

On Precautions for Atlas Judgment of Criminal Psychological Testing Techniques

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Abstract : In criminal psychological testing, the testing atlas would be a very important basis for drawing conclusions. However, in real-life testing, there are often cases where the testing atlas are not ideal, making it difficult to draw conclusions. Therefore, using extra-graphic information such as overt behavioral information, micro-expressions, and verbal interactions, this paper investigates the method of using information outside the atlas combined with testing techniques to judge through the testing of actual cases, aiming at serving practical needs of the field.

Keywords : Criminal Psychological Test; Atlas; Judgment

The testing atlas has been the most reliable basis for the test, with three major indicators, namely skin conductance, respiration, and heart rate. Some devices are equipped with electroencephalogram parameters, which are not yet mature enough to give valid case information in lie detector tests, and sometimes can affect the comfort of the person being tested by wearing it on the head and cause physical discomfort to the person being tested, thus affecting the changes of atlases. Therefore, the use of electroencephalogram parameters is not recommended at this stage of testing. Some instruments are available with two respiratory parameters, thoracic respiratory and abdominal respiratory parameters, which are used together, which is not really necessary because one parameter is enough to collect the respiratory signal. Some instruments do have action parameters, which are mainly used to record the abnormal actions of the subject, and this parameter indicator can be used for reference. In practical applications, the atlas response is often anomalous due to subjective and objective reasons, and there are situations where no conclusions can be drawn, which requires the use of other information and other indicators to draw conclusions collaboratively in order to improve the accuracy and reliability of the test conclusions. Criminal psychological testing technology is a technique that relies on both machines and humans. In the real test, it is important to give full play to the role of the main testers to crack the difficult deadlock, rather than allowing the instrument to dominate the test.

1. Be cautious about jumping to conclusions on the spot

In criminal psychological testing techniques, at the end of the test, if the test results or the core issues of the case and the detection of key issues are immediately announced to the subject on the spot, it has a strong deterrent effect on the subject who is still in a state of passionate stress after the test, which can quickly dismantle the subject's psychology of fluke and rejecting confession, and thus play a catalytic role in the subsequent interrogation. In addition, the interrogation immediately after the test can often quickly break the psychological defenses of the tested subject. However, to achieve this desired effect, the facts or core details of the case announced by the main testers on the spot must be accurate, otherwise, the tested subject will easily access the test information, overturning internal doubts about the accuracy of the psychological testing technique and strengthening the will to take a chance and confrontation. Once this happens, criminal psychological testing techniques are considered to have a side effect on the

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investigation and trial of the case. When evaluating the atlases on site, the evaluation in a short period of time can easily be wrong due to factors such as attention allocation, physiological factors of the tested subjects, reliability of question preparation, verbal interactions, behavioral movements, and emotional overt behaviors. In practical tests, there are few tests that have been completely invalidated because one or two details in the whole case have not been measured correctly. To avoid this, we should not rush to draw a conclusion on the spot right after the test, and we need the test team to review and re-evaluate the testing atlas and various factors in the testing process to fully evaluate the system factors before we can draw a cautious conclusion.

2. To combine overt behaviors for a comprehensive evaluation

The evaluation system of the technical conclusion of the criminal psychological test is diversified, although the atlas is important, the non-atlas information also contains great value, especially the overt behaviors, the testers of the actual cases will all pay high attention to them, and will repeatedly study the video data before, during and after the test, and judge the relationship with the case from the overt behaviors information of the tested subjects. Information of overt behaviors includes a combination of body movements, physiological responses, verbal expressions, eye contacts, and other manifested states. Some testers arrange all the tested persons to line up in the same waiting room before the test, record the overall activity status of all the persons with high-definition camera system, and after the test, the comprehensive information of all the persons is studied and judged by high-definition video, and then the testing atlas is combined to weight the statistical test conclusion with high accuracy. High-definition audio and video data of the whole process of testing is particularly important, therefore, we should focus on video data collection and collect video data of the original state as much as possible. Ideally, the data collected are all unmasked video data of the subject, which are more credible. The abnormal signals of the physiological reactions of the tested person should also be paid great attention to, such as the back of the tested person's cold; The tested person is in a cold sweat; His/ her hands are shaking; his / her face flushes bright red and other abnormalities are also physiological signals after the lie is revealed.

3. To combine micro-expressions for a comprehensive evaluation

The history of utilizing facial expressions to tell lies dated back to the development of the human face, where the clear, recognizable human face became the inner effect or once hair on the face was removed. For example, the faces of birds are especially small, making it difficult for us to observe their facial expressions.

Various facial expressions of people become important clues to identify lies in interpersonal and criminal cases investigations. However, the higher and more sophisticated brain is able to control and evoke facial expressions to conceal real thoughts and emotional feelings, especially during social activities where such concealment and hiding are more frequently expressed. In criminal cases involving imprisonment and death, both the criminal and the innocents show more complicated facial expressions since the former would attempt to muddle through, while the latter is afraid of being wrongly accused or afraid of getting into more trouble and not wanting to be involved in the circle of right and wrong, which are hard to distinguish who is the real criminal.

However, with the further development of lie detection studies on facial expressions, certain rapid and brief facial expressions have been found to be truly representative of human mental activities and related emotional states. What is questioned is whether these brief and rapid facial expressions are disguised by the human brain as well. Studies have demonstrated that these brief and fleeting expressions are expressions that the brain has not yet had a chance to process and process, representing the real thoughts and emotional activities of people at that moment, which are micro-expressions.

In polygraph test, facial expression serves as a physiological indicator for the reference of polygraph conclusion, but the main testers are easily disturbed by wrong facial expressions, thus if micro-expressions are incorporated into the evaluation system of polygraph, the accuracy rate of polygraph test can be improved.

4. To combine verbal interactions for a comprehensive evaluation

When the tested person deliberately disrupts the pace of the conversation and changes the topic of the conversation in the pre-test or post-test conversation, it often means that the tested person wants to avoid and evade certain facts, and this information is a signal of involvement in the case. In the test of criminal psychologies in major cases, 70% of the people concerned in a case all showed behaviors of changing the subject. Explained from the viewpoint of attention theory in psychology, it is the subject who wants to interfere with the attention of the testers and distract the focus of the main testers.

In a large number of practical cases, most of the tested people or suspects are under the illusion that they believe that "their words will change the judgment of the personnel handling the case", resulting in constant explanations, constantly changing the topic to cover up the fear in their hearts, so when there is a constant explanation, we should also pay attention to it. Those who are not connected to the case, of course, also worry about being wrongly accused, but their explanations are more about the relationship

to the case or to specific certain investigative subjects than about the facts of the case itself or key details. The focus of attention also needs to be determined in the case of verbal abnormalities, and the principle of control question test is actually linked to the victim's focus of attention. At the end of the test, it is necessary to repeatedly listen to the verbal expressions of the tested persons and study their concerns combined with the atlas to draw conclusions. In the actual test, attention should also be paid to the tested subjects who show deliberate goodwill and active closeness during the pre-test conversation with the main testers, and some female subjects may also show deliberate weakness, which are anomalies in verbal interactions.

5. To combine abnormalities in the atlas for a comprehensive evaluation

There are also cases where the galvanic skin response is extremely weak throughout the test, and it is difficult to draw conclusions based solely on the atlas, in which case the flexible use of other methods is critical. In one burglary test, the male subject was 28 years old, with good physiological status and low level of galvanic skin response during the whole test, and the test results were inconclusive according to the atlas at that time. However, according to years of pre-test experience, based on the comprehensive performance of the detective information and pre-test conversation with the tested person, the main tester asked the tested subject in a clear manner at the end of the test: "Now you can talk about this case", the tested subject then admitted the process of the crime, and confessed to it. In another test of a murder case, the tested subject's atlas response was weak, and after the test was over, the main tester suddenly disclosed that there was someone else who knew about the case, and the subject then immediately confessed that his father knew about it, and the case was quickly broken through after a surprise interrogation of his father. What these cases reveal is that there is a loss in the process of converting the psycho-physiological signal of the tested person into an electronic atlas signal, therefore, it is important to respect this objective law in the atlas evaluation and make up for the deficiency by using other methods.

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