph process is designed to build upon the investigation. While the examiner's tactics may change due to events that unfold during the examination, especially new revelations from the examinee, the examiner is dependent on investigative input as a foundation for the examination. Erroneous information about the offense, the crime scene, evidence, or the examinee's role in the case could easily cause the examination process to miss the mark and produce incorrect conclusions.

All information on the offense, which can be obtained through conventional investigative methods, should be collected prior to the polygraph examination. this is not to say that in some situations, circumstances may dictate giving an examination while the investigation continues. In fact, there may be times when it is wise to conduct an examination early in the investigation to help determine the direction of the investigation, or to prevent the needless expenditure of resources on uncorroborated information, such as may be furnished by a source/informant of unknown reliability. However, regardless of when the examination is conducted, all available case facts, including results of interviews, crime scene information, and forensic laboratory reports, should be furnished to the examiner in sufficient time to be thoroughly reviewed and digested prior to the test.

Information on the role or nature of the examinee's involvement in the case should be furnished to the examiner, along with details of all previous statements the examinee provided. For this reason, an investigator should interview all persons to be polygraphed prior to the examination, record the results, and furnish them to the examiner. This way, any slight variations from any previous account of events that occur during the polygraph examination will be clear.

Successful examiners will plan examinations to allow for some investigative error in imprecision. For example, in a bank robbery investigation, the examiner should consider the possibility that the person found in possession of the "bait money" may have participated in the crime in some capacity other than that of the actual robber. It is even possible that the examinee came into possession of the money through some innocent means. Therefore, a well-qualified examiner will consider including questions concerning "knowledge of the crime," " participation in any way," and "evidence-connecting" in the examination, in addition to the obvious question, "Did you rob the bank?" Even so, accurate investigative information is mandatory to assist the examiner in focusing the examination and "asking the right questions." Those concerned about the accuracy of examiner opinions

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should review the quality of the investigative information available to the examiner prior to the polygraph examination.

Examination Conditions

The final area to consider in assessing the accuracy of an examiner's opinions concerns the conditions which surrounded the actual examination. In assessing this area, the investigator or law enforcement official should review all of the conditions which existed when the examination took place, especially conditions which were not obvious in connection with other factors. Professional examiners will willingly discuss results relative to examination conditions.

Even under the best of conditions, the polygraph may produce misleading results. As with any professional procedure having an element of subjectivity, rushed, harried testing conditions may cause accuracy to deteriorate because of inadequate time for a thorough investigation and for proper briefing of the examiner. Adverse consequences also can results because of examiner stress, an unintentional shortening of the pretest interview, and relaxation of or deviation from standard procedures.

The examiner should have sufficient time to prepare for the examination without interference from departmental authorities or investigators prior to or during the examination. Also, no hint should be made by those involved in the investigation as to expected or desired results. The examiner should have the latitude to conduct the examination at a comfortable pace, free from extraneous official pressure.

Another examination condition which could affect polygraph accuracy relates to the physical surroundings of the examination site. Best results are obtained in a professionally equipped, polygraph suite with good lighting, modern instrumentation, adequate ventilation, and temperature control. The polygraph suite should be designed to eliminate any distractions, such as extraneous outside noise. Once started, examinations should be interrupted for only the most compelling reasons. Examinations conducted in other than carefully controlled environments may be contaminated by the introduction of these negative influences.

It would be impossible to address in this article all the possible variables which could play an important role in polygraph accuracy. However, by carefully reviewing all the circumstances surrounding the examination, any deviations from normal conditions become apparent. Such variances should be viewed with suspicion. Examinations which take place under "crisis-like" conditions can get out of control and result in less than optimum performance by examiners, investigators, and examinees.

Quality Control

One important element which may be useful in assessing polygraph results is the result of the quality control review of the examination, if one was conducted. Quality control should be an integral part of law enforcement polygraph usage, as experience in the Federal polygraph has shown.

Evaluating Investigative Polygraph Results

Quality control reviews consist of independent, "blind" evaluations of polygraph charts and related documentation by other senior and well-qualified examiners to ensure that the original testing examiner's conclusion as to truth or deception are substantiated. While such reviews do not assure the examination's scientific validity, they do promote consistency in examination results, ensure that proper procedures were used, and guarantee that chart interpretation adheres to established standards.

Departments too small to have a quality control program may be able to establish such a program with another department. And, if it is impossible to obtain a quality control review locally, charts and documentation from particularly important cases may be submitted to FBI Headquarters for review.

CONCLUSION

A large number of variables have the potential for influencing polygraph accuracy. Wise investigators and law enforcement officials will carefully assess the factors impacting on particular polygraph examinations. Knowing how these factors influence accuracy will permit better-informed judgments about the weight accorded to an examiner's opinions concerning the veracity of statements made by the examinee. This, in turn, should result in more appropriate use of polygraph results in directing subsequent, investigative proceedings.

Footnotes

¹ In polygraph examinations conducted by the FBI, between 50 and 60 percent indicated that the examinee was deceptive. Also, approximately 60 percent of those believed to be deceptive either confessed or admitted withholding or significantly falsifying information furnished to authorities. Most of the remaining "deceptive" examinations and almost all "non-deceptive" examiner conclusions are not confirmed, yet must be factored into investigative findings. About 10 percent of all examinations conducted in FBI cases are "inconclusive"; about 1 percent are "incomplete." "Polygraph Activities Report," Laboratory Division, Federal Bureau of Investigation, Washington, D.C., January 13, 1989, p. 4.

² Polygraph validity is the extent to which a polygraph method achieves correct identification of lying and truthful examinees in a specified application. See also, D.C. Raskin, G.H. Barland, and J.A. Podlesny, <u>Validity and reliability of detection of deception</u> (Grant No. 75-NI-99-0001 to the University of Utah). National Institute of Iaw Enforcement and Criminal Justice, Iaw Enforcement Assistance Administration, U.S. Department of Justice, Washington, D.C., 1978. p.8. This study indicated that accuracy rates were quite high with a combined accuracy of decisions (for both truthful and deceptive examinees) which exceeded 90 percent. Approximately 10 percent of the examinees yielded inconclusive results, and the errors were almost equally distributed between false positives and false negatives.

³ Ronald M. Furgerson, "Polygraph Policy Model for Law Enforcement," <u>FBI Law Enforcement Bulletin</u>, Vol. 56, No. 6, June 1987, pp. 6-20, for a thorough discussion of policy considerations in polygraph usage.

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⁴ "Polygraph techniques" is a general term referring to the various methods for conducting polygraph examinations. Each technique consists of all components of the examination process, including the procedures for pretest interviews, testing, chart evaluation and decision making, and post-test interviews. Key elements of various techniques include the structure of the test questions, the types and number of questions, how they are presented, and their sequencing.

⁵ <u>Supra</u> note 1, at 23.

⁶ Regulations of the Federal Bureau of Investigation specify that to retain their certification, FBI examiners must undergo refresher/inservice training at intervals not to exceed 2 years. <u>Manual of Investigative Opera-</u> <u>tions and Guidelines</u>, Federal Bureau of Investigation, Washington, D.C., p. 1198.05.

⁷ E.G., FBI examiners are encouraged to conduct a minimum of 48 examinations per year. <u>Manual of Investigative Operations and Guidelines</u>, Federal Bureau of Investigation, Washington, D.C., p. 1198.05.

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THE POLYGRAPH SHIELD

By

David E. Nagle Esq.

The "right to privacy? was first proposed in an 1890 <u>Harvard Law Review</u> article, but was acknowledged by the Supreme Court only a quarter of a century ago. Today, many observers predict that privacy in the workplace will be the most controversial legal issue of the next decade. As employers are forced to address societal problems -- from AIDS to substance abuse and from employee theft to parental leave -- challenges to those corporate responses will fill our courts.

In the past, management's right to specify employee standards of conduct and to require the disclosure by their employees of personal information went largely unchallenged. Just as employees could insist upon a job assignment or a promotion, and back it up with the threat of resignation, employers could demand that their workers comply with certain employment conditions. Employees unwilling to abide by the specified conditions were free to seek employment elsewhere.

However, today we find increasing resistance to management's authority to unilaterally impose conditions of employment, particularly with respect to "privacy" issues. Kurt Decker, writing in <u>Employee Privacy Law and Prac-</u> <u>tice</u>, asserts that employees have privacy interests in: (1) their person, property or private conversations; (2) their private life and beliefs; (3) the use of irrelevant, inaccurate or incomplete facts to make employment decisions and (4) the disclosure of employment information to third parties.

While a constitutional "right to privacy" is not applicable to the private sector employer-employee relationship, a trend has developed toward recognition by the courts of tort claims arising from an employer's "unreasonable" intrusion upon an individual's privacy. Juries have become increasingly generous in their interpretation of "unreasonable" -- and with their awards.

The Employee Polygraph Protection Act passed in 1988 with the strong support of organized labor. It is significant because it shows a Congress, once content with legislation protecting essentials -- civil rights and safety in the workplace -- that is now moving into areas of employee sensitivity.

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While efforts to ban the polygraph have been around for years, the legislation passed on December 27, 1988, was due to some cagey political maneuvering by its advocates. First, they exempted all public sector employees, thereby defusing the potent opposition of law enforcement and local governments. Next, they provided limited exemptions for security firms and drug manufacturers, thus avoiding the testimony in opposition that would have garnered the most public sympathy. Finally, they offered their bill as a "compromise" measure, taking away employers' right to pre-employment testing, but suggesting that they had preserved management's right to use polygraph in specific loss situations.

However, the measure that passed fails to strike the promised balance. Opponents of polygraph testing achieved, directly or indirectly, virtually all they sought. As explained below, few employers familiar with this new law will conclude that the benefits outweigh the threat of legal action which will accompany any use of the polygraph in the workplace.

LEGISLATIVE PROVISIONS

What does the statute prohibit?

Under the provisions of the new law, and subject to the exemptions detailed below, employers cannot directly or indirectly require, request, suggest or cause an employee or prospective employee to take a lie detector test, nor can they use, accept, refer to or inquire concerning the results of any lie detector test. Employers cannot discharge, discipline, discriminate in any manner against or deny employment or promotion, or threaten to take such action on the basis of test results, or because of a refusal to take a lie detector test.

Which employers are exempt?

All public sector employers are exempt, as are certain defense, security and FBI contractors. Drug manufacturers and distributors were granted a limited exemption for pre-employment testing of certain applicants (those who would have direct access to drugs), and for specific incident testing of current employees (those who had access to the property involved in an economic loss or injury).

Employers primarily in the security business (armored cars, security systems and certain guard services) have a limited exemption for pre-employment testing, but the exemption does not give employers in the security business any special treatment with respect to testing current employees.

All employers may test current employees pursuant to a "limited exemption for ongoing investigations" described below.

Finally, like the Fair Labor Standards Act, the law in only applicable to employers that are "engaged in or affecting commerce, or in the production of goods for commerce." Therefore, there are a few small, local employers who are unaffected by this legislation.

What is the 'ongoing investigation' exemption?

An employer may <u>request</u> that an employee submit to a polygraph examination if (1) there is an ongoing investigation into economic loss or injury to the employer's business; (2) the employee had access to the property; (3) the employer has a reasonable suspicion that the employee was involved; and (4) an authorized representative of the employer signs a qualifying written statement.

The statement, which is to be given to the employee before the test and kept by the employer for three years, must:

^ Set forth with particularity the incident being investigated and the basis for testing particular employees.

^ Identify the specific economic loss or injury sustained by the employer.

^ State that the employee had access to the property involved.

^ Describe the basis of the employer's reasonable suspicion.

Where testing is authorized under the statute, what are the limitations on the manner in which tests may be conducted?

First, while the statute prohibits a wide range of "lie detector" tests, most of the exemptions allow only polygraph testing. Accordingly, other electrical and mechanical devices used for the detection of deception are generally banned.

Under the "ongoing investigation" exemption, an employee may not be discharged, disciplined or otherwise discriminated against on the basis of test results, or due to a refusal to take a test, without additional supporting evidence. the evidence that is used to establish reasonable suspicion (used to justify the employer's original request that the employee submit to a test) may be considered. Under all other exemptions, the test results (or refusal to take a test) shall not be the sole basis for the adverse personnel action.

The examinee has extensive procedural rights afforded by the legislation, many of which were already protected under state statutes or regulatory standards. There can be no questions on: religion, political beliefs, sexual behavior or union activity. The subject must be excused on medical grounds if there is a note from a physician.

In addition, the employer must provide (1) reasonable written notice of the date, time and location of the test, as well as advising the individual of his or her right to consult with counsel or an employee representative, (2) written information on nature and characteristics of the polygraph test procedure and instrument, (3) written information as to any observation and/or recording to be done of the test, (4) written notice, acknowledge in writing by the employee, that: ^ The employee cannot be required to take the test as a condition of employment.

^ Any statement made during the test may be used to support a decision to discharge or otherwise discipline the employee.

^ Of "the limitations imposed under this section" and "the legal rights and remedies available to the examinee" under this Act.

^ The examiner must conduct the test in accordance with standards set forth in the Act, including a requirement for a written report, a copy of which must be made available to the subject, along with a list copy of the questions asked.

What are the consequences of violation?

Civil penalties of up to \$10,000 may be assessed, for anything from failure to hang up the informational poster from the Department of Labor, to a jury's conclusion that an examiner's question was asked in a manner that "needlessly intruded" upon a test subject. In addition, the Secretary of Labor is authorized to go into federal courts to obtain injunctions in order to half violations of the law.

Most significant is the provision that allows any applicant or employee allegedly harmed by an employer's violation of this statute to bring a private civil action, in state or federal court, for full legal and equitable relief. Such cases will be heard by a jury and may result in awards of employment, reinstatement, promotion, lost wages and benefits, as well as pain and suffering, emotional distress, costs and attorneys' fees. No applicant or employee may be asked to waive his or her rights under this statute.

MISCELLANEOUS PROVISIONS

Since the term "employer" includes any person acting directly or indirectly in the interest of an employer, those who hoped to avoid the impact of the law by hiring through some outside agency will still be unable to use polygraph test results in the hiring process.

This law, by its own terms, does not preempt any more restrictive state or local law, or collective bargaining agreement.

ADVICE TO EMPLOYERS

Pre-employment polygraph testing is banned for virtually all covered employers. Those who try to get around this aspect of the law are almost certain to fail, and potential liability is significant.

Employers can only request that employees submit to polygraph testing when a specific economic loss or injury has occurred, and an employer must establish "reasonable suspicion" that the employee was involved. One of the most effective uses of the polygraph is thereby eliminated -- clearing most employees who had access, allowing the investigation to focus on a few suspects.

As there is published case law evaluating the phrase "reasonable suspicion," employers would be well advised to consult with counsel to determine whether the evidence which they have available is sufficient to support a request that an employee submit to a polygraph. As the employer is required to provide the employee with a written statement of the basis for the employer's suspicion, along with a summary of employees' rights and remedies available under this law, there can be no after-the-fact justification of a violation.

In the final analysis, the Employee Polygraph Protection Act will eliminate the vast majority of polygraph testing routinely conducted in the past. While employee theft is likely to remain at the same outrageous level or increase, use of the polygraph can only be justified under certain limited circumstances.

The polygraph may be valuable as an investigative tool where the risk of keeping the dishonest employee is sufficiently high to justify compliance with the burdensome procedural requirements and accepting the threat of litigation. Even in those situations the employer will need to consider an alternative the advocates of this law certainly never envisioned: since the vast majority of employer-employee relationships are terminable at will, and since the requirement of "additional supporting evidence" is applicable only to the discharge of an employee who has been asked to submit to a polygraph test, is it wiser for an employer to discharge all suspects without ever raising the possibility of polygraph tests ... without ever concluding the investigation?

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THE EYE AND LIE DETECTION A BIBLIOGRAPHY

By

Norman Ansley

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LAW NOTES

By

Norman Ansley

In this issue we publish the text of H.R. 3451, a bill to amend the <u>Employee Polygraph Protection Act of 1988</u> introduced by Mr. Bartlett and co-sponsored by Mr. Williams, Mr. Young and Mr. Darden. The bill was introduced at the request of the APA and the Texas Association of Polygraph Examiners to amend the language of the EPPA to permit state licensing boards to have access to examiner records to enforce the state licensing laws and regulations. The bill has been referred to the Committee on Education and Labor.

Also in this issue are abstracts of appellate court decisions. In Okafor, a New York appellate court took notice of a polygraph test ordered by the trial court after the defendant was convicted. The trial court was so troubled by the evidence and conviction, that with consent of all parties, it ordered a polygraph test. The report said the defendant was telling the truth in denying the charge. Maryland, in Kosmas, the state's highest court continued its rigid ban. In three federal cases the mention of polygraph tests was so prejudicial that in Miller it required reversal, but not too prejudicial for reversal in Candolini and Kiszewski. In Wolfel v. Holbrook, the Sixth Circuit reversed a civil law suit in which the plaintiff was allowed to say he had volunteered for a test and the defendant was forced to answer a question about refusing to take a test. In Ex parte Hinton, the Alabama Supreme Court, in a case of first impression, decided that non-stipulated polygraph test results were of no probative value at the sentencing phase of a trial because the premise on which the tests are based has not yet been established.

FEDERAL LEGISLATION

H.R. 3451, 101st Congress, 1st Session, To amend the Employee Polygraph Protection Act of 1988 to prescribe conditions of disclosure of information acquired from polygraph tests.

IN THE HOUSE OF REPRESENTATIVES, October 12, 1989, Mr. Bartlett (for himself, Mr. Williams, Mr. Young of Florida, and Mr. Darden) introduced the following bill; which was referred to the Committee on Education and Labor.

A BILL

To amend the Employee Polygraph Protection Act of 1988 to prescribe conditions of disclosure of information acquired from polygraph tests.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section 9(b) of the Employee Polygraph Protection Act of 1988 (29 U.S.C. 2008(b)) is amended --

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(1) by striking out the period at the end of paragraph (3) and inserting in lieu thereof a comma and the following: "except that a governmental agency which is responsible for the licensing and disciplining of polygraph examiners may have access to such information without such a court order for purposes of such licensing and disciplining", and

(2) by adding after and below paragraph (3) the following: "Any court, governmental agency, arbitrator, or mediator who receives, under paragraph (3), information acquired from a polygraph test may, except in connection with the licensing and disciplining of polygraph examiners, disclose such information only to the persons described in paragraphs (1) and (2). In using such information in the licensing and disciplining of polygraph examiners, the agency shall maintain the anonymity of the subjects of such tests.".

CASE ABSTRACTS

United States v. Miller, 874 F.2d 1255 (9th Cir. 1989)

Defendant was convicted of bribery, conspiracy to commit espionage, copying national defense information and delivering it to a foreign government, and communicating confidential information to a foreign government with intent to harm the United States or aid a foreign government. Richard W. Miller appealed.

The United States Court of Appeals, Ninth Circuit, reviewed the district court's decision to admit polygraph evidence as to whether it was an abuse of discretion. Miller was given a polygraph examination by the FBI and requested another. It was during the pretest of a planned second examination by a different examiner that Miller admitted giving his Soviet contact, Svetlana, a classified document.

In a pretrial move, Miller said he would not challenge the voluntariness of his admissions but he would attack their reliability. The trial court ruled that if Miller chose to challenge the admissions, then it was only fair for the government in response to "set the scene." At trial the defendant did challenge the reliability of his admissions, and the court then allowed the government to introduce evidence concerning Miller's polygraph examinations, including the fact that Miller was told he had failed the examinations. The court gave the jury a limiting instruction.

The Ninth Circuit court noted that they generally disfavor admission of polygraph evidence. <u>Brown v. Darcy</u>, 783 F.2d 1389 (9th Cir. 1986). However, the Court might admit it for a limited purpose unrelated to the results of the test, <u>United States v. Bowen</u>, 857 F.2d 1337 (9th Cir. 1988), if the trial court determines that the probative value of polygraph evidence outweighs the potential prejudice and time consumption involved in presenting such evidence. See also <u>Tyler v. United States</u>, 193 F.2d 24 (D.C.Cir. 1951), cert. denied 343 U.S. 908, 72 S.Ct. 639, 96 L.Ed. 1326 (1952), <u>United States v. Kampiles</u>, 609 F.2d 1233 (7th Cir. 1979), cert.denied 446 U.S. 954,

100 S.Ct. 2923, 64 L.Ed. 812 (1980) [another espionage case], and <u>United</u> <u>States v. Hall</u>, 805 F.2d 1410 (10th Cir. 1986).

The appellate court said the prejudicial impact of the testimony about the polygraph results was to convince the jury unduly that Miller's answers during the polygraph examinations were false, and a fortiori, that his admissions were true. The Court concluded that the jury's verdict was affected by the introduction of the polygraph evidence.

For this and other reasons, reversed and remanded for a new trial.

United States v. Candolini, 870 F.2d 496 (9th Cir. 1989)

The defendant was convicted of arson, attempted arson, mail fraud, and conspiracy, and he appealed.

The defendant claimed the trial court erred when a witness said he asked another suspect to take a polygraph examination. There was an objection and a move to strike, overruled. Defendant said the jury would infer that the other suspect took and passed the test and he either refused or took one and did not pass. The witness' reply, however, was unsolicited by the prosecution. The court did not give an instruction to the jury.

The United States Court of Appeals, Ninth Circuit, noted that this was a new issue for them, but the Sixth Circuit in <u>United States v. Murray</u>, 784 F.2d 188 (6th Cir. 1986) held such an unsolicited reference to a request to be reversible error. The Seventh Circuit in <u>United States v. Dietrich</u>, 854 F.2d 1056 (7th Cir. 1988) was one in which the witness referred to the fact he had taken a polygraph test, and that was not reversible error. The Ninth Circuit Court observed that in <u>Candolini</u> the reference was to another person, not the defendant, and did not bolster the credibility of any person who testified.

The Circuit court of appeal said the admission of the statement was error, but not an error of constitutional dimension. Therefore, reversal required that the error materially affect the verdict. The Court thought that was unlikely in this case. The conviction for attempted arson was reversed for other reasons. The convictions for arson, conspiracy and mail fraud were affirmed.

Wolfel v. Holbrook, 823 F.2d 970 (6th Cir. 1987), cert. denied 108 S.Ct. 1035 (1988)

An immate brought civil rights action against two corrections officers arising out of an alleged beating of the immate by the officers. The United States District Court entered judgment in favor of the immate, and the officers appealed.

During the course of the investigation of the prisoner's allegation, the prisoner was transported to the Ohio State Highway Patrol Headquarters for a polygraph test. Sgt. Arthur Reitz administered the test but it was

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inconclusive because the prisoner refused to answer two control questions. The investigating committee completed their investigation and decided the allegation was without merit, and the prisoner then filed suit. The trial court refused a pretrial motion in limine to exclude the polygraph evidence, and at trial, over objection, allowed Wolfel (the inmate) to testify that he had volunteered to submit to a polygraph examination. The trial court also allowed the defendant to develop testimony from one of the officers that he had not submitted to a polygraph examination. Defendants filed a motion for a new trial, arguing error over the polygraph testimony. The motion was denied, and they appealed.

The United States Court of Appeals, Sixth Circuit, said that absent a stipulation, the admissibility of polygraph evidence is generally inadmissible, but in limited circumstances, within the discretion of the trial judge, evidence of willingness to submit to a test may be admissible if it is relevant. However, in this case, neither Wolfel's test, which was inconclusive because of his lack of cooperation, nor the officer's refusal to be tested, was relevant to the issue. The trial court also erred because the marginal evidence of the officer's refusal was outweighed by its prejudicial effect.

Reversed and remanded for further proceedings not inconsistent with this decision.

United States v. Kiszewski, 877 F.2d 210 (2nd Cir. 1989)

Defendant was convicted of making false declarations and he appealed.

Defendant argued that the judge should not have allowed an agent to testify in response to a question from the judge: "The sum and substance of it, your Honor, is I accused [Kiszewski] of not telling me the truth and that I wanted him to take a lie detector test. He refused and that was pretty much the end of our relationship." The defense did not then object, but the court decided a few minutes later to strike the response from the record, adding an instructive comment. On appeal, defendant argued that this was so prejudicial that he was denied a fair trial. The government argued that it was not prosecutorial misconduct, there was a cautionary instruction, and it was harmless.

The United States Court of Appeals, Second Circuit, agreed with the prosecution and was of the opinion that the reference to the lie detector did not have a strong impact on the listeners, and the effect was cured by the court's strong and timely corrective instruction. If error, it was harmless.

The case was affirmed in part, and remanded in part for further proceedings. The remand was unrelated to the polygraph issue.

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Ex parte Hinton, 548 So.2d 562 (Ala. 1989)

The defendant appealed conviction for two robbery murders for which he was sentenced to death [Hinton v. State, 548 So.2d 547 (Ala.Cr.App. 1988)].

Defendant argued that he should have been permitted to introduce results of a polygraph examination both in the guilty phase and sentencing phase of his trial, despite the fact that his test was not the product of a stipulation as required by <u>Wynn v. State</u>, 423 So.2d 294 (Ala.Cr.App. 1982), and that there is no requirement that the prosecution stipulate to a test, <u>Ex parte Clements</u>, 447 So.2d 695 (Ala. 1984).

The Supreme Court of Alabama said that the question of introducing polygraph evidence, over objection, into the sentencing phase was one of first impression. Defendant claimed the results of the test indicated he had nothing to do with either of the murders.

The Court decided that the polygraph test has no probative value because the premise on which polygraph examinations are based has not sufficiently been established. <u>Ex parte Dolvin</u>, 391 So.2d 677 (Ala. 1980). Second, the results are not probative because the introduction of test results tend to distort the truth-finding process. The Court explained "While we in the legal community are well aware of the lack of established reliability of polygraph examinations, members of a jury may not be so well informed."

Sentence affirmed.

Kosmas v. State, 560 A.2d 1137 (Maryland 1989)

Defendant was convicted of second degree murder, and he appealed.

The Maryland Court of Appeals affirmed. The Court of Appeals (Maryland's highest court) granted certiorari. The defendant claimed the trial court erred in admitting into evidence the testimony of a private detective who asked the defendant, after the police had departed, if he would take a lie detector test, and that the defendant replied "no." The trial court instructed the jury to disregard the testimony, but denied a defense request for a mistrial.

The Court of Appeals held that the inferential prejudice to the defendant was substantial, in that it weakened the defendant's credibility. In regard to the court's instruction to the jury, the Court of Appeals said that even in the fact of such caution ... "it is akin to the placing of a nail in a board. The nail can be pulled out, but the hole made by the nail cannot be removed." The Court cited <u>Brown v. Eyman</u>, 324 F.Supp. 342 and other cases. In considering the effects of the court's instruction, the Maryland court cited <u>Bruton v. United States</u>, 391 U.S. 123, 88 S.Ct. 1620, 20 L.Ed.2d 476 (1968). For this and other reasons the Court reversed and remanded to the Court of Special Appeals with instructions to that court to reverse and remand to the circuit court for a new trial.

In a footnote, the Court noted that the prosecution successfully argued a motion in limine that prevented the defense from cross-examining the private detective on the fact that he had apparently failed a polygraph examination given in connection with the case.

People v. Christopher Okafor, New York Criminal Term Part 59, September 8, 1989.

The defendant was convicted of counts of rape, sodomy, sexual abuse and assault, and he moved to set aside the judgment of conviction pursuant to a <u>Rosario</u> violation in which he claimed critical information was withheld from him prior to trial, particularly the handwritten notes of a detective and the District Attorney's Crime Victim's Assistance Unit's fact sheet which included statements made by the infant complainant, Jennifer Wesserling and her mother, Barbara Wesserling, two of the principal witnesses at trial. A <u>Rosario</u> violation, the court said, would require granting the motion, a vacatur of the judgment of conviction and a new trial.

The Court found other instances of both Rosario and Brady material being withheld from the defendant, those involving procedures of the Family Court and the Department of Social Services. The Court said that quite apart from the Rosario violations which mandated vacatur of the judgment, there were a number of other factors which impelled the court to conclude that to set aside the judgment would be in the interests of justice. After the verdict had been rendered and sentence imposed, the trial court continued to be troubled by the result and could not put the matter aside. Troublesome, for example, was the fact that the sole direct evidence came from a five-and-one-half year-old child (four years old at the time of the alleged acts of abuse) who had been in the sole custody of her mother for almost two years. Also, the mother had been engaged in a bitter marital dispute involving, inter alia, custody of the child. In addition, further charges of sexual abuse had also been made against other adult parents alleging activities conducted jointly with this defendant and that such charges were all dismissed in the Family Court after extensive hearings. The experienced detective had testified that there was no corroborative evidence and that the child had been totally manipulated by her mother for her own ends, and that the conviction was a serious miscarriage of justice. Also troublesome was the bizarre nature of some of the acts described by the child as having taken place at the time she was alleged sexually abused ... that adults involved in the "ritual" wore black robes and hoods, animals were slaughtered and two children were killed by the defendant by cutting them from their heads to their necks. No objective evidence tending to show that these events ever took place was discovered. These events were said to have taken place at the home of a friend of the defendant, but she was never located in the building around the corner in which she allegedly lived. At one point the mother showed the detective pictures which she claimed were drawn describing certain of the ritualistic activities, but on questioning by the detective who concluded that the pictures could have not been drawn by a child so young, the mother then claimed that she had drawn them from the child's oral descriptions of what took place.

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It was further noted that the court was so troubled by these matters that with consent of all parties, a polygraph test was administered by a "most prominent technician in the field, Richard Arther, who determined that the defendant, in denying the charges was telling the truth."

Accordingly, the motion to set aside the verdict was granted, and a new trial directed.

*case submitted by APA member Nat Laurendi.

<u>State v. Hinton</u>, 383 S.E.2d 704 (N.C.App. 1989)

Defendant was convicted of several sexual offenses relating to activity with his 14-year-old stepdaughter.

Defendant claimed the court erred in allowing references to polygraph tests. Test results are inadmissible in North Carolina, even if stipulated. <u>State v. Grier</u>, 300 S.E.2d 351 (N.C. 1983). However, the Court of Appeals has noted that every reference to a test will not necessarily result in prejudicial error. <u>State v. Kirkman</u>, 238 S.E.2d 456 (1977). In this case it was not a polygraph test that was mentioned, but a Psychological Stress Evaluator (PSE). The Court, in upholding the verdict of guilty, said that the mention of the test did not deprive Hinton of a fair and impartial verdict because the results were not mentioned and the jury was immediately told not to consider the remarks.

Judgment affirmed.

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