

## How to Use the Concealed Information Test

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### Abstract

The Concealed Information Test (CIT) is the most researched and validated method available to polygraph examiners. This article is a step-by-step guide intended to educate novice and experienced polygraph examiners how this useful technique can help them resolve cases in the field. It outlines how to set up conditions to maximize its utility, design and conduct the testing, and analyze the results.

Key words: concealed information test, guilty knowledge test, polygraph, psychological detection of deception, PDD, recognition test

### Introduction

There are two principal approaches to psychophysiological detection of deception (PDD): deception tests and recognition tests. Deception tests are the most commonly used, and they include the Zone Comparison Technique, the Modified General Question Technique, and the Relevant-Irrelevant Technique, to name a few. Recognition tests include the Searching Peak of Tension, the Known Solution Peak of Tension, Acquaintance Tests, and the Concealed Information Test (CIT, the current name for what had formerly been called the Guilty Knowledge Test). Figure 1 displays a taxonomic organization of the main PDD approaches.

Of the methods outlined in Figure 1, the least utilized by field polygraph examiners is the CIT (Suzuki, Nakayama, & Furedy, 2004). However, the CIT has the best theoretical foundation of any of PDD method, and more theoretical validation research than all other methods combined. First introduced by David Lykken (1959, 1960), the CIT can prove to be an important tool in the inventory of polygraph examiners. This article is a

practical guide for using the CIT in the field, to familiarize both the experienced examiner and the polygraph student in the CIT methodology.

The CIT is typically used in an adjunct capacity, though examiners may use it as a primary technique. It can provide additional support for the decision based on a Comparison Question Technique (CQT), and can serve as a powerful tool in the posttest interrogation. The CIT is especially useful in circumstances where the Comparison Question Technique may produce less than optimal results. For example, police polygraph examiners are sometimes compelled by their senior officers to conduct a polygraph examination of someone who has been interrogated extensively. One might expect, considering the current CQT theory, that a suspect who has been interrogated for hours before a polygraph examination would react to the relevant questions irrespective of his guilt or innocence. This is why every examiner is instructed in polygraph school to avoid testing suspects under these circumstances. However, if the examinee has not been told all of the details of the crime, the CIT can still be conducted even after an interrogation.

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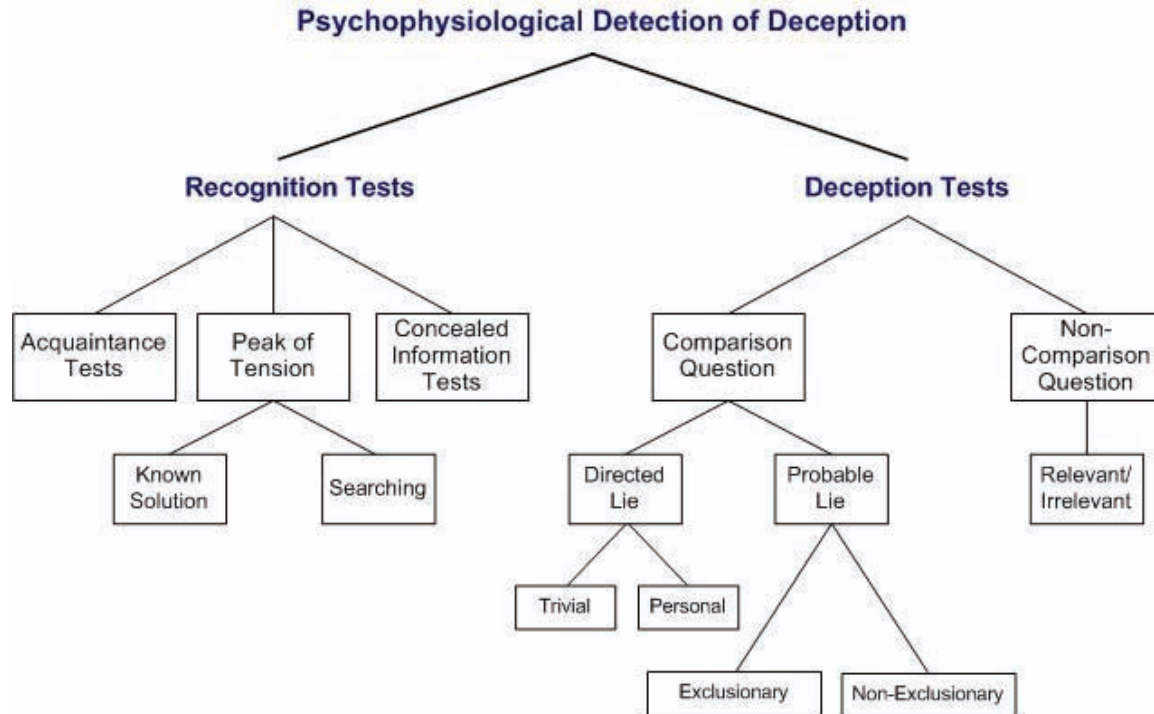


Figure 1. Taxonomic organization of the major PDD methods.

Similarly, law enforcement polygraph examiners are sometimes directed to test the veracity of an individual shortly after the murder of a loved one. Conducting a CQT examination of a distraught family member presents tremendous challenges both in comparison question development and in interpreting the charts. A CIT has a better chance of producing accurate results under these conditions than does a CQT because of the lack of potential emotion invoking questions (e.g. Did you stab your wife). (Lykken 1959, 1960) The CIT also takes less time to conduct (approximately one hour), is less intrusive, and provides one more tool to the competent polygraph examiner.

This CIT guide is divided into seven individual steps: Educating Investigators, Gathering Information, Constructing CITs, Pretest Practices, Testing, Scoring Rules, and Decision Rules. We recognize that there are other methods for approaching the CIT which may be equally useful and valid. The method outlined in this article satisfies all of the critical components of the CIT.

### **Educating Crime Scene Investigators**

The successful application of the CIT relies heavily on the input and information derived from the crime scene investigator, as this individual provides the foundation upon which the CIT is to be developed. Teaching investigators how to use the CIT as a tool in their investigation is not a difficult task. The CIT is quite easy to teach and takes less than a couple of hours to present it from beginning to end. The task of getting the investigator to use what they learn about the CIT represents a greater challenge.

Most law enforcement officers learn as trainees how to dust and lift fingerprints, take proper evidentiary photographs, preserve and collect footwear and tool mark impressions, and other technical skills when they are in their law enforcement training academy or through their respective departmental training programs. Polygraph orientation is sometimes included in these training areas but is usually introduced as a means to an end following a thorough investigation, and typically only the CQT approach is provided. One way to foster

the use of the CIT technique by investigators is to introduce it when they are just starting their professional training. This way the CIT becomes a habitual approach that is integrated into their investigative repertoire from the outset, before they become settled into a particular method of operation. However, increased implementation of the CIT approach by investigators will take time to develop, as newly trained and educated officers will slowly fill the ranks. Seasoned officers are impacted only in a secondary capacity, perhaps when they become training officers or when they are open and exposed to new methods they see used successfully by others.

Veteran officers are more likely to be receptive to this training at advanced training schools (e.g., basic homicide investigation, crime scene technician, polygraph, etc.). Whatever stage the training is to be introduced, it is imperative that the training be consistent. Also, whenever there are changes or corrections made to the training program, they should be provided to those who have already received the training. For the actual training procedure, a program can be extracted from the material provided in this article. Training the investigator in the elements of the CIT is no different from training the polygraph examiner. They should be exposed to all aspects of the approach, ranging from the conceptual theory to the nuts and bolts of the decision process.

Once officers are trained how to use the CIT, they actually need to apply the approach under field conditions. One way to get investigators to use the CIT is to stress their involvement in the process. When law enforcement officers or investigators have an attachment to a procedure they are more likely to embrace and use it. A fingerprint examiner compares the fingerprints to see if they match the unknown latent lifts, but their success is largely dependent on the investigator's ability to properly collect and preserve the fingerprints. The same principle holds true with the CIT. The investigator's ability to properly choose and conceal the critical information has a significant effect on the successful application of the CIT. Another sales point is that the CIT can be utilized at the beginning of the investigation. Most investigators have more than enough activity to fill their time and any procedure that can

aid them in clearing up an investigation more expediently is usually welcomed with open arms.

The last reason for engaging investigator support for the CIT is probably one of the best (if not the best) reasons to use it: the admissibility of the CIT as evidence in court. Much of that which has discouraged courts from admitting the CQT as evidence is remedied by using the CIT. (Ben-Shakhar, Bar-Hillel, & Kremnitzer, 2002) It has been generally accepted as being founded on sound scientific theory, produces a known error rate, and does not offer findings that would overwhelmingly prejudice a jury to give it undue weight over other evidence (*Daubert v. Merrell Dow Pharmaceuticals*, 2003).

### **Gathering Information**

Similar to the Peak of Tension, the CIT requires that the innocent examinee be naïve regarding the details of the crime that are to be included in the test. These details are referred to as keys, and protecting this information is critical to the success of the CIT.

The best practice for finding and securing this vital information is for the examiner to be involved early in the investigation. When an examiner has the opportunity to visit the crime scene or to participate in the investigation from its onset, it allows for a construction of the CIT with the investigators and reduces the probability of information leaks. This early involvement helps secure critical information and ensures that is not to be released to anyone but those individuals responsible for working the investigation. This makes sense when put into context. One would not readily complete a criminal investigation and then call out forensic specialists to a crime scene to dust for prints and search for other physical and trace evidence months after the crime and after an unknown number of persons have potentially tainted the scene.

At the scene, the examiner works with investigators to classify the crime (e.g., larceny, homicide, etc.) as well as the criminal mind of the individual or group that committed the crime. If available, a criminal psychologist and/or criminal profiler should

be used with the investigative team to help classify the aforementioned psychological aspects. Knowing your suspect facilitates choosing the appropriate information to gather, as the best key information is not always the statutory requirement of the crime, but rather information that is concealed and salient to the person(s) who committed the crime. It is also the most vulnerable aspect of the technique, where false negatives may occur, due to the selection of ineffective key information.

Documentation is important for the CIT as it is with the collection of any type of forensic evidence. Thorough field notes and photographs can help resolve questions in a review or judicial setting when the concealment of the key information is in dispute. Photographs may also be used to construct a visual presentation of a key test, which will be discussed later in this article.

Visiting the crime scene is not always practical in the field, as examiners often conduct cases for other agencies which prevents them being involved in the investigation process. Alternatively, the crime under investigation may not warrant their involvement in the early stages. Predominant law enforcement practices use examiners to conduct a polygraph at the end of an investigation. Although the process of finding key information is much the same as collecting at the scene, the examiner is now limited mostly to the investigative report and the investigator(s) to extract key information for the CIT. If there is ample time between the scheduling of the exam, one could also enlist the aid of a criminal psychologist or criminal profiler, for the purposes of developing additional key information.

Gathering information needed to construct the CIT at the later stages of an investigation is sometime thought to be a time-consuming process. In reality, finding useful keys can be quite easy, albeit societal or methodological variables might diminish the number of amendable cases. (Podlesny, Nimmich, & Budowle, 1995; Podlesny, 2003) Often there are details of a crime or crime scene that are not relevant to the “statutory requirements” of the crime, but are quite salient to the person who committed the crime. For instance, in a breaking and

entering crime commonly the most memorable portion of the crime is the entry, followed by the exit. The entry is usually a “rush” for the criminal. Many examiners have heard criminals claim that it is a “high” for them. Thus, it is not that key information is difficult to find, but rather that examiners must change the way they review the investigation. Sometimes simply asking the investigator if there are any peculiar facts about the case can unveil a potential key. The critical factor is that the item or act we choose to test must be memorable to the person who committed the crime. Picking memorable items or acts might be achieved by utilizing a criminal psychologist and/or criminal profiler, as previously mentioned, or simply utilizing investigators’ anecdotal knowledge gained through interviews with people whom committed specific criminal acts.

The following case demonstrates a successful implementation of the CIT in an actual field investigation. The content has been altered to protect identification and confidentiality of the subject and investigation. A polygraph examination is scheduled for a suspect in multiple residential break-ins. The strategy in these crimes was to cut the phone line, kick in the back door of the residence, steal electronics, and then exit the residence via unlocking the front door. Potential keys in this case are: the phone line, entry by the back door, a kicked-in door, stolen electronics, and an exit by unlocking the front door. These key items are then presented in a list of details that do not apply to the crime, known as control items. In the next section we will take the information we have gathered and insert it into the CIT framework.

Keep in mind that at this juncture there are many different ways that proposed concealed information could have been legitimately leaked to the subject being tested. To ensure that the areas of questioning are still concealed, strict measures must be taken to prevent the possibility of misclassification. A three-step process toward this goal is provided in the section entitled Pretest Practices.

### **Constructing CITs**

It should first be acknowledged that there are several acceptable methods of

constructing a CIT, so long as the essential requirements are satisfied. Each CIT includes one key item embedded among several control items. For example, the key item could be the murder weapon that was used in a homicide, with the control items being other plausible murder weapons that are not related to the crime in question. A non-key item is always placed as the first item in the sequence, and; the key item is randomly placed in the list after that point. Again, the key item must be something that the perpetrator is most likely to have paid attention to, and be able to recall during testing. The control items must be as plausible for the innocent examinee as is the key item. A CIT can be made up of one or multiple key item examinations. However, users should strive to include three or more independent CITs, as this can provide a more acceptable probability of false positive. (See Table 1) If all of these prerequisites in place, an acceptable CIT will result.

Our preferred approach to the CIT is to use one key and five control items per test. More or fewer control items can be used, and there are some advantages to having more rather than fewer. Our favored method of using five control items per CIT results from an inclination toward simplicity: calculating error probabilities is easier, and there is more discussion of this later in the article.

If one used the real life example described earlier, one might construct CITs like these:

A. If you are the person who broke into the house, you know where it was entered. Repeat after me these areas of entry.

1. basement window
2. garage door
3. bathroom window
4. front door
5. back door (key item)
6. bedroom window

B. If you are the person who broke into that house last night, you did something on the property just before entering the house. Repeat after me these actions.

1. Broke a window
2. Cut the phone line (key item)
3. Tied up a dog

4. Climbed the fence
5. Damaged a birdbath
6. Broke the porchlight

C. If you are the person who broke into the house, you got in using a particular method. Repeat after me these methods of entry.

1. Screwdrivered the lock
2. Crashed brick through window
3. Hacksawed the padlock
4. Kicked in the door (key item)
5. Sledgehammered the hinges
6. Picked the lock

D. If you are the person who broke into that house last night, you stole something. Repeat after me these items.

1. Shotgun
2. Credit cards
3. Bottle of vodka
4. Coin collection
5. Necklace
6. Television set (key item)

E. If you are the person who broke into that house last night, you escaped through one of these exits. Repeat after me these exits.

1. Basement window
2. Garage door
3. Front door (key item)
4. Patio door
5. Bathroom window
6. Bedroom window

CITs can also be conducted using visual stimuli. Instead of presenting words or phrases aurally, a CIT can be conducted visually using photos of objects, scenes, and faces. As with the more traditional CIT, visual presentation of the items would have to meet the basic requirements stated earlier (one key per test, random ordering within tests, all items similar in theme, plausibility of all items, etc.) As examples of stimuli for the visual CIT, an examiner could use the crime scene photos from the crime of interest, and select equivalent photos from other crime scenes where the suspect could not have been. The photos could show the entry point the perpetrator used, any articles he left behind, faces of victims, location from where stolen objects had been taken, or any other scene that investigators are confident must

have been seen by the perpetrator but not by the person who is innocent.

Special care must be taken with visual stimuli in the CIT because pictures can carry more information and distractions than words or phrases. Common sense dictates that users should try to control the illumination level of the images, strive to ensure that they carry similar emotional weight (especially when displaying images of bodies), and standardize as much as possible the images in terms of size and coloration. Examiners must also be confident that the examinee is looking at the pictures during the data collection process. Figure 2 shows the set up for the CIT using photographs displayed on a computer screen that is controlled by polygraph operating software. It is also possible to use slide projectors or other means to present the images.

In previous works it has been recommended to position the examinee so that their field of view did not include the polygraph instrument (Abrams, 1989; Matte, 1996; Reid & Inbau, 1982). This requirement was conceivably based on the hypothesis that the analog instrument's visual and audible response to an examinee's answers might introduce an additional psychological stimulus to the examinee. The visual and audible stimuli might cause a more or an additional response. The now commonly used computerized polygraph instruments do not have these components. With the heightened threat of countermeasures that is present today, it is now hypothetically more beneficial not to place the examiner in a position that would hinder their optimal visibility of the examinee. A dorsal position would most indubitably do just that and much pertinent information might be missed.



*Figure 2. Example of how visual stimuli can be presented in a CIT.  
(Photo courtesy of Jamie Brown of Limestone Technologies, Inc.)*

### **Pretest Practices**

The pretest of the CIT is typically brief but important. First, the examinee is presented with an overview of the entire

process of the CIT, as would be done in a CQT, but covering CIT elements. Next any necessary pre-pretest forms (i.e. waivers, medical background, etc.) should be completed.

After the paperwork is complete, the examinee is told that he or she will be undergoing a knowledge-based examination and that it will be necessary to determine whether the areas to be tested are known to the examinee. Examinees should be asked to write everything they know about the incident under investigation and how the information was learned. This is done to avoid conducting an examination where the correct answer is already known. The source of information can be later checked for its veracity. The examinees should be reassured that mere knowledge of the information does not mean that they have committed the crime under investigation and that there are frequent instances when others involved in the investigation leak information (i.e. investigators, victims, witnesses, media, etc.). It should be stated that it is your goal as the examiner to conduct a fair examination and to eliminate any potentially corrupted data. This process represents the examiner's first step to ensuring that the key information was concealed from a possibly innocent examinee.

After the examinees have completed the written statement of knowledge, the second step of confirming the concealment of the key information should commence. In this step, the information that the examinees have written should be orally reviewed. The examinees must verbally commit to this information as their only knowledge of the crime. If additional information is produced in the verbal review, that new information and its source should be documented on a new sheet of paper. It should be noted that if at any point the examinees indicate that they have knowledge of a potential key, the CIT using that item should be eliminated from the test.

Once the examinee has committed to have no further knowledge of the crime, the remaining keys are proposed and presented in a general question form in the third and final confirmation step. Prior to completing the third step, it is important to familiarize the examinee with the instrument and the CIT procedure.

At this point describe the instrumentation just as with the CQT. However, the explanation of the procedure and what we are looking for is somewhat

different from the traditional CQT. The foundation for the CIT is the orienting response/reflex theory (O'Gorman, 1979; Siddle, Kyriacou, Heron, & Mathews, 1979; Sokolov, 1963, 1966; Verschuere, Crombez, De Clercq, & Koster, 2004). When a person is involved in a significant event, a memory of that event is created. If presented with information that is salient because it is linked to a memory of the event, his or her body will have an orienting response to the key. Because an innocent person does not have a memory of the event, all items will seem plausible and there will be no unique reaction to the key. When the orienting response is elicited, the physiological channels we are monitoring will show responses, which is the same effect observed in the acquaintance exam. Obviously some of the information and terms used here are for technical discussion and must be tailored to the level of sophistication of the examinee.

Next a practice examination is conducted to acclimate the examinee to the instrumentation, the examiner's voice, and ensure that the examinee can properly follow the movement and answering instructions. The acquaintance test is conducted as with the CQT but the examinee is instructed to answer each question by repeating the alternative ending. For example; "Regarding the color of your shirt today, is it red?" The examinee says red. In this way, the examinee becomes accustomed to the CIT question and answer process.

The final step to verifying that the keys were properly concealed takes place just before the data collection phase. In the CIT, each key item test is a separate test in and of itself. Before every test the examiner reads the general question that is to be asked and informs the examinee to repeat the alternative ending. For example; "Regarding where the house was entered, was it the \_\_\_\_ ?" At this time the examinee is simply asked, "And you don't know the correct answer to that question, do you?" If the answer is still "no", then you may proceed to conducting the test. If the answer is "yes", you document the information, from where or whom it was obtained, and eliminate that key. Note that only the question is reviewed in the aforementioned example but it may be prudent to refer to the state or federal

laws/policies that regulate polygraph use on this issue. Some standards or laws may require that all of the stimuli, including the various endings, need to be reviewed prior to the data collection process. Standards governing polygraph use in the Federal Government require that all stimuli (including the alternate endings) must be reviewed prior to data collection.

## Testing

During the testing phase the examiner is in essence conducting multiple tests on a single incident. As previously stated, each key item that is tested is a separate test. There are essentially two parts to the testing phase; reviewing the stimuli and conducting the test.

Stimulus review is self-explanatory. Remember to verify from the examinee that he or she does not know the key stimulus from the control stimuli in the list. Reviewing the stimuli before testing serves multiple purposes. The review process serves to ensure that the examinee understands all of the stimuli and how you pronounce the stimuli, and it affords the examinee an opportunity to identify any problematic items. For example, one or two irrelevant items might hold significance to the examinee, a factor that could affect scoring. The examiner must correct those items, or drop that test. There should be no emotion-evoking stimuli in the CIT. Most professional standards require that you review the questions with the examinee.

Stage two is the conduct of the test. It is recommended that each key item test be presented only once. If your state law requires at least two presentations of the same question (e.g. Texas), there is nothing wrong with the presentation of each key item test more than once, as this procedure has also shown to be effective (Ben-Shakhar & Elaad, 2002; Ben-Shakhar, Gati, Ben-Bassat, & Sniper, 2000; Elaad & Ben-Shakhar, 1997). However, multiple presentations do change the probability table from the one provided in this article with each successive presentation.

When conducting the test, it is important that you read each item with the same voice inflection. This helps eliminate the potential that a subject might erroneously identify the key. If you have problems with

keeping your voice consistent and your instrumentation has the capabilities, consider using a computer generated voice to present the questions. Some of these programs have different voices from which to choose. After you have completed the recommended or required presentations of the key item test, the process is repeated for each key item test until all have either been administered or eliminated for other reasons (i.e. subject knew the key). Once all of the key item tests have been completed, you are ready to score the examinations.

## Scoring Rules

Of the several available scoring regimens for the CIT, the most researched method is Lykken Scoring (Lykken, 1959). In fact, Lykken Scoring has been used in every CIT research study published to date that analyzed physiological responses. It entails the ranking of the electrodermal response (EDR) amplitudes from 2 to 0. If the largest EDR takes place on the key item, the score for that test is a 2. If the second largest EDR takes place on the key item, the score is a 1. All others are scored 0. Reactions to the first buffer are ignored.

To illustrate, refer to the polygraph chart in Figure 3. If the key item on that test was number "3", that test would be scored a 2. If the key item was number "5", the test would be scored a 1. If the key item were numbers "2", "4" or "6", the score would be a 0.

One should note that there are other physiological channels that were not scored. The scoring of the pneumograph has been proposed using respiration line length (RLL) (Timm, 1982a) and supported in subsequent research ((Ben-Shakhar & Dolev, 1996; Elaad, 1994; Elaad, Ginton & Jungman, 1992; Nakayama & Yamamura, 1990; Timm, 1982b). A scorer must have a means for measuring RLL, such as a planimeter or software. There is a two-fold challenge to scoring the respiration channel, however. First, respiration is a process over which the examinee can exercise considerable control. Consequently, scorers should have less confidence in scores that result from this channel. Second, examinees vocally respond to the test items, a behavior that can interrupt



the pattern of breathing during the window in which the pattern would be analyzed. Some portion of the RLL can be attributed to the break in respiration pattern that occurs during the verbal answer. For these two reasons, examiners who choose to score the respiration channel with the CIT should not rely heavily on the scores for decision making.

Other research supports the scoring of other physiological channels. There are findings related to heart rate deceleration (Adachi & Suzuki, 1991; Verschuere, et al., 2004) that were suggestive, but the effect was small. Moreover, most polygraphs do not display pulse rates in a manner that allows easy scoring. A small but significant effect for plethysmograph data has been shown (Elaad

& Ben-Shakhar, in press; Podlesney, Raskin, & Barland, 1976). There currently does not appear to be any evidence to support scoring the cardiovascular channel in the CIT.

Most research has used the electrodermal channel as the sole source of information for conducting the CIT (see the CIT bibliography at the end of this article.) For evidentiary purposes, it is recommended that only the EDRs be scored. When conducting routine investigative examinations, all channels can be considered using a more global assessment of the responses. Examiners should always record all of the standard polygraph channels where it is required by law.

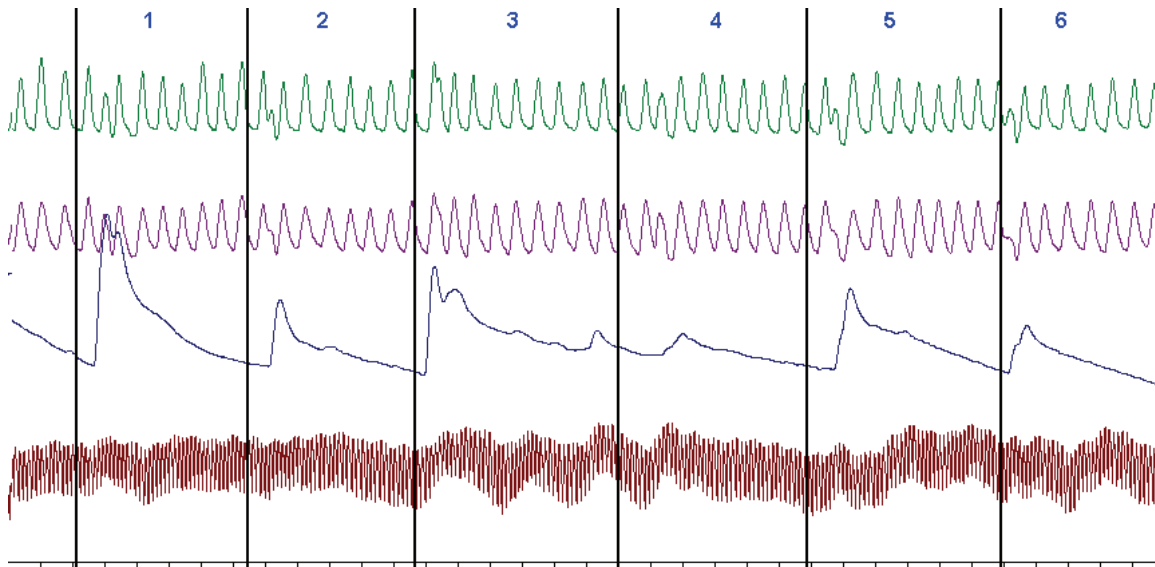


Figure 3. Sample CIT chart

### Decision Rules

Once scoring has been completed, the scores can be used to form an opinion. There are three possible outcomes for the CIT: Recognition Indicated (RI), No Recognition Indicated (NRI), and No Opinion (NO). These decisions are based on the total score. After the completion of the CITs, the scores are summed for all tests. The range of total scores can run from 0 to twice the number of CITs. For example, if there were five CITs run, with a potential of 2 points per CIT, the maximum attainable score is 10. The cutoff for a call of

RI is equal to the number of CITs. Using again the five-CIT scenario, a total score of 5 or greater would justify a call of RI. A total score of 4 or less calls for an NRI decision. NOs can arise if there are no reactions to any of the CITs, or if the number of useable CITs is severely reduced by movements, artifacts, or countermeasures.

Rather than decisions, examiners may choose to simply report probabilities. Table 1 lists the probabilities for up to eight CITs and scoring only the EDRs. The number of CITs is on the left margin, and the scores are listed

across the top of the table. If an examinee had a score of 9 for a six-CIT examination, the likelihood of being naïve to the key items would be 1.0%. A total of 12 points for the same examination would produce a probability of less than one-tenth of a percent

chance that the examinee is naïve regarding crime-related information. A score of 3 in this case would suggest that the examinee does not know the details of the crime, as there is a nearly 69% chance of a truly naïve examinee achieving this score.

Table 1. Probability of examinee having knowledge of crime details as a function of the number of CITs and exam score.

	<b>Score</b>													
<b>CITs</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>
<b>2</b>	0.12	0.04												
<b>3</b>	0.28	0.13	0.03	0.01										
<b>4</b>	0.44	0.25	0.10	0.04	0.01	0.00								
<b>5</b>	0.58	0.38	0.20	0.09	0.03	0.01	0.00	0.00						
<b>6</b>	0.69	0.50	0.31	0.17	0.08	0.03	0.01	0.00	0.00	0.00				
<b>7</b>	0.78	0.61	0.42	0.26	0.14	0.07	0.03	0.01	0.00	0.00	0.00	0.00		
<b>8</b>	0.84	0.70	0.53	0.36	0.22	0.12	0.06	0.03	0.01	0.00	0.00	0.00	0.00	0.00

### Summary

All polygraph examiners, and especially those in law enforcement, should have a working knowledge of the CIT. When conditions permit it can be a tremendous boon to the investigative process. The CIT is suitable as a primary technique, a supportive technique, or both. The strengths and limitations of the CIT are listed below.

#### Strengths

1. It is the most scientifically supportable technique a polygraph examiner can use.
2. The scoring method allows the examiner to calculate the precise likelihood of a false positive error. No such capability exists for manual scoring in the CQT.
3. It does not use probable-lie comparison questions, and therefore is less intrusive than the CQT.
4. It is relatively easy to set up, conduct and score.
5. Because the CIT relies primarily on the orienting response rather than the fear of detection, it can be used in emotionally

charged cases where the CQT might fail.

6. It can be conducted either visually or aurally.
7. It is ideal for evidentiary applications.
8. It can be used as a powerful tool to elicit confessions from those who react to the key items.

#### Limitations

1. The CIT is a recognition test, not a deception test. It is designed only to determine whether the examinee knows certain information about the crime.
2. It cannot be used in circumstances where the examinee might legitimately have knowledge of potential key items, such as when the examinee is a witness or victim, or in "he said – she said" cases.
3. Like the Peak of Tension, the greatest limiting factor is the development of key items. This problem can be overcome for both the POT and CIT by educating the investigative officers on the necessity to withhold information from the public in general, and from potential suspects in particular.

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