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Psychological Assessment of Brain Damage

Bill J. Barkley*

APPROXIMATELY 100 YEARS to grow up legally! Why? Lack of communication, which leads to lack of understanding, lack of contact, and lack of involvement between the two professions is the only explanation. We need more emphasis upon courses in Forensic Psychology in our law schools as well as in our graduate departments of psychology. The average clinical psychologist shies away from involving himself in cases that might eventually lead to testifying. The psychologist is not trained to answer with a "Yes" or a "No" and therefore is not accustomed to this procedure in the court room. In my estimation it is time that the clinical psychologist is helped to grow up legally, by having a better understanding of forensics, and it is time the legal profession is helped to grow up by a better understanding of psychology. The slow, but gradual increase in the requests for articles such as this, as well as those of Caldwell¹ and Albee², in addition to increasing the courses in Forensic Psychology will only make it possible for this growth to take place. Marshall Houts punctuates this need when he says, "As lawyers, I think we owe our clients the duty of exploring this relatively unused method of scientific proof."³

A qualified well trained clinical psychologist with the doctor of philosophy degree from a recognized university can be of help to the lawyer in a great number of cases. Caldwell⁴ gives a very thorough presentation of the criteria to be considered when choosing a clinical psychologist to work on a legal problem, although I disagree with him on the matter of the diplomate status. I do not feel that any lawyer should put too much stock in Caldwell's statement, "Although lack of diplomate status should not be held against a clinical psychologist who testifies as an expert witness, having it could be presented strongly in qualifying him as a man with advanced professional standing." As every lawyer

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¹ Caldwell, *Courtroom Use of Psychological Testing 1 Trauma* (No. 6, 1960).

² Albee, *The Use of Psychometric Tests The Head* (1957).

³ Houts, *Has Psychology Attained Legal Age 1 Trauma* (No. 6, 1960).

⁴ Caldwell, *op. cit. supra* n. 1.

knows, in addition to a qualified academic background, and years of experience, he also wants and needs a professional expert witness with courtroom sophistication. Many accredited expert witnesses have folded upon testifying, and cases have been lost. In my opinion, holding the diplomate status is not necessarily a qualifying sign of advanced professional standing. Forensic psychology like clinical psychology should consider the individual and not the labels.

What are the cases in which a clinical psychologist can be of assistance to the lawyer? There are many, but I feel the following are the most important: personal injury with brain damage, personal injury with emotional disturbance, mental deficiency, mental competence, probation for mental illness, divorces, competency for custody of children, adoptions, and first offense acting out criminality. Since my specialty is organic brain damage testing and because so many personal injury suits involve this question of the presences of brain trauma or not, I shall limit myself to discussing the value of psychological testing in this area alone.

Before discussing cases where psychological testing either proved or disproved the presence of organic cerebral pathology, I want to stress the importance of the lawyer, psychologist, and neuro-psychiatrist working very closely together as a team. This team approach, with all three members of the team having consultations, both before the client is tested or examined and afterwards, is of utmost importance and has proven invaluable in the many cases I have testified on regarding the presence or absence of organic brain damage. All too often the lawyer calls a neuro-psychiatrist requesting a neurological work-up and a brain wave test and then requests that he pick some psychologist for the testing. The opposite has happened where the psychologist was contacted first and then asked to recommend some neuro-psychiatrist. Usually following this type of initial contact, there is the expected flow of reports to the lawyer's office, and none of the persons on what I would like to call the desirable forensic team meet until maybe fifteen minutes before court opens. This is a most undesirable procedure, and should be transplanted with consultations and briefing as described above.

The recent decision in *Jenkins v. U. S.*⁵ has reinforced the acceptance of the psychologist as an expert witness. There the Court stated:

⁵ D. C. Cir. No. 16306, October 26, 1961. See also: 78 A. L. R. 2d 919 (1961) for annotation on psychologists as expert witnesses.

Qualified psychologists no less than qualified psychiatrists can help a jury to discharge this burden by giving it the benefit of their opinion as expert witnesses.

What can a competent clinician trained in psychology offer the lawyer with the use of psychological tests? I agree with Albee⁶ when following what I think is a very excellent discussion of intelligence and intelligence testing, as well as brain damage, he says, "None of these tests have any magical properties, none of them are certain or sure, . . ."; it is the clinician using the instrument, whether it be a psychological test, a brain wave machine, or a reflex hammer.

Every practicing lawyer as well as every student of law owes it to himself to acquaint himself with Caldwell's⁷ excellent very thorough presentation of approximately twenty-five different tests that a psychologist might use in legal diagnostic work-ups. This should be considered a standard reference source for any case involving organic brain damage. New tests are being developed every year, and different clinicians feel more comfortable with some tests than others. As you will note from the cases discussed *infra*, this writer never uses a standard battery; the results of the first test administered more or less dictates the tests that follow, as well as the condition of the client, time, and place of testing.

The cases which will be discussed in this article will not be presented as uniform legal citations, but rather as psychological summaries of cases that were of assistance to the lawyers concerned. I will therefore refer to them in an anonymous manner rather than case name.

CASE NO. 1. The plaintiff had been hit on the head by a steam shovel and one and a half years later started a round of being examined by four neuro-psychiatrists. The first one found that the psychic function in abstract thinking and digit span recall was impaired. The second one reported that regarding eye grounds, there was residuals of preexisting papilledema evidenced by blurring of nasal disc margins of both eyes and peripapillary "light rings," as well as constriction of both visual fields, the right being worse. The third examiner reported twitching of muscles of forearm and parathesia of left thigh along with recommending the need for further study concerning organic brain

⁶ Albee, *op. cit. supra* n. 2.

⁷ Caldwell, *op. cit. supra* n. 1.

damage. Following this an EEG was performed which showed some bitemporal asynchronicity within normal limits and the left temporal area shows occasional paroxysmal. Finally, after all of the above, the plaintiff was referred for psychological testing, and a battery of tests was administered which included the Rorschach, Visual Bender Gestalt, Graham-Kendall, Free and Controlled Recall, Kohs Blocks, and the Shipley Hartford Retreat Scale.⁸ A somewhat detailed analysis of these test results, particularly in this first case, will be of help to the lawyer in knowing what to expect in such reports.

The Rorschach record was very limited and unproductive. The limited number of associations he had at his disposal resulted in an inability to interpret two of the ten cards. Lack of emotional responsiveness is of the irritable, impulsive, and uncontrolled variety. Poverty of ideas prevented a new interpretation for each block and therefore, we find a perseveration of responses. The same response is given through several successive blots with no regard for its fitness. There was rigidity of thought processes and inability to think in the manner of the normal average subject. He recognized inadequacies in his responses but was unable to do anything about them. There was a poor range of psychic reactivity. In typical organic brain damage functioning he constantly sought reassurance for his performance. Eight of the classical organic signs were present in the record, and on the Robert Hughes Organic Quantitative Scale⁹ he achieved a score of thirteen which is six points above the critical score of seven. Dr. Hughes found in his study that when a score of seven or higher was used 82% of patients with organic brain damage would be correctly identified.

The Bender Visual Motor Gestalt Test further punctuated the presence of organic cerebral pathology. A score of nineteen, using Barkley's objective scoring manual,¹⁰ places the subject well within the organic brain damage group, since his score is three points above the critical score of sixteen. The performance was also indicative that his is a motor disturbance rather than a disorder in perceptual organization. Auditory recall, both free

⁸ See: Caldwell, *op. cit. supra* n. 1 for a comprehensive discussion of the individual psychological tests referred to throughout the article.

⁹ Hughes, *Rorschach Signs for the Diagnosis of Organic Pathology* 165 J. Proj. Technique (1948).

¹⁰ Barkley, *Visual Motor and Hapto-Kinesthetic Perception in Brain Damage Cases* (Unpublished Dissertation Western Reserve University Library 1952).

and controlled, are grossly impaired. The visual memory for designs as measured by the Graham-Kendall was only borderline, which indicates that this perceptual process is not as grossly impaired as others. His entire performance on the battery of tests administered clearly indicates the presence of organic brain disturbances. The results were particularly significant in that there was marked inter-test agreement in indicating the presence of organic brain pathology with resulting deficit. It is further indicated that the prognosis is poor as the results suggest that the plaintiff's functioning will progressively deteriorate.

The above case is not only interesting from the fact that the psychological testing was more pointed and conclusive in highlighting the organic cerebral pathology than the EEG was, but this was also the case in which the judge recognized the clinical psychologist as an expert witness. The case was heard before a jury and a verdict was rendered in favor of the plaintiff.

The value of using a wide battery of psychological tests, but only by a competent qualified psychologist, is emphasized in the following case.

CASE NO. 2. The plaintiff had suffered from a head injury and his lawyer had him tested by a non-qualified psychologist. He administered a wide battery of recognized psychological tests, but did relatively little with the results and his final report said practically nothing. The lawyer for the insurance company obtained a copy of those psychological test results and forwarded them to me for my appraisal and comment.

I submitted the following report concerning those test results:

Mr. X says, in his first paragraph, that his results suggest that the plaintiff has suffered from some form of cortical impairment, but does not go on further to indicate how he comes to this conclusion. He then states in a second remark that certain mental operations appear to be intact, and that the plaintiff's ability for abstraction is generally intact. The latter is particularly contra-indicated in cases of organic cerebral pathology. If the plaintiff's ability for abstraction is generally intact, then he should also be able to acquire new knowledge whether the material is intangible or not. This also causes me to question another statement in Mr. X's opening paragraph, where he states that the plaintiff's I.Q. is 122, but does not give us a memory quotient for the Wechsler Memory Scale which would enable us to compare any discrepancy in this area, even though he had administered the Wechsler Memory Scale.

Mr. X's opening statement in paragraph 2 which says to effect this is more significant since the inability does not seem attributable to psycho-neurotic interference, is not backed up with satisfactory test findings, which I am sure would have been significantly indicated on the Rorschach, which he administered. If test results indicated an attitude towards failure, or inability to perform, I would like to know why Mr. X feels that this is a typical example of anxiety of the organic patient rather than that of an anxiety state alone.

The Bender Motor Gestalt Test has long been used as a measure of organic cerebral pathology, and has many subjective signs indicating organic brain damage, but Mr. X again fails to mention any of these indications, in spite of the fact that the test was administered. He further fails to mention any of Piotrowski's ten signs of organicity or incorporate the objective score of Hughes indicating organicity on the Rorschach. I feel that Mr. X has purposely kept his report general and vague and that the client should be re-tested for reasons stated above. The re-testing would compile adequate psychological data to either rule out Mr. X's vague generalities, or to substantiate them before trial.

As a result of these comments and recommendations to the insurance lawyer, the client was re-tested. Unfortunately, he was unavoidably one and a half hours late for his appointment, and this necessitated omitting two tests from the battery originally planned. However, I administered the Wechsler Adult Intelligence Scale (WAIS), the Wechsler Memory Scale Form 1, the Visual Bender Gestalt Test, and the Graham-Kendall Memory for Designs Test were administered, and the following results were obtained.

On the WAIS he achieved a Verbal I. Q. of 110, a Performance I. Q. of 107 and a total I. Q. of 109. The fact that there is only a three point difference between verbal and performance is a contra-indication of Organic Brain damage. We must immediately question why the previous examining psychologist obtained an I. Q. of 122 two months ago as compared to the I. Q. of 109 achieved at this time. The fact that all three I. Q.'s on the WAIS are so similar, and that the vocabulary subtest skill, which is not usually affected by any trauma, is in keeping with the range of the above three I. Q.'s found, which makes one think that this is approximately the real everyday functioning level at which this plaintiff has always operated.

In considering his deterioration, on the WAIS, when we com-

pare the "hold" and "don't hold" tests,¹¹ we find that his deterioration ratio of 23% is only 3% higher than that expected by the normal population of his age. It must also be kept in mind that one-half the cases in a normal population will have "Don't hold" tests lower than "hold" tests. Neurotics, as well as brain damage patients, score lower on performance than they do on verbal sub-tests. The plaintiff scores on Picture Completion and Block Design are greater than his scores on Picture Arrangement and Object Assembly, which is in keeping with a picture of neurotic overlay, rather than organic brain damage.

On the Wechsler Memory Scale, the plaintiff achieved a memory quotient of 79, but it was found that his mental control was un-impaired, and that his visual memory ability is also well intact, however, all items dealing with auditory perception are interfered with. His auditory memory span; his immediate memory recall; and his auditory associative learning are impaired, and it is the result of his performance in these three areas that he scored so low on the memory quotient. No organic brain damage functioning was elicited on the Visual Bender Gestalt Test or the Graham-Kendall Memory for Designs test. On the Bender he achieved a score of 7, which is within the normal range of functioning, and a score of 2 on the Graham-Kendall, which is also within the normal range. In summary, it can be said that the above test results are not indicative of organic cerebral pathology; that the plaintiff has no impairment in the visual motor sphere, that his memory for visually perceived material is intact, his retention of previously learned knowledge is unimpaired; mental control is very good; ability for abstraction is profitably functioning; and that he is capable of new learning as long as it is not auditorily presented. Thus it would appear that the test results do not suggest gross deterioration in either mental processes or general character.

The above report was submitted, the hearing was set, and fifteen minutes before I was to be called to testify, the lawyers for the plaintiff agreed to settle without continuing the hearing.

The third and final case that I would like to discuss is interesting in that it was an open and shut case of definitely estab-

¹¹ The subtests of the WAIS, for diagnostic purposes, may be classified into these two categories. The "don't hold" group will usually yield lower scores where there is organic brain damage; whereas the "hold" group may render higher scores regardless if organic brain damage is present or not.

lished organic cerebral pathology as shown by both the EEG as well as the psychological testing, but the case was thrown out of court because of so many discrepancies in the testimony of the plaintiff, and the psychologist was never called to testify.

CASE NO. 3. The plaintiff suffered brain trauma following an automobile accident, had been unconscious for several minutes, the EEG examination indicated abnormality, and he was referred for psychological testing by his own attorney. A battery of psychological tests was administered, including the Shipley-Hartford Retreat Scale, the Graham-Kendall Memory For Designs, the Wechsler Adult Intelligence Scale (WAIS), and the Wechsler Memory Scale Form 1.

The results of the WAIS were punctuated with signs of typical post traumatic brain damage. There was a wide range of scores on the sub-tests, and the large discrepancy between his Verbal I. Q. of 124 compared with his low Performance I. Q. of 75 most certainly points to this finding. The scores on the WAIS indicate a deterioration quotient of 76 and when we compare this with the quotient of 96 which is expected for persons of his age, the results again clearly indicate a marked residual impairment of the plaintiff's conceptual processes. On the Wechsler Memory Scale he achieved a Mental Quotient of 92 which isn't too low, but when compared with the Verbal I. Q. of 124 on the WAIS, which I feel is more in keeping with the plaintiff's original basic intelligence, we then have indication of a memory loss. His mental control is fair, but both visual and auditory retention are very poor.

Both the Shipley-Hartford Retreat Scale and the Graham-Kendall scores were pathognomic and indicative of post Traumatic organic cerebral pathology.

The presence of the organic signs of perseveration, concrete thinking, perceptual impairment, memory loss, impairment of new learning, and rigidity of thought processes; being highlighted throughout all the tests, clearly indicates that the plaintiff is suffering from organic cerebral pathology with deterioration.

Summary

There is a realistic need for recognizing the psychologist as a legal aid. Team work between the lawyer, psychologist, and neuro-psychiatrist with consultation both before examination and after is necessary. Lawyers must acquaint themselves with

the various psychological tests and insist that reports are detailed and substantiated with scientific findings. There is a great need for a more thorough understanding of forensic psychology among lawyers and psychologists. The lawyer must be sure to choose a qualified psychologist and he should look at the psychologist as a qualified expert witness rather than a conveyer of test findings, and only the psychologist should be considered capable of presenting his findings in court.