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The Open Letter to Polygraphers

Dear Friends, and Colleagues, I decided to write this paper due to some of my concerns regarding the upcoming requirement of the APA regarding the usage of “Validated Techniques,” that included required methods of chart analysis based on the scoring systems employed during the research study of each of the particular techniques. Many of these techniques were validated using new evaluation methods that I believe have not proved to be more accurate than the older traditional methods.

I am in total agreement that we should use the most accurate technique format in order to raise the standard of our work and increase the trust in our profession. My concern is that the profession has been driven by a few individual researchers who are dazzling us with numbers and statistics. Statistically, if we have nine women in a room, eight of whom are still virgins, and one who is in her ninth month of pregnancy, we can say that nine women divided into nine months means that the average for each woman is one month of pregnancy. A true statistic, and yet a totally false statement.

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I would like to present to you a case of a multi-faceted examination evaluated by traditional vertical scoring (3-position scale), Horizontal Scoring System (HSS), and OSS 3. The first two systems conclude deception, the third, OSS 3, concludes no significant reactions, or no deception.

Either the traditional 3-position spot score that we have been employing for over 30 years is incorrect, and HSS which has been in use for over 20 years is incorrect, or the newest method, OSS 3, is mistaken.

Fortunately, this case concluded with a confession and the examinee returned some of the stolen items, so we are sure it was not a false confession, and that the two older methods were more accurate than the newer method.

This is not the first time I have observed this problem, and therefore it is of great concern to me. This problem seems more common in multi-faceted and multi-issue examinations than in single-issue examinations.

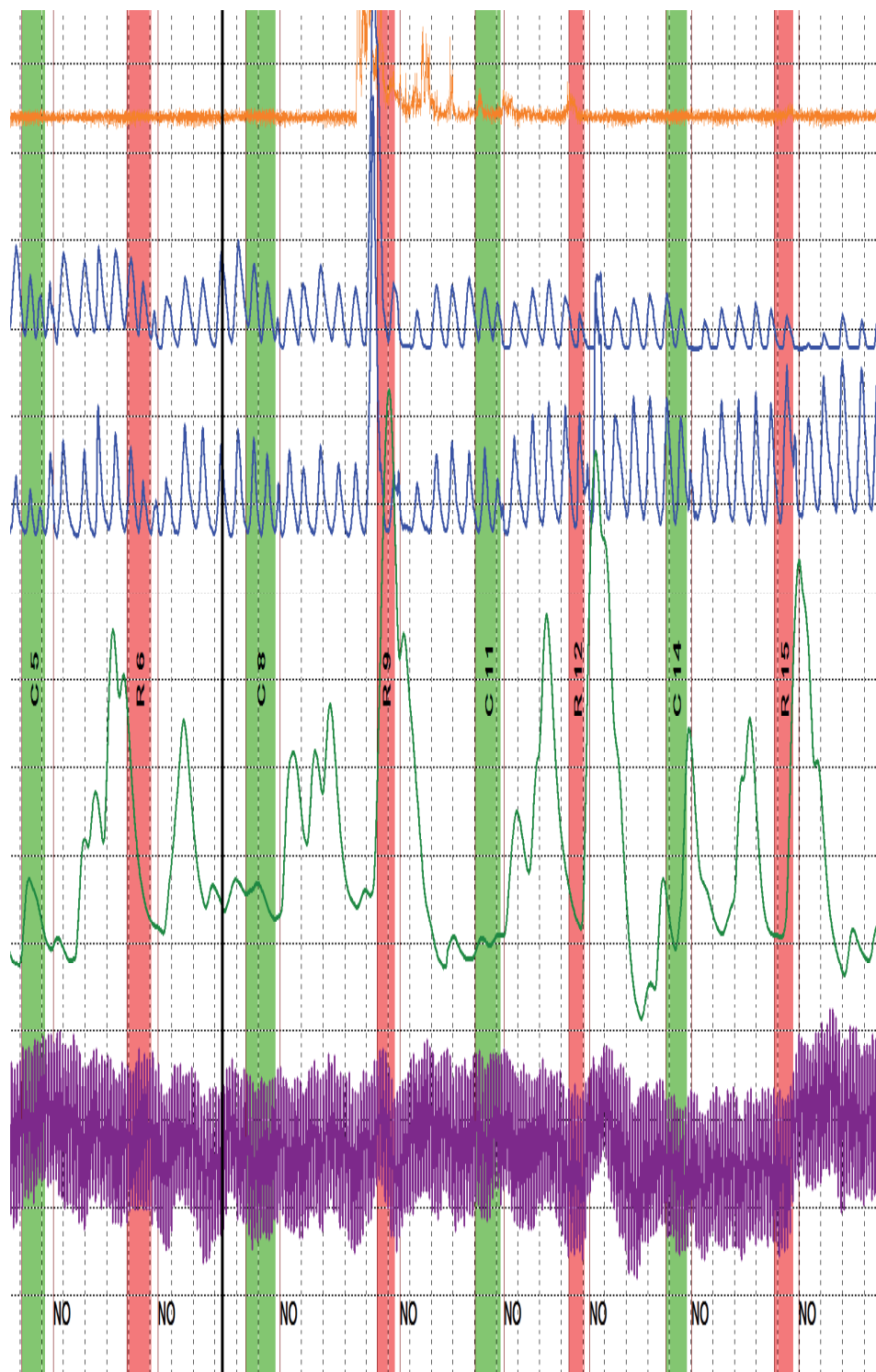
11 Another of my concerns is the short time period used in evaluating the pneumos by OSS 3. Pneumos are measured from the beginning of the question, and the window of evaluation often only allows for two to three breaths to be evaluated. One of these breaths is always the answering distortion cycle. This cycle is inconsistently affected by where the examinee's natural breathing cycle is when they must answer by exhaling due to the end of the examiner's question. This means only one or two breaths are actually considered that are not unduly affected. As you can see in the example below, less than 2 ½ breaths are being considered for analysis, of which one entire breath is the answering distortion cycle.

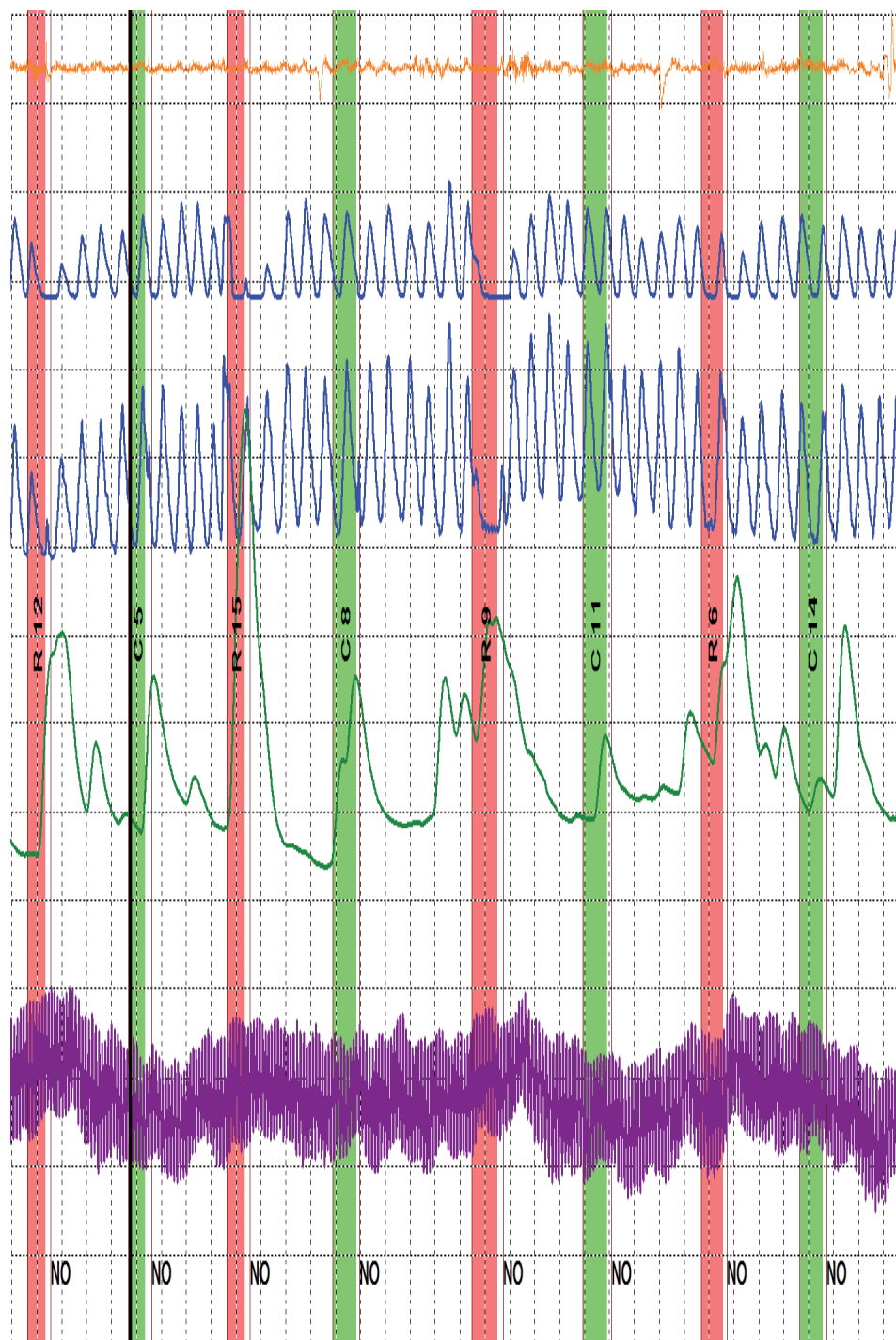
You will be able to judge for yourself that if the newer method failed to detect such obviously clear charts; this is in fact a very BIG problem. The test is an Integrated Zone Comparison Technique (IZCT) with four relevant questions.

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Horizontal Scoring System (HSS)

	C5	R6	C8	R9	C11	R12	C14	R15
P1	6	7	5	1	2	4	3	8
P2	7	8	5	1	3	2	5	5
Avg. P	6.5	7.5	5	1	2.5	3	4	6.5
EDA	2	4	3	1	6	8	5	7
Cardio	4	5	1.5	1	2	7	2	8
S.T	12.5	16.5	9.5	3	10.5	18	11	21.5
	C8	R6	C11	R9	C14	R12	C5	R15
P1	7	3	2	5	4	8	1	7
P2	6	3	1	4	5	7	1	6
Avg. P	6.5	3	1.5	4.5	4.5	7.5	1	6.5
EDA	3.5	3.5	1	5	6	7	2	3.5
Cardio	3	3	1	5	5	5	2	7
S.T	13	9.5	3.5	14.5	15.5	19.5	5	17
	C14	R6	C11	R9	C5	R12	C8	R15
P1	1	5	2	8	3	6	4	7
P2	2	6	3	8	5	7	1	4
Avg. P	1.5	5.5	2.5	8	4	6.5	2.5	5.5
EDA	5	6	1.5	3	4	7	1.5	8
Cardio	1	8	2	7	3	5	4	6
S.T	7.5	19.5	6	18	11	18.5	8	19.5
Total	33	45.5	19	35.5	37	56	24	58

-12.5
Spot

-16.5
Spot

-19
Spot

-34
Spot

Three-Point Scale manual evaluation

	R6	R9	R12	R15
P1	-1	0	-1	-1
P2	0	0	1	0
EDA	-1	0	-1	-1
Cardio	1	0	-1	-1
Spot Total	-1	0	-2	-3
P1	-1	-1	-1	-1
P2	-1	-1	-1	-1
EDA	-1	-1	-1	-1
Cardio	-1	-1	-1	-1
Spot Total	-3	-3	-3	-3
P1	-1	-1	-1	-1
P2	-1	-1	-1	-1
EDA	0	-1	-1	-1
Cardio	-1	-1	-1	-1
Spot Total	-2	-3	-3	-3
Total	-6	-6	-8	-9

Result of OSS3

Limestone Technologies Inc.

Objective Scoring System - Version 3

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

Result

No Significant Reactions

p-value

0.001

Probability this result was produced by a deceptive person

Cumulative normal distribution for deceptive subjects (Barland 1985)

Technique

Multi-facet (MGQT)

Using two-stage rules (Senter 2003)

Data Integrity - Artifact Detection

0.009

No significant differences in artifact distribution

Test Details		Spot Scores		Decision Alpha (1 tailed)		Components	
Exam #	499735	Question	p-value	Result	NSR	0.100	weight
Exam Date:	12-21-2011	R6	0.051	No Significant Reaction	SR	0.050	Pneumo
Examiner:	Tuvia	R9	<0.001	No Significant Reaction	Bonferonni corrected alpha	0.013	EDA
Report Date:	12-25-2011	R12	<0.001	No Significant Reaction	Use Bonferonni	TRUE	Cardio
Examinee:		R15	<0.001	No Significant Reaction	Test of Proportions (1 tailed)	0.050	Pulse O2

Questions

Q6

Q9

Q12

Q15

Measurements

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

Chart 1

	C5	R6	C8	R9	C11	R12	C14	R15
P1	50.79	52.88	68.63	37.80	40.14	26.12	13.44	19.55
P2	56.66	77.65	63.45	64.41	127.38	84.26	88.18	83.46
E	1.79	20.37	45.36	38.31	64.44	25.59	54.09	2.98
C	1.77	5.08	7.74	2.39	11.85	2.30	12.04	0.00
F	0.04	0.21	0.00	0.88	0.00	0.13	0.27	0.14

Chart 2

	C5	R6	C8	R9	C11	R12	C14	R15
P1	42.66	22.63	37.67	30.68	45.59	21.99	32.83	30.26
P2	78.28	70.14	92.56	88.48	105.89	91.32	91.17	78.47
E	21.94	51.89	27.85	27.27	0.00	44.04	38.41	11.97
C	3.36	7.84	1.95	3.17	0.00	2.72	4.48	4.21
F	0.00	0.00	0.00	0.18	0.05	0.65	0.00	0.00

Chart 3

	C5	R6	C8	R9	C11	R12	C14	R15
P								

Standardized Logged Ratios

Chart 1

	R6	R9	R12	R15
P	0.00	-2.11	0.00	0.00
E	1.46	0.19	1.00	3.00
C	2.52	3.00	3.00	
F	0.00	0.00	0.00	0.00
WMean	1.48	0.54	1.37	2.20
Mean				1.40

Chart 2

	R6	R9	R12	R15
P	-3.00	0.00	0.00	-2.17
E	-1.10	0.19	-0.77	1.84
C	-3.00	0.06	0.86	-1.44
F				
WMean	-2.00	0.12	-0.17	0.15
Mean				-0.58

Chart 3

	R6	R9	R12	R15
P	3.00	3.00	3.00	3.00

Conclusion

As an examiner since 1988 who has participated in many research projects, I believe that each day we should search for improvements, but as I see it to-day we are still far from the point of leaving our older known methods.