

## **A Letter to the Editor Regarding Cushman's Critique of the Matte Quadri-Track Zone Comparison Technique and its Inside Track.**

**James Allan Matte**

Dear Editor:

This letter is in response to the article authored by Barry Cushman entitled "Is Matte's Inside Track the Answer to false Positives, False Negatives and Countermeasures? There is Reason to Fear that Hope is Gone" published in *Polygraph*, Volume 42, Number 3, 2013.

### **BACKGROUND:**

Cushman asserts that the Inside Track containing the Fear of Error control question and the Hope of Error relevant question used in the Matte Quadri-Track Zone Comparison Technique (MQTZCT) "does not offer the benefits its developer asserts and the extreme accuracy previously reported is likely due to methodological flaws and unsound reasoning." In order to support his claim, Cushman used the data from the three published field studies - Matte, Reuss (1989), Mangan, Adams, Armitage (2008), and Shurany, Stein, Brand (2009), restricting it to the first two Tracks (Primary and Secondary), ignoring the data of the third Track (Inside Track) containing the Fear and Hope of Error questions. Cushman then lowered the score threshold of the MQTZCT from an increasing score threshold of +3 and -5 per chart (+6 and -10 for 2 charts minimum; +9 and -15 for 3 charts and +12 and -20 for 4 charts) to a fixed score threshold of -2/-3 (A score of -2 or greater = No Deception Indicated; a score of -3 or less = Deception Indicated) regardless of the number of polygraph charts collected and used for a determination of truth (NDI) or deception (DI). No Inconclusive zone was used.

Cushman reported that "There were no significant differences to any of the results with or without the use of the Inside Track." Cushman concluded that "the Inside Track provides no benefit over ignoring it and scoring only the first two tracks." However, Cushman admits that "Whether the Inside Track is scored or ignored, the prior MQTZCT studies offer some support for the validity of the technique overall." Nevertheless Cushman faults the three studies which he states "use convenience - not probability - samples, making generalization risky." He criticizes the three field studies for not using a control group as if these were laboratory studies. He also rejects the influence that the Inside Track may have on the Primary and Secondary Tracks' test questions and claims that the Dual Equal Strong Reaction Rule "results in a shift of the scores of the MQTZCT's first two tracks in the negative direction, but it does so asymmetrically. That is, it pushes the truthful scores in the negative direction, but is essentially neutral for the deceptive." Cushman fails to understand and appreciate the presence within the test structure that the Fear and Hope of Error Questions have in confirming the legitimacy of the reactions to the Control/Relevant questions in the Primary and Secondary Tracks. He also fails to understand and appreciate the influence the Inside Track questions have on the Primary and Secondary Tracks resulting from their review and feedback during the pretest interview. Cushman opined that "the MQTZCT is just another ZCT, and as such, we should not expect accuracy any better (or worse) than any other validated single-issue ZCT. Thus the evidence that the MQTZCT is an outlier as concluded in the APA meta-analysis (2011) is now even stronger. The most parsimonious explanation for its 'exceptional accuracy' is likely nothing more than a methodological flaw (or flaws)." Cushman's final remark is that this author's criticism of the APA meta-analysis is therefore without merit.

**RESPONSE:**

It should be noted that a similar critique of the MQTZCT's Inside Track was presented by Cushman at the 2010 American Polygraph Association seminar, Myrtle Beach, S.C. (Cushman, Krapohl, 2010) (unpublished) wherein he used a lower score threshold (+/-4 fixed threshold) claiming similar results as found in his latest published article, which resulted in the publication of a lengthy essay by this author entitled "Psychological Aspects of the Quadri-Track Zone Comparison Technique and Attendant Benefits of its Inside Track" (Matte 2011) which fully describes the psychological aspects and functions of each component of the MQTZCT and addresses the assertions and claims made by Cushman regarding the effectiveness of the Inside Track. Hence, due to the limited length of this Letter to the Editor, whenever necessary, I will refer the reader to that article and others referenced herein and readily available for review and download at [www.mattepolygraph.com](http://www.mattepolygraph.com).

First of all, we must recognize that the Matte Quadri-Track Zone Comparison Technique (MQTZCT) is a psychological test that *infers* deception or truthfulness to the target issue by the elimination of variables identified in Chapter 9, Forensic Psychophysiology Using the Polygraph (Matte 1996) that could have caused the autonomic responses other than a deliberate attempt at deception. It therefore is essential that the polygraph technique provide safeguards that will prevent those identified impeding variables from interfering with the examination process. One of those variables is the *Fear of Error* by an innocent examinee.

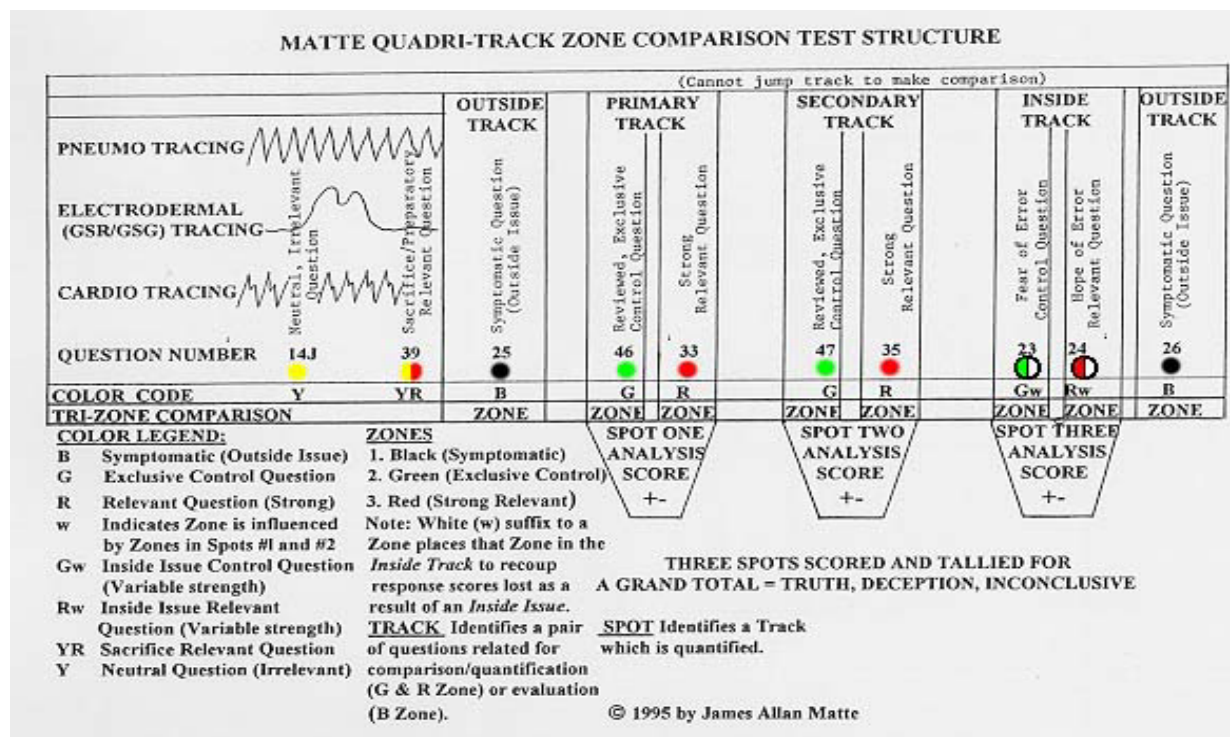
While attending the Backster School of Lie Detection in January 1972, I learned that Cleve Backster did not believe that the Stimulation Test increased the accuracy of the Backster Zone Comparison Technique and thus it was not incorporated into his lesson plan and instruction guide. Following graduation I accepted a position with a large polygraph company whose president was a graduate of the National Training Center of Lie Detection, owned and directed by Richard O. Arther, developer of the Arther Technique. The company president insisted that I attend an NTC seminar to learn the Arther Technique, which used a False Unknown Solution Stimulation Test (Matte 1996, Chap.10) which Arther labeled the Double Verification Test (DVT). The DVT was administered as the second chart after the collection of the first relevant chart. Unknown to the examinee, the polygraphist knows the numbered card the examinee selected for insurance against deceptive examinees who may attempt the use of countermeasures and distortion of the physiological data. I worked with more than half a dozen polygraphists, all trained at NTC, with the use of closed circuit television which offered an excellent training and supervisory tool. I continued to use the Backster ZCT but incorporated the DVT administered as the second chart and in the process noticed that innocent as later verified examinees often produced from mild to significant responses on the relevant test questions in their first relevant chart, but after the administration of the DVT, the second relevant chart (chart #3) produced from little to no responses on the relevant question but significant responses on the control questions indicating a significant shift in their psychological set. This phenomenon was experienced hundreds of times by all of the polygraphists at the company, and the DVT was obviously responsible for those results. I subsequently reasoned that when the examinee's card number is accurately selected by the polygraphist, this usually convinces the examinee of the accuracy of the test and thus relieves his fear that an error will be made on his test regarding the relevant issue and related test questions, thus focusing his attention on the control questions embracing probable lies. My theory was confirmed with the post-test interview of many truthful as later verified examinees who displayed such a shift. However, not all examinees were positively influenced by the results of the Stimulation test, especially when it was administered as the second chart after the first relevant chart had been collected. In fact, a field study (Matte 2012b) revealed that countertrend scores, scores that did not follow the true trend as later established by ground truth were significantly greater (for the truthful) than those who were not administered a stimulation test. However, the stimulation test administered as the first chart, before any of the relevant charts, did not suffer a countertrend score that exceeded those examinees who were not administered a stimulation test. During an experiment in 1975 on the development of the Matte Control Question Validation Procedure (Matte 1976; Chap 14, Matte 1996), wherein the stimulation test was used as the first

chart, the logic of its administration as the first chart became quite apparent and from that moment all specific-issue tests were preceded by the stimulation test as the first chart. At that time, some specific-issue tests involving both the Arther technique and the Backster technique produced confirmed false positive results which precipitated my development of the Quadri-Track Zone Comparison Technique (Matte 1978) to resolve that problem keeping in mind my experience with the administration of the stimulation test as the second chart resulting in a shift of the truthful examinee's psychological set from the relevant questions to the control questions and the post test confirmation of my theory that the examinee's Fear of Error was responsible for the aforesaid shift.

After much experimentation, I altered the Backster ZCT by deleting the last two test questions dealing with previous polygraph tests and the drug question which introduced two additional issues not related to the relevant issue and I inserted in their place the following control and relevant questions as test questions 23 and 24 respectively. See diagram below:

## MATTE QUADRI-TRACK TEST QUESTION STRUCTURE & FORMAT

- 14J Neutral Irrelevant Question.**  
**39 Preparatory/Sacrifice Relevant Question.**  
**25 Symptomatic Question.**  
**46 Non-Current Exclusive Control Question.**  
**33 Relevant Question.**  
**47 Non-Current Exclusive Control Question.**  
**35 Relevant Question.**  
**23 Fear of Error Control Question.**  
**24 Hope of Error Relevant Question.**  
**26 Symptomatic Question.**



Test questions #23 and #24 are worded as follows which contain a suffix that relates each question to the relevant or target issue. These two test questions form the “Inside Track” as described in above test structure.

23. Are you afraid an error will be made on this test regarding the target issue?

24. Are you hoping an error will be made on this test regarding the target issue?

The above two test questions are thoroughly reviewed with the examinee and feedback is acquired from the examinee to insure that the test questions are correctly interpreted. The standardized and structured pretest interview is designed to elicit a negative answer to both test questions. (See Matte 1996, Supp 2002-2012 and Matte 2010a for details).

The Inside Track containing the Fear of Error Control question and the Hope of Error Relevant Question provide confirmation of the legitimacy of the reactions to the control and relevant questions with plus or minus scores that are added to the scores acquired from the Primary and Secondary tracks. For example, if there is a comparative lack of reaction to the Fear of Error question but significant reactions to the Hope of Error question in two or more charts, this confirms that the reactions to the relevant questions in the Primary and Secondary tracks are not due to a Fear of Error and only a Deceptive examinee will hope that an error will be made on his test regarding the target issue, thus confirming the legitimacy of the reactions to the relevant questions in the previous two tracks. This confirmation is important to the polygraphist because it provides him assurance that he is not dealing with a false positive and a Deceptive examinee will find it most difficult to deny his culpability when confronted with his reactions to Hope of Error that only a Deceptive examinee will experience. Furthermore, the Inside Track questions can be most useful when testifying in court regarding the legitimacy of the reactions on the relevant test questions.

Another benefit of the Inside Track is when the relevant issue pertains to a sex offense wherein the relevant test questions must explicitly describe the offense which may contain stigmatic language. The Inside Track test questions employ the suffix “regarding the target issue?” This avoids stigmatic language and the emphasis is on the word “afraid” and “Hoping” but nevertheless addresses the relevant issue.

The presence of the Inside Track test questions provide evidence that a variable identified in Chapter 9, Matte 1996, as *Fear of Error* and labeled by Dr. Paul Ekman (1985), Behavioral Scientist<sup>1</sup> as the “*Othello Error*” has been addressed and factored into the test structure and protocol. Furthermore, it will also address the concern expressed by the National Research Council of the National Academies in their 2003 report on polygraph that the *fear of error* by an innocent examinee may mimic responses of a guilty examinee.

Dr. Ekman, in his 1985 book “Telling Lies” discusses the elements of “fear” in his chapter on the ‘Polygraph as Lie Catcher’ and states:

“The severity of the punishment will influence the truthful person’s fear of being misjudged just as much as the lying person’s fear of being spotted – both suffer the same consequence.” Dr. Ekman felt that the polygraph examination, like behavioral clues to deceit, is vulnerable to what he terms the ‘Othello Error’, because the Shakespearean character Othello failed to recognize that his wife Desdemona’s fear might not be a guilty adulterer’s anguish about being caught, but instead could be a faithful wife’s fear of a husband who would not believe her. Both cause an autonomic nervous response.

<sup>1</sup> Dr. Paul Ekman, Clinical Psychologist and Behavioral Scientist, in 2001 was named by the American Psychological Association as one of the most influential psychologists of the 20<sup>th</sup> Century based on publications, citations, and awards. In 2009 he was named One of the 100 Most Influential People in the World by *Time Magazine*.

The National Research Council of the National Academies of Science's 2003 report stated:

"Gustafson and Orne (1963) suggest that an individual's motivation to succeed in the detection task will be greater in real-life settings (because the consequences of failing to deceive are grave), and this elevated motivational state will also produce elevated autonomic activation." "This Theoretical argument also leaves open significant possibilities for misinterpretation of the polygraph results of certain examinees. It is plausible, for instance, that a belief that one might be wrongly accused of deceptive answers to relevant questions – or the experience of actually being wrongly accused of a deceptive answer to a relevant question – might produce large and repeatable physiological responses to relevant questions in non-deceptive examinees that mimic the responses of deceptive ones."

The National Research Council of the National Academies of Science further stated "examinees who fear being falsely accused have strong emotional responses that mimic those of the truly deceptive. Under this hypothesis, field conditions might have more false-positive errors than are observed in the laboratory and less accuracy."

In the Matte & Reuss (1989a)<sup>2</sup> field study, the Fear of Error increased the total scores for the Truthful from +341 to +762 thus increasing the score by +421 points. The Fear of Error control question generated an adjustment to the 58 Innocent case scores by increasing the score an average of +7.3 per case. The average total score per Innocent case without the Fear of Error adjustment was +5.89 and with the Fear of Error adjustment was +13.1. This shows that the "Fear of Error" factor is extremely significant and cannot be ignored in the scoring of Innocent cases. It also increased the average score per case for the Guilty from -19.7 to -25.1.

In the Mangan, et al (2008) field study, the Fear of Error increased the scores for the Truthful from a mean of +4.0 per chart to +7.1 and the Deceptive from a mean of -6.9 per chart to -10.0. When applied to the traditional case of 3 charts the score is NDI +21.3 and DI - 30.0.

In the Shurany, et al (2009) field study, the Fear of Error increased the total score of the Truthful from a mean +3.39 per chart to +5.39 per chart, and the Deceptive from -3.54 per chart to -6.08 per chart. When applied to the traditional case of 3 charts the score is NDI +16.1 and DI - 18.24.

The significant increase of scores for the truthful examinees confirms the Fear of Error hypothesis by Dr. Ekman and the National Research Council of the National Academies of Science. Furthermore the presence of the Inside Track within the construct of the technique addresses that variable listed under Category A (Matte 1996).

Cushman stated that by reducing the MQTZCT's increasing score threshold of +3 and -5 per chart with a minimum score threshold of +6 and -10 for 2 charts and +9 and -15 for 3 charts and +12 and -20 for 4 charts to a fixed threshold of -2/-3 (-2 or greater = NDI, -3 or less = DI) regardless of the number of charts collected on the first two tracks, he was able to dispense with the scores from the Inside Track and nevertheless acquire the same accuracy. However he omits the fact that by doing so, he deprives the polygraphist tangible proof that the *Fear of Error* variable was addressed and the confirmatory feature that the *Hope of Error* relevant question provides in establishing the legitimacy of the reactions to the relevant questions in the primary and secondary tracks. Using aforesaid fixed score threshold means that collecting 3 charts, each with only a -1

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<sup>2</sup> The Matte, Reuss 1989a field validation study on the Quadri-Track Zone Comparison Technique is a 220-page doctoral dissertation. An abridge version was published in *Polygraph*, Vol. 18, Nr. 4, 1989. Both studies are available for review and download at [www.mattepolygraph.com](http://www.mattepolygraph.com).

score would justify a conclusion of Deception. Neither a judge or jury would find that scenario convincing given that the examinee could have acquired -18 points on each chart for a total of -54, yet was found Deceptive with a -3 total score. Opposing counsel could argue that the examinee could have hallucinated that minimal -1 score. A compelling example of such a cross-examination can be found in Chapter 9, Examination and Cross-Examination of Experts in Forensic Psychophysiology Using The Polygraph (Matte 2000). Furthermore, published research (Raskin, Barland, Podlesny 1978; Matte, Reuss 1989) indicates that as the scores increase, so does the accuracy rate. Further published research (Matte 2013) revealed a connection between the score threshold, rate of inconclusives and minimum number of charts required for a decision of truth or deception. Therefore, a technique that uses a low score threshold would require the collection of more charts than a technique that employs a higher, increasing score threshold in order to attain similar accuracy and reliability. When confronted with several targets, the minimum number of useful charts can become critical.

Conversely, the data in the Matte-Reuss (1989a) field study (Table 10-C) shows that the average score per chart for the truthful was +6 and for the deceptive -9, hence for three charts the average score for the truthful would be +18 and the deceptive -27. Furthermore, the Mangan, et al. field study showed that the average score per chart for the Truthful was +7.1 and the Deceptive -10.0, resulting in a three chart score of +21.3 for the Truthful and -30.0 for the Deceptive. The Shurany field study showed that the average score per chart for the Truthful was +5.39 and the Deceptive -6.08 resulting in a three-chart score of +16.1 for the Truthful and -18.24 for the Deceptive. These high scores provide a significant buffer against errors. For instance, in the Matte-Reuss field study, the score threshold for the Truthful for three charts is +9 and the Deceptive is -15, but the average score for three charts was +18 for the Truthful and -27 for the Deceptive. This provides a margin of accuracy of 9 points for the Truthful and 12 points for the Deceptive before inconclusive results would occur. Moreover, in order for a blind reviewer to commit a false negative (FN) or false positive (FP) error, he would have to travel from -27 past Zero to +9, a distance of 36 points to arrive at a false negative, and +18 past Zero to -15, a distance of 33 points to arrive at a false positive, respectively. Therefore the margin of accuracy as shown in the Matte-Reuss field study provides a significant score buffer for the blind reviewer, which no doubt contributed to the near-perfect correlation coefficient of 0.99 for the numerical scores in that study.

It must be noted that Cushman faults the aforementioned three field studies which he states “use convenience – not probability – samples, making generalization risky” but fails to account for the fact that the Matte-Reuss field study provides four Predictive Probability Tables for Estimating Error Rates for the Quadri-Track ZCT. Table 10a-1 for scores obtained without using the Inside-Track for the Innocent; and Table 10a-2 for scores obtained using the Inside-Track for the Innocent. Table 10b-1 for scores obtained without the Inside-Track for the Guilty; and Table 10b-2 for scores obtained using the Inside-Track for the Guilty. These tables were used to establish the score threshold for the Truthful and the Deceptive subjects. (Matte, Reuss 1989a). He further criticizes the three field studies for not using a control group. The use of a control group is feasible in laboratory experiments but impractical in field research which is the only method of testing genuine *Fear of Error* in polygraph examinations. (See Guiding Principles and Benchmarks for the Conduct of Validity Studies of Psychophysiological Veracity Examinations Using the Polygraph (Matte 2010b).

Mangan, et al’s “Rebuttal to objections by Iacono and Verschuere et al.” published in *Physiology & Behavior* (Mangan et al 2008b) persuasively addresses their criticisms of Mangan et al.’s field research on the MQZCT. (Rebuttal can be reviewed at [www.mattepolygraph.com](http://www.mattepolygraph.com) under heading “List of Validated Polygraph Techniques” in the Matte Quadri-Track Zone Comparison Technique’s list of published field studies.)

Cushman states that “the MQTZCT is just another ZCT, and as such, we should not expect accuracy any better (or worse) than any other validated single-issue ZCT.” Cushman assumes that

all Zone Comparison Techniques use the same pretest interview structure, same type of control questions, same test construct and format and same test data analysis and number of features having diagnostic value as that used in the MQTZCT, an assumption that is false (See Matte 2010a, Matte 2012a, Matte 2012b, Matte 1996). He acknowledges the presence and use of the Matte Dual-Equal Strong Reaction rule that is used in all three tracks but claims that the Matte Dual-Equal Strong Reaction rule "results in a shift of the scores of the MQTZCT's first two tracks in the negative direction, but it does so asymmetrically. That is, it pushes the truthful scores in the negative direction, but is essentially neutral for the deceptive."

Contrary to Cushman's unfounded claim, published research by Hedges, Deitchman and Samra (2013) regarding Backster's Either-Or Rule which forms the basis of the Matte Dual-Equal Strong Reaction Rule (see explanation below), Hedges et al. stated that "The Either-Or Occurrences t-test and the results displayed in Tables 2 and 3 all refute the assumption that the EOR is biased against non-deceptive examinees. Actually, the exact opposite of this belief is displayed. All three methods of calculating the EOR result in a non-deceptive bias rather than deceptive." However the Matte Dual-Equal Strong Reaction Rule is non-selective and its scoring is more conservative, assigning a -1 rather than a -2 and the rule is applied only in the pneumo and cardio tracings.

Furthermore, a published study authored by Nelson, Handler, Adams and Backster (2012) concluded that "Results of this study support the validity of the Backster numerical scoring system for You-Phase exams." The Backster's Either-Or Rule forms the nucleus of his numerical scoring system. Published research by Meiron, Kapohl, Ashkenazi (2008) concluded that "Analysis showed the following: Backster's (EOR) scoring method is significantly more accurate than Backster (no EOR) method ( $p \geq 0.05$  in Binomial distribution)." A field study by this author (Matte 2010c) of the Backster Zone Comparison Technique's Either-Or Rule and Scoring System versus two other scoring systems when the relevant question elicits a strong response, revealed that "The results of this field research study support Backster's "Either-Or" Rule of comparison of the relevant question that elicits a strong reaction with the control question that elicits the least or no reaction, and refutes the contention that its practice makes the Backster Zone Comparison Technique biased against the innocent examinee."

Backster's Either-Or Rule dictates that to arrive at an interim spot analysis tracing determination of (+2) or (-2) there must be a significant and timely tracing reaction in either the red zone (relevant) or the green zone (control) being compared.

If the red zone indicates a lack of reaction, it should be compared with the neighboring green zone containing the larger timely reaction. If the red zone indicates a timely and significant reaction it should be compared with the neighboring green zone containing no reaction or the last reaction. Presence of response to one or both green zone questions in addition to red zone question indicates serious green zone question defect (See Fig. 1).

The Either-Or Rule is aided by the use of non-current exclusive control questions that distinctly separate the time frame embraced by the control questions from the time frame of the relevant questions. This provides the examinee with a clear choice between the threats posed by the red and green zone questions creating a double-bind effect (Bateson et al. 1956).

Therefore when there is a presence of a significant response to a relevant question and the control question immediately preceding it also has an equally significant response, that control question is deemed defective therefore the relevant question is compared to the control question immediately following it which if effective will contain little or no response producing a score of -2.

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<sup>3</sup> Double-bind. A situation in which a person must choose between equally unsatisfactory alternatives; a punishing and inescapable dilemma. *American Heritage Dictionary*.

The aforesaid Backster rule is based on the premise that both zone questions appear to be equally threatening to the examinee, the degree of threat being proportionate to the degree of the responses, which indicate that while the examinee may be attempting deception to the relevant questions, its neighboring control question may be too intense due to faulty structure, embraces a more serious unknown crime, or a countermeasure attempt was made. A sophisticated guilty examinee may be able to cause a reaction on the control question but cannot control an oncoming reaction to the relevant question. However, a guilty examinee may use countermeasures on all of the control questions thus depriving the user of the Backster Either-Or rule from using a control question that has little or no response, thus producing zero scores and an inconclusive result. The fact that inconclusives can hide the use of countermeasures is an important reason for attaining a low inconclusive rate.

The Matte Dual-Equal Strong Reaction Rule which is non-selective in that each relevant question can only be compared with the control question preceding it within the same track, remedies the aforesaid countermeasures problem. When there is an equally significant reaction to both the relevant and control questions being compared in the same track, that control question is deemed defective in accordance with Backster's Either-Or Rule reasoning, but inasmuch as that relevant question cannot jump the track for comparison to other control questions and must be compared with the defective control question, a score of -1 rather than -2 is assigned to that track tracing. The Dual-Equal Strong Reaction Rule applies only to the Pneumo and Cardio tracings, not the EDA (GSR/GSG) due to its volatility and sensitivity to extraneous stimuli. It thus can be seen that the application of countermeasures on all control questions including the Inside Track would produce a minimum score of -6 per chart which exceeds the minimum score threshold of -5 per chart for the MQTZCT thus defeating the countermeasure. The presence and application of the Matte Dual-Equal Strong Reaction Rule in the first two tracks as well as the Inside Track prevents erroneous plus scores from affecting the overall tally of scores, a rule that is not used in other zone comparison techniques, thus contradicts Cushman's belief that the MQTZCT "is just another ZCT, and as such, we should not expect accuracy any better (or worse) than any other validated single-issue ZCT." With that remark, Cushman attempts to justify the APA meta-analysis (2011) conclusion that the MQTZCT's exceptional accuracy must be the product of a methodological flaw (or flaws), rather than recognizing the system's attributes.

The MQTZCT utilizes almost twice as many diagnostic features as the Federal and other polygraph techniques in the analysis and scoring of the collected physiological data. For instance, the MQTZCT has been using changes in heart rate as a diagnostic feature which is supported by published research (Bruno Verschuere, Geert Crombez, Armand De Clercq and Ernst H. W. Koster (May 2004); Graham, F. L., and Clifton, R. K. (1966); Adenauer, Catani, Keil Atchinger, Neuner (2010); Gomez, Danuser (2010), yet excluded from the Federal polygraph school's test data analysis due to its purported poor productivity (Kircher, Kristjansson, Gardner, Webb, (2012). Nevertheless, this is but one of several differences between the MQTZCT and other techniques which may be found in *Forensic Psychophysiology Using The Polygraph* (Matte 1996).

The MQTZCT assigns each physiological tracing, the pneumo, EDA and Cardio equal diagnostic value (33.33%) whereas some of the other techniques assign the EDA 50% and the other two tracings 25%. Others will score both pneumo tracings and then average the scores. The differences can significantly alter the results.

Cushman further rejects as implausible the positive influence that the review of the Inside Track's *Fear and Hope Error* questions may have on the examinee during the pretest interview when these two questions are discussed in depth with the examinee to assure his understanding and desired comprehension of those test questions. For the innocent examinee the *Fear of Error* question may offer a place other than the relevant questions to relieve his anxieties regarding the target issue.



Furthermore, the standardized pretest structure of the MQTZCT consisting of seven items that must be addressed includes an explanation of the importance of examinee cooperation, to wit: Truthful are cooperative, follow directions. Deceptive are uncooperative, do not follow directions. The former does not want an error to be made. The latter does want an error to be made. (Matte 2012a). A recently published study in *Psychophysiology* authored by Eitan Elaad (2014) entitled "Differences in the readiness of guilty and informed innocent examinees to cooperate on the Guilty Action Test" indicated that cooperating instructions attenuated (weakened) Skin Conductance Responses (SCR) of the innocent examinees to the critical items.

The MQTZCT uses the Examination Reliability Rating Table (Matte 1996) to determine the (1) adequacy of the case information, (2) case intensity and (3) distinctness of issue on a scale of 0 to 5 before a decision is made regarding the conduct of the examination. Unless the aforesaid items are deemed adequate, the case is returned to the requester for more information or else declined. This procedure assures that only those cases having adequate case information, case intensity and distinctness of issue are accepted which, in my four decades of experience, reduce the inconclusive rate.

The above are some but not all of the differences between the MQTZCT and other polygraph techniques which Cushman apparently ignores in his claim that "the MQTZCT is just another ZCT, and as such, we should not expect accuracy any better (or worse) than any other validated single-issue ZCT." He then uses that erroneous assumption to justify the conclusions of the APA Meta-Analytic Survey and declares this author's published Critique of the Meta-Analytic Survey (Matte 2012c) to be without merit. The errors, omissions and bias that permeates the Meta-Analytic Survey mirrors Cushman's article and his last statement.

The Integrated Zone Comparison Technique, version 2, incorporated the *Fear of Error* control question and the *Hope of Error* relevant question into its test structure with reported success by its users. Field research is sure to follow and imitation is the ultimate recommendation.

This author recently trained a polygraph examiner in the use of the MQTZCT and the examiner subsequently reported the results of the first two examinations. The first examination resulted in a -35 score for three charts indicating deception confirmed by confession, and the second examination resulted in a +27 score for three charts indicating no deception confirmed by physical and witness evidence. The examiner was elated over the ease in which the examinations logically progressed to their conclusion, and the high scores, far exceeding the score threshold (-15 and +9), provided reassuring confidence in its results. As my grandmother used to say, "The proof is in the pudding."

Sincerely,

James Allan Matte

## References

*All references of studies and articles authored by James Allan Matte are available for review and download at [www.mattepolygraph.com](http://www.mattepolygraph.com) under the heading of Research and Publications by James Allan Matte.*

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