Testing the Truth-Teller Who Was There

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Abstract

The danger of having a higher false positive (FP) error rate in testing victims has been acknowledged over the years (Ginton, 1993; Ginton, 1997; Horvath, 1977; Raskin, 1986), and calls for extra caution and specific steps to be taken (Ginton, 1993; Ginton, 1997). Based on a recently published new concept - Relevant Issue Gravity (RIG) (Ginton, 2009) - the present paper claims that this danger exists also in non-victim situations when testing truth-teller examinees that have vivid memories related to the event under investigation (the relevant issue). A recommended preventive remedy in the way of conducting the test is suggested.

Keywords: Comparison Question Technique, CQT, Relevant Issue Gravity, RIG, Truth-teller, False Positive, Elastic Cover, Adaptive Polygraphy.

The physiological reactions we are looking for in psychophysiological detection of deception are by no means "lie reactions." Yes, we do see such reactions accompany the act of deception quite a lot, but not always, and of course, they are known to occur in the absence of any actual or intended lie. Whether they indicate the arising of an emotional response(s) accompanying the perception of stimuli that threaten the examinee's safety or well being (Fight, Flight or Freeze notion) or the cognitive activity reflecting the perceived importance of the stimuli presented to the examinee by the question (salience hypothesis), both of them, or none of them (e.g. internal cognitive conflict or even mere physiological activity), they might look the same. Our task is to make sure to detect and measure their appearance and safely relate them to the occurrence of specific acts of deception. The first task is taken care mainly by the instrument, but the latter has to do with the way we conduct the test, and in particular, choosing the appropriate testing technique preceded by a proper pre-test interview. While it is up to the instrument to detect and measure the physiological reactions when they occur, it is the examiner's responsibility to make sure the examinee is reacting. Most examinees in most instances will react to the questions spontaneously, but some might need to be stimulated to do so. Having taken care of that part of our mission (i.e., making sure the physiological reactions we expect are actually induced), we still face our most important and difficult task, namely, relating them or some of them to specific acts of deception. This is what the examination is all about, and this is the main reason and justification for developing various testing techniques and formats.

The most common technique in modern polygraphy is the Comparison Question Technique (CQT), previously known as the Control Question Technique. The Comparison Question Technique appears in quite a few different formats originating mostly from the pioneering works of John Reid (1947) or Cleve Backster (1963), but always based on a common denominator. The common denominator – which is the essence of the CQT – is the need to compare the physiological reactions between two types of questions: the Relevant and the Comparison (Control) questions. The most basic decision

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rule in any of the CQT formats is very straightforward: if the detected reactions to the relevant questions are stronger, on average, than the reactions to the comparison questions, then the examinee is considered to be deceptive with regard to the relevant questions; when they are weaker, the examinee is deemed "non-deceptive."

The most common theoretical basis for this decision rule, until lately, was laid down some fifty years ago by Cleve Backster, who used the term "Psychological Set" to explain this differential reactivity between deceptive and non-deceptive examinees. By that, I believe, he meant: 1) The examinee concentrates on the aspects posing the greatest threat to his or her well being and automatically reacts to this danger with the emotional physiological fight or flight mechanism in an effort to protect himself, and 2) Due to a kind of differential attention process, while deceptive examinees identify the relevant questions as posing the greatest threat for them, the truth-tellers find the comparison questions to posses this quality.[2]

In recent years another approach has been introduced, namely the Differential Salience Hypothesis that puts the emphasis on cognition rather than emotion (Honts, 2004; Handler & Nelson, 2007; Senter, Weatherman, Krapohl & Horvath, 2010). According to this perspective, the physiological reactions reflect the salience value of the stimuli impinging upon the examinees, and the reason we can see differential reactivity is due to the difference between the truth-tellers and the deceptive examinees in the perceived relative salience of the two types of questions. While for the deceptive examinees the relevant questions are more salient than the comparison questions, the opposite is right for the truth-tellers. Unfortunately the presenters of the Differential Salience Hypothesis in their efforts to stay away from the "Psychological Set" term in its prevailing meaning in the field, have not yet provided a good and sufficient reasoning that can explain the cause or the origin of this differentiation in the states of mind of the deceptive versus the truth-teller examinees, that in turn results in the aforementioned differential salience of the two question types. It should be clear that the differential salience occurs in the minds of the examinees and unless explaining the reason or the dynamic of the build up of this difference between the liars and the truth-tellers states of mind, it seems that what is left is not more than the assumption that "by nature" the two types of questions possess different subjective qualities for the guilty versus the innocent examinees.

Lately, this has been addressed by Avital Ginton (2009), who has introduced a new concept into the polygraph arena, namely the Relevant Issue Gravity (RIG) strength. It is assumed that in order to perceive attentively a stimulus (a must for acknowledging its salience), one has to first be relatively free from other attention-attracting-stimuli. Whenever one's attention is focused heavily on a certain stimulus, it is very hard to distract his/her attention from it and divert it to other stimuli.

[2] "Psychological Set" with different qualifiers for prefixes, is a concept widely used in psychology between the 1950s and the 1980s, describing a psychological state of mind of having predisposition to perceive, interpret, and/or to react to stimuli in a particular way, while relatively ignoring other stimuli, interpretations, or various possible reactions. This tendency or readiness, which might be situational or context bounded, is caused by specific prior experiences, instructions or biases towards a particular interpretation of the target stimuli. (McKeachie & Doyle, 1966; Hilgard & Atkinson, 1967; Marx, 1976; Myers, 1986; Reber, 1995).

Unfortunately, the concept of "Psychological Set" has been used or understood in our field in somewhat erroneous ways, that gives the impression that "Psychological Set" is a term describing specifically the tendency of examinees to respond physiologically with a Fight, Flight or Freeze (FFF) autonomic pattern, to stimuli that pose the greatest threat to their well-being or interests at the moment. Responding to stimuli that pose a threat is not a Psychological Set. However, the reason that an examinee identifies certain stimuli as posing a threat to him and reacts accordingly, is highly influenced by his Psychological Set. Thus, the differentiation found between liars and truth-tellers in responding more to the relevant or comparison questions might be related to different Psychological Sets that they hold.

Upon arrival at the examination room to take a specific issue[3] CQT, whether guilty or innocent, the examinees' state of minds are focused on the relevant issue because they know they are about to be tested on their veracity in this regard. Any stimulus that stems from this issue is preloaded with salience, and the more the examinees' minds are preoccupied with that issue, giving questions related to it more signal value, the more difficult it is to divert their attention to other stimuli and make those stimuli (i.e. other question types) salient for them.

Several factors might contribute to the tendency of the examinees' minds to be bound to and preoccupied by the relevant issue(s), and the overall bounding force that leads to this preoccupation of the mind with the relevant issue(s) was termed by Ginton "Relevant Issue Gravity" (RIG).

According to the RIG strength hypothesis, it is hypothesized that deceptive examinees, as a whole, are more preoccupied with the relevant issue to begin with, relative to the truth-tellers and that results in relatively higher resistance to diverting their attention to the comparison questions' domain when they are presented during the pretest interview and later in the test phase. That brings about a mirror image kind of differential salience of the two question types between the deceptive and the truth-tellers. This means that while for the deceptive examinees the relevant questions are more salient than the comparison questions, it is the comparison questions that are more salient for the truth-tellers. This differential salience in turn leads to the differential emotional reactivity.

One of the main factors contributing to the RIG is the very fact that in most "classic" cases, deceptive examinees actually carry real experiences and memories of the issue probed in the relevant questions - unlike the innocent truth-tellers who have more of an abstract understanding of event with no exact memory traces. These emotional and cognitive traces of memory hold a psychological bounding force towards the relevant issue and strengthen the Relevant Issue Gravity for the deceptive examinees. The RIG strength theory suggests that the success or failure in maneuvering the focus of the examinee's attention from the relevant issues' domain to the domain of the comparison questions, which is manifested in his/her relative strength of reactions to the relevant versus the comparison questions, indicates the strength of the RIG for that particular examinee on that specific occasion. A strong RIG indicates a deceptive examinee while a weaker RIG that results in shifting the attention towards the comparison questions, indicates a truth-teller.

However, if a main factor in strengthening the RIG for the deceptive is the existence of memory traces from the relevant event, then we might also expect to detect a relatively strong RIG in truth-tellers who have actually been through that event and carry with them emotional and cognitive traces of memory of what has happened to them from their perspective. Hence, they do possess a strong bounding force that ties their attention to the relevant issue and interferes with the diversion of their attention towards the comparison questions' domain, resulting in a higher rate of false positives. The risk of having a higher rate of false positive has been acknowledged in the field for many years with regard to various kinds of victims such as victims of sexual abuse, sexual assault, or other kinds of violence, victims of fraud and so forth (Ginton, 1993; Ginton, 1997; Horvath, 1977; Raskin, 1986). However, from the RIG strength theory perspective it also applies to non-victim situations such as a case in which a person who claims to be an eyewitness to a crime, becomes a suspect of the very same crime and ought to take the polygraph examination to refute the suspicion. Similarly, but probably to a lesser degree, an examinee who is suspected of killing a person claims that when he arrived at the scene the person was already dead. Thus, there are

[3] A specific issue CQT is a test that covers one specific issue that is under investigation, aimed to diagnose whether the examinee's version about the case is a lie or is he telling the truth. The examinee knows in advance that the test is targeting that issue.

cases in which the RIG strength theory predicts that the existence of the mirror image like differential salience of the relevant versus the comparison questions between the deceptive examinees and the truth-tellers is somewhat questionable not only with regard to victims but in non-victim situations as well. How should we deal with such cases to prevent false positive outcomes?

When testing an examinee who might have been through the relevant event(s) one way or another, and probably has vivid memories, but denies the specific allegations, it is recommended to opt for a pre-test that starts by discussing the relevant event(s) but very quickly diverts from asking whether the examinee did or did not do the alleged acts, towards whether or not he/she is lying now when denying it? The relevant issue becomes not the alleged acts in the investigated event but the issue of whether or not he or she is now lying in that regard. That kind of professional recommendation has been in the field, for many years for testing alleged victims, at least by Israel Police (Ginton, 1993; Ginton, 1997). But to the best of my knowledge it has never been suggested in the professional literature with regard to other allegations.

Turning the relevant issue away from the original event while keeping the effort to detect deception about it, is expected to result in reducing the RIG strength for all examinees, but it should weaken the truth-tellers' RIG to a higher degree, improving the chances that their attention could be diverted from the relevant to the comparison questions. The deceptive examinee, when asked about lying in his/her version of the event, usually couldn't help thinking and experiencing what had actually happened because, to answer the question, he would have to process it, which we would expect would cue the original incident. For the truth-teller, on the other hand, it is easier to dissociate the relevant questions about lying from the original event's memory traces that he may carry because these traces have nothing to do with lying and because the interaction with the examiner: discussing the relevant questions (about lying), tends to avoid cueing these traces. By so doing the bounding effects of the memories from the original event on the RIG strength will still exert their influence in the deceivers' minds, interfering with diverting their attention towards the comparison questions' realm, while relatively reducing their influence on the mind of the truth-tellers, and it will be easier to divert the attention of the truth-teller examinee towards the comparison domain. It is important to say that it is not expected to totally eliminate the impact of the memory traces on the RIG of the truth-teller rather it is only expected to weaken their effect, so, whenever the traces of memory carry a very heavy load, traumatic or sensitive, this remedy won't be enough to prevent false positive outcome.

In terms of technique, the best way to follow the recommendation is to ask the examinee to write, in the presence of the examiner, a short statement in which he or she denies the allegations, and then to ask whether he or she was lying in that written statement. Unfortunately due to lack of relevant empirical research, this recommendation could not be supported by clear cut data. However, it does gain support, for what it is worth, from a lot of personal experience with both the probable false positive outcomes in such cases, if the tests are conducted in the regular direct manner and with the success of the recommended remedy to cope with such situations.

Finally, some people might think that the kind of recommendation given above contradicts the important, and in a way the "bon ton" tendency to pursue greater standardization in our field because it introduces the notion of state-dependent variations in the way the CQT examinations should be conducted. While this claim seems to be true at first glance, it is still for the benefit of our profession. To put it in a wider perspective, it is the opinion of the present author that the extreme striving for rigid standardization in the name of science is based in a way on a simplistic and limited concept of what science is. It is true that behavioral and biological sciences should deal with the central tendencies of phenomena which are formalized in general rules that concern most of the existing variance while treating the individual differences or the variation between existing situations as irrelevant noise. However, this is only the first step, and probably the easiest one, the next

steps must deal with the individual and specific situational variance not as a noise, but as part of the phenomenon that needs to be systematically addressed and explained. It is therefore that nowadays in the field of medicine there is a clear trend to shift from the simple standardization of diagnoses and treatment to individualized or personalized medicine, which is leaned heavily on individual differences found between the patients in biological, psychological and environmental aspects, and applies tailor-made diagnostic yardsticks and treatments based on the specific variations found in that specific patient at the time. This medical philosophy and practice says that modern medicine should be Personalized Medicine, meaning "Different Things to Different People," as has been stated by a leading international organization of medicine the Personalized Medicine Coalition Organization, in its Mission and Principles chapter (2010).

It is the belief of the present author that we should not, in the name of science, throw away the tailor-made approach in conducting polygraph examinations that for years has characterized the work of the best polygraph examiners and shift into the standardized "scientific" mediocre kind of work. We should adopt the scientific methods not only in favor of standardizing our profession but also to improve our understanding of the "art" quality found in our work rather than suppress it in the name of science and standardization. Thus, I call to keep in mind that modern polygraphy means understanding and conducting "Different Things to Different People and Different Situations." In other words I call for developing an adaptive approach or adaptive polygraphy.

Polygraph or the Psychophysiological Detection of Deception, is a short blanket that can not cover everything without paying in errors. A clever polygraph examiner and a wise usage of polygraph must make a choice whether to cover the feet or the head with this short blanket and conduct the examination accordingly (Ginton & Ber, 1992). That seemed to be recognized lately more and more, at least with regard to the scoring (e.g. Krapohl, Stern & Bronkema, 2003), but a wiser approach should look to turn the short blanket into an elastic cover that can deal differently with different people and different situations (Ginton & Ber, 1992). That is the only way that can improve our performance beyond the glass ceiling of 90% accuracy.

This doesn't mean to abandon the attempt to formulate standard rules but rather to try to formulate second or third generation rules, which should be applied differentially in accordance with the differences between the cases, the kind of examinees and the specific situation, sometimes unique, that characterize the particular examination. The case of testing "Truth-tellers who were there," presented in the article, is but one example of this adaptive polygraphy approach.

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