An analysis and evaluation of the Wechsler-Bellevue patterns of alcoholics with auditory and visual hallucinations with an attempt to discover any discriminable diagnostic pattern.

Arnold. Binder
University of Massachusetts Amherst
AN ANALYSIS AND EVALUATION OF THE WECHSLER-BELLEVUE PATTERNS OF ALCOHOLICS WITH AUDITORY AND VISUAL HALLUCINATIONS WITH AN ATTEMPT TO DISCOVER ANY DISCRIMINABLE DIAGNOSTIC PATTERN

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WITH AN ATTEMPT TO DISCOVER ANY DISCRIMINABLE DIAGNOSTIC PATTERN.

BY

ARNOLD EUGENE BINDER

PROBLEM SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE, MASTER OF SCIENCE

AUGUST 1950
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PROBLEM AND BACKGROUND

The purpose of this study was to discover if there is any characteristic patternning of Wechsler-Bellevue subtest scores which may be an aid in the differential diagnosis of alcoholic types of "delirium tremens" and "hallucinosis".

The background of this study began when Dr. Harry Michelson of the Northampton State Hospital suggested that there might be some way in which the type of hallucination which is experienced by the alcoholic could be determined prior to the onset of these symptoms. Inasmuch as those patients experiencing "delirium tremens" almost always have hallucinations in the visual sphere and those with "hallucinosis" almost always experience auditory hallucinations, the clear-cut diagnosis of these two types is forthright when these symptoms are apparent. However, it was proposed that there is some psychological rather than physiological reason for the type of hallucination seen in these cases.

Elaborating upon this hypothesis, Dr. Michelson has suggested that the sensory modality most often and consistently relied upon in new learning situations and in the guidance of routine behavior would determine the type of hallucination noted. For example, if the person has always depended more upon the visual senses in learning in school or on the job, he would be more inclined to have visual hallucinations when under the influence of an excess of alcoholic indulgence. Likewise, if more dependent in the past upon the auditory apparatus and faculties in learning, he would
be more likely to experience hallucinations in that sphere.

A close examination of the literature extending back to 1927 disclosed no evidence of any previous work on this specific topic or hypothesis.

In order to establish or investigate the validity of such a thesis, the test used had to include some method whereby these two faculties could be adjudged in one single performance situation, if at all possible; the investigation would have to be so planned that some previously standardized and accepted psychometric instrument could be utilized as the performance situation.

It was not the purpose of this study to attempt to prove or disprove the validity of Dr. Michelson's hypothesis, but rather to determine if any characteristic patterning of subtests of the Wechsler-Bellevue exists which might be an aid in the differential diagnosis of the two types of alcoholics mentioned, "delirium tremens" and "hallucinosis". It would remain for later work to unite Dr. Michelson's hypothesis with any findings growing out of the present study.

If the Wechsler-Bellevue in a later investigation is found to reveal differences in a factor called "tendency to rely upon vision or audition", and if the proposed hypothesis of the characteristic patterning is found to be correct, then the Wechsler-Bellevue may be used to examine the hypothesis of Dr. Michelson as just described.
MATERIALS, SUBJECTS AND PROCEDURE

The material used in this study consisted only of the Wechsler-Bellevue Adult Intelligence Scale, Form I.

The subjects in this investigation were alcoholic in-patients of the Northampton State Hospital. Those patients who admitted to either type of hallucination or upon whose record the attendant doctor had noted the presence of these phenomena were used in this experiment; patients experiencing both forms of hallucinations were excluded. In some cases the social histories have had to provide record of hallucinations in the past.

A close examination of the records of all incoming patients, as well as a scrutiny of the records of those patients already resident at the Northampton State Hospital, was made and those individuals suitable for the experiment were selected and their social histories recorded. (1)

Due to the few persons available, the following controls were not usable in this experiment: age, length of intake of alcoholic beverages, type of alcohol taken, economic status, sociological background, educational background, number of previous admissions

(1) Data contained in the social histories were not analyzed in the present study, but are included (see Appendix) in the interest of future analysis.
for same and different reasons and diagnoses, length of treatment in hospital, hereditary background and intelligence.

The procedure was simply to give all the subjects the Wechsler-Bellevue, Form I, record the test patterns and social histories together with any additional information on the person deemed valuable (i.e., abstracts from other institutions), then to attempt an analysis of the patterns noted.

One of the first things to be mentioned in this study is the small number of patients that were available to the examiner. This can be better understood when it is pointed out that although there were something like twenty-three hundred patients in residence at the time of the study, the number of suitable cases was very low. From the beginning of the problem, it was evident that few alcoholics were admitted to the hospital who suffered from hallucinatory experiences either prior to or subsequent to admission. Up to and including the sixth week of residency by the writer, from among those who were admitted it was possible to secure only these four cases. A few other alcoholics were tested, but these were subsequently found to have had both types of hallucinations at one time or another, and therefore could not be used in the present study.

The Wechsler-Bellevue was chosen for purpose cited as one of the most useful tests available and as one of the most versatile as regards the types of people to whom it could be given. Also, more work had been done with this test than most, with diagnostic interpretation as the ultimate goal.
However, it should not be assumed that this was the only test which could have been used for such a study. It was merely the writer's premise that a characteristic patterning differentiating "delirium tremens" from "hallucinosis" patients could be found using the Wechsler-Bellevue, though it might have been seen using other tests; also use of the Wechsler-Bellevue fitted in best with the requirements of the training program of which this study was a part. But it must be stated that it was the writer's opinion that this test incorporates a flexibility of interpretation which made it more adaptable to the problem than other tests.

Another point to be raised is the lack of suitable controls for this experiment. However, it can only be reiterated that such controls were impossible under the conditions present at the time of the study and with the number of cases available for experimentation and evaluation. It was with regret that only diagnosis, sex and test used could be named as having been kept constant. But it was the hope of the writer that the problem might be redone using a large enough number of cases and with enough experimental variables held constant to permit statistical treatment and evaluation of the results.

In view of the above-mentioned facts, it must be understood that no really conclusive statements can be formulated on the basis of the available evidence. Only tentative statements of conclusions can be made.
RESULTS AND DISCUSSION

Table I shows the respective Wechsler-Bellevue subtest patterns of the four subjects used.

Vocabulary scores were not included in the test pattern analysis because, as noted, the intelligence of the subjects could not be held constant. Vocabulary is considered almost universally to be an excellent index of the intelligence of an individual. Wechsler himself included the Vocabulary subtest only as an alternate test, at the first publication of his test, and only later included it in the regular administration instructions of the test. Also, little if any work has been done in diagnostic evaluation using this subtest. For these reasons the test was not used for analysis, although the scores were included in the interest of future analysis.
# TABLE I - Weighted Wechsler-Bellevue Subtest Scores

<table>
<thead>
<tr>
<th>Subject and Hallucination Type</th>
<th>A (vis.)</th>
<th>B (aud.)</th>
<th>C (vis.)</th>
<th>D (aud.)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Verbal Subtests</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information</td>
<td>12</td>
<td>11</td>
<td>13</td>
<td>11</td>
</tr>
<tr>
<td>Comprehension</td>
<td>11</td>
<td>11</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>Arithmetic</td>
<td>9</td>
<td>9</td>
<td>16</td>
<td>7</td>
</tr>
<tr>
<td>Digit Span</td>
<td>16</td>
<td>3</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Similarities</td>
<td>11</td>
<td>7</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td><strong>Total Weighted Verbal Score</strong></td>
<td><strong>59</strong></td>
<td><strong>41</strong></td>
<td><strong>53</strong></td>
<td><strong>33</strong></td>
</tr>
<tr>
<td><strong>Vocabulary</strong></td>
<td>13</td>
<td>11</td>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td><strong>Performance Subtests</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Picture Arrangement</td>
<td>9</td>
<td>7</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>Picture Completion</td>
<td>10</td>
<td>9</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Object Assembly</td>
<td>8</td>
<td>12</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>Block Design</td>
<td>10</td>
<td>4</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>Digit Symbol</td>
<td>10</td>
<td>7</td>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Weighted Performance Score</strong></td>
<td><strong>47</strong></td>
<td><strong>39</strong></td>
<td><strong>62</strong></td>
<td><strong>24</strong></td>
</tr>
</tbody>
</table>
The results presented in the foregoing table can be evaluated in several possible ways. One such way would be to make a comparison for any diagnosis of the total weighted scores of the verbal and performance sections of the Wechsler. Another way would be to study the individual subtest scores with regard to the type of hallucinatory experience of the particular patient. A third method would include the comparison of the results of two or more tests as being part of a definite patterning making possible diagnosis on its basis in part or in whole.

When seen in the light of the first type of analysis the following facts are evident:

1. The Verbal total weighted scores of those persons experiencing auditory hallucinations exceed very slightly the total weighted Performance scores of these same persons.

2. There is no consistent evidence of superiority of Verbal over Performance weighted scores, or vice versa, of those persons having visual hallucinations.

Upon analysis of the second type (individual tests with diagnosis), it is found that in "visual" types, there is higher Information than Comprehension accomplishment. This distinction is not seen in the "auditory" types.

Finally, seeking a pattern of subtest scores related to types of hallucination, the following evidence is presented:

1. In "visual" types, there are higher Digit Span subtest
scores seen than in the "auditory" cases.

2. Picture Arrangement subtest scores are higher for the "visu- 
   uals" than for the "auditory" cases.

3. Block Design scores of the "visuasls" exceed those scores of 
   the "auditory" type on the same subtest.

4. The Digit Symbol score of the "visual" type surpasses that 
   of the "auditory" individuals.

In general, there is a higher level of achievement seen in the 
Performance subtests of those persons suffering from visual halluc-
inations than those of persons with auditory hallucinations when suf-
fering from alcoholism. However, there is a seemingly characteristic 
pattern of the "visual" type wherein most of his Performance subtest 
scores surpass those of the "auditory" type patient. In fifteen of 
the twenty comparisons of Performance subtest scores possible with 
these four subjects, the "visuasls" scores exceeded those of the 
"auditories".

Some of the interpretations seen on analysis of the test patterns 
themselves are:

a. "Visuasls" show greater span of attention and ability to learn 
   well in new situations, together with better rote ability, as evidenced 
   in the higher Digit Span scores of the "visuasls" than of the "audi-
   tories".

b. Greater social awareness together with contact with society 
is evidenced for the "visuasls" than the "auditories" on the basis of 
the better Picture Arrangement subtest scores of the former type.
c. There is also seen a better visual-motor coordination ability for the "visuals" than the "auditories".

d. Lastly is seen a better ability to deal with abstracts in the performance sphere of the "visuals" than the "auditories".

At this point it is the wish of the writer to express an opinion which it was hoped might be in part, at least, borne out by the results of this study. It was thought that (1) those persons who habitually made greater use of the visual senses would obtain higher Wechsler-Bellevue Performance subtest scores, and (2) that those who had made fuller use of the auditory sense would score higher on the Wechsler-Bellevue Verbal subtests. However, the only way in which this opinion can be tied up to the hypothesis of Dr. Michelson concerning type of hallucination as determined by sense modality made more extensive use of in earlier situations, would be to carry out some series of experimental investigations devised for such a purpose.

If (a) these two opinions are substantiated by further research and (b) the suggestions in the present data are upheld in a more extensive and better-controlled investigation, then there might be grounds for expecting a consistent tendency for "visually dependent" persons to develop visual hallucinations should they become alcoholics, and, conversely, "auditorily dependent" persons would be expected to experience auditory hallucinations should they become alcoholics.

However, some evidence must be presented through thorough investigation to show that patterns on the Wechsler-Bellevue subtests are the same for normal "visual dependents" and for alcoholic "visual.
dependents" and also for the "auditory dependent" types, both normal and alcoholic.

However, it must be remembered that it was not the purpose of this study to prove or disprove this opinion but rather to look for some characteristic Wechsler-Bellevue subtest patterning for types of alcoholic hallucinations.
CONCLUSIONS

Because of the small number of subjects used in this study, no actual conclusions can be drawn at this time. It is hoped, however, that this topic of study will be the subject for further and more adequate research. For it is felt that there are possibilities along this line of investigation, the answers to some of the problems contained therein being useful for the care and prevention of alcoholism and the attendant episodes of destruction and disaster.

Inasmuch as the occurrence of violence in a patient with delirium tremens is practically non-existent, while those patients with acute hallucinosis may and usually do become destructive and violent, some method of prognostic evaluation at an early stage in the alcoholic career could prevent the latter from harming themselves and others. This could be accomplished by keeping those persons diagnosed as "future hallucinosis" under close and careful surveillance and supervision so that further course of the alcoholism might be prevented by enforced abstinence from alcoholic beverages of any type.
SUMMARY

A study was made of the Wechsler-Bellevue patterning of four patients of the Northampton State Hospital for the purpose of determining if some characteristic patterning might be found whereby differential diagnosis of "delirium tremens" and "hallucinosis" might be made. These four subjects were given the Wechsler-Bellevue Adult Intelligence Scale, Form 1 (one individual had already taken this test and the results obtained were used); then the results were analyzed. Several possible patterning were indicated and their limitations discussed.

No definite conclusions could be reached due to the unavoidable inadequacy of the sampling and the lack of controls. The findings which tend to be shown on the basis of this small sample and are indicative of the possibility of the existence of a characteristic Wechsler-Bellevue subtest patterning for alcoholics of the "delirium tremens" and "hallucinosis" types are:

1. "Visuals" show greater span of attention and ability to learn well in new situations, together with better rote ability, as evidenced in the higher Digit Span scores of the former type over "auditory" types.

2. Greater social awareness together with contact with society is evidenced for the "visuals" than the "auditories" on the basis of the better Picture Arrangement subtest scores.

3. There is also seen a better visual-motor coordination ability in the "visuals" than in the "auditories" as shown in the Object
Assembly and Block Design scores.

4. There is also seen a better capacity for abstract reasoning in the performance sphere of the "visual" type than the "auditory".

5. In general, the "visual" type surpasses the scores of the "auditory" type in all the Performance subtests.

6. The "auditory" type has a Performance score which surpasses his Verbal score (total weighted) but no findings can be cited for the "visuals".

The above are only suggestive and cannot be taken as conclusive under the circumstances with so small a sample and so few extraneous variables held constant.

A hypothesis of the author, to the effect that persons using the visual faculties would score higher on the Performance section of the Wechsler while those using the auditory faculties more would score higher on the Verbal subtests, was mentioned.

More research remains to be done along this line, but it is felt that the way has been indicated, at least, for a possible source of informative research for those interested in the diagnosis and prevention, at an early stage, of alcoholism tending to show hallucinations after a history of alcoholic indulgence.

August 1950
ACKNOWLEDGEMENTS

The author wishes to thank all the members of the staff and of the various departments of the Northampton State Hospital for their kind assistance and suggestions as well as their constant and whole-hearted cooperation during the period of his stay there.

In particular to the Psychology staff of the hospital, headed by Miss Hannah Davis, for their guidance and advice, without which this paper might well have been impossible, is extended the greatest of appreciation and thanks.

A further note of gratitude is due Dr. Harry Michelson, Clinical Director of the Northampton State Hospital, for his original suggestions of the thesis of this project.

Finally to the faculty members of the Psychology department of the University of Massachusetts goes an expression of gratitude for the constructive criticisms and the evaluation of this manuscript which made possible the completion of this study under the difficult conditions prevailing.

August 1950
APPENDIX
Name: Patient A  Age: 40

Born: November 1, 1909  Informant: Sister-in-law
Diagnosis: Alcoholism (visual hallucinations)

Family History:

Father: ..... was born in ..... and died about five years ago at the age of 66 of cancer of the prostate.

Mother: ..... was born in ..... and is 70 years old, in good health and lives with the informant.

Siblings: ..... age 44, in good health, married. (female) (5)

Patient is next in line.

........., married, 38, in good health. (male)

etc.

Sister: ..... died in this hospital in 1940 from broncho-pneumonia. She had been a patient here since May 1939, and was diagnosed Schizophrenia, Paranoid Type.

Other than the sister, there is no history of any nervous or mental illness in the family.

Personal History:

The patient was born in 1909. Birth was normal and it was believed that development was normal. He was healthy during childhood and about the only illness he ever had was measles. The mother stated that he was always a good boy as a youngster, and never gave her any trouble.

Religion: Patient belonged to the Congregational Church but expresses no interest in religion and does not attend services. He has never expressed any unusual ideas concerning religion.
**Education:** It was stated that the patient graduated from trade school.

**Military Service:** Informant was unable to give any adequate information about this. She stated that the patient enlisted in the Army and was at Pearl Harbor at the time it was bombed. He was discharged in March of 1945, apparently served in the South Pacific area all the while he was in service. She did not know of his rating or type of discharge received.

**Occupational History:** Patient was a car mechanic by trade before he went into the service and had worked quite steadily. However, since he has returned home from the service, he has not made a good occupational adjustment although he has had several jobs. He gets drunk and loses his job. He works only until he gets enough money to go out on a bender.

**Habits:** Patient smokes incessantly. According to the informant, the patient began to drink rather excessively only since he has returned home from the service. The court record reveals that he has been arrested for drunkenness as early as 1932. According to the informant he has to have liquor every day. He drinks until he reaches such a point that he is totally unable to take care of himself. He usually drinks "Sneaky Petes", wine with beer chasers. When he is drinking, he does not eat; neglects himself. He is quiet in his manner when drunk.

**Court Record:** The patient has had the following arrests:

1/25/32 - Drunk, $15.00 fine paid.

7/22/32 - Drunk, probated to 7/2/34
7/3/47 - Drunk, released.
10/7/49 - Drunk, released.

Informant believes that the patient has also been arrested in Northampton and in Springfield and that most recently he was arrested for drunken driving.

**Interests and Personality:** Patient is described as being a friendly, good-natured person. He is irresponsible; shows no concern over the future. He feels that the world owes him a living and is absolutely undependable. However, he is good-hearted and does not look for sympathy or attention. He seems to trust people. He is stubborn; will not heed advice. He is not subject to mood swings. Patient's chief recreational outlet has been drinking. He also enjoyed ballgames.

**Psychosocial History:** It was believed that when he was a bit younger, he showed interest in women, but never formed any deep friendship with any particular girl. In later years he has not shown any interest in women, according to the informant.

**Physical Health:** Informant believed that the patient's physical health has been satisfactory. She did not know of any history of any serious illnesses or operations or injuries. She stated that when he is drinking, his ankles swell and that he also has been troubled with hemorrhoids.

**Previous Attacks:** Patient has previously been hospitalized at Leeds.

**Onset of Present Illness:**

According to the informant, she has not seen too much of the
patient in recent months. After he came home from the service, he lived there off and on for a few months but has been absent for the past 2½ years. She states that they have not seen him for three weeks prior to his admission to this hospital. Informant believed that the patient did not have any regular living quarters. She states that he has been drinking heavily and she presumed that that was the cause of his present hospitalization. She stated that before he was sent to Leeds, he had Delirium Tremens and saw men after him. Informant was unable to give any information regarding his present illness. She states that he has become disinterested in his appearance of late. He has never expressed any appreciation in the past for what the family has tried to do for him. Patient was admitted ....... 1950.
Test Pattern

Patient A

<table>
<thead>
<tr>
<th>Wechsler-Bellevue Subtest</th>
<th>Weighted Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information</td>
<td>12</td>
</tr>
<tr>
<td>Comprehension</td>
<td>11</td>
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<tr>
<td>Digit Span</td>
<td>16</td>
</tr>
<tr>
<td>Arithmetic</td>
<td>9</td>
</tr>
<tr>
<td>Similarities</td>
<td>11</td>
</tr>
<tr>
<td>Vocabulary</td>
<td>13</td>
</tr>
<tr>
<td>Picture Arrangement</td>
<td>9</td>
</tr>
<tr>
<td>Picture Completion</td>
<td>10</td>
</tr>
<tr>
<td>Object Assembly</td>
<td>3</td>
</tr>
<tr>
<td>Block Design</td>
<td>10</td>
</tr>
<tr>
<td>Digit Symbol</td>
<td>10</td>
</tr>
</tbody>
</table>
Name: Patient A
Age: 40
Date of Test: July 12, 1950
Purpose: General Evaluation
Test Used: Wechsler-Bellevue, Form 1
Summary and Conclusions:

The patient is operating with high average intelligence. This is further indicated by a very high vocabulary. Despite the fact at the time of the test that the patient had been undergoing treatment for alcoholism for one week only, he seemed to be operating with most of his intellectual functioning capacity intact. A slight discrepancy is indicated in the difference of I.Q. V. to Wechsler I.Q., but this is not too marked.

The highest score obtained was that on the Digit Span which is indicative of an excellent span of attention as well as ability to learn well in new situations together with a good rote ability. Information, Comprehension and Similarities in the Verbal section are indicative, by their fairly good and consistent scores, of excellent social awareness and content together with retention of abstract ability.

Little variability is seen between Verbal and Performance sections and little intertest variability within these two parts, giving no clinical evidence of use to the examiner. The lowest score on Performance was Object Assembly, part of which may be explained by the shakiness of the patient's hands throughout the test situation, which might well have hindered proper manipulation of the pieces. As
a whole, the Performance tests showed consistent scores and no indices of abnormal patterning were noted throughout.

General Behavior:

Throughout the interview the patient was extremely cooperative and interested in the proceedings. He complained of a "big head" and his hands exhibited slight tremors; doubtless due to the recent alcoholic bout. Excellent planning was noted on the Block Design exercises, despite the fact that one of the designs was missed by misplacing one block and the last due to running over the time limit. The perseverant attempts were not ended on time due to apparent interest on the part of the patient in what was before him.

Test Results:

Wechsler-Bellevue

<table>
<thead>
<tr>
<th></th>
<th>Full I. Q.</th>
<th>113</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal I. Q.</td>
<td>109</td>
<td></td>
</tr>
<tr>
<td>Perform. I. Q.</td>
<td>116</td>
<td></td>
</tr>
<tr>
<td>D. Q.</td>
<td>2%</td>
<td></td>
</tr>
</tbody>
</table>
Name: Patient B

Age: 45

Born: February 16, 1905

Diagnosis: Alcoholism (auditory hallucinations, denied but present)

Family History:

Father: .... died at the age of 73 of pneumonia. However, he had been ailing for some time with other disabilities including shingles.

Mother: Died at age of 49 of cancer of the stomach.

Siblings: ........., age 50, brother. He and his wife separated about ten years ago and has not been heard from since.

Patient is next.

........., sister, the informant, age 35 and well. She is employed as a stenographer.

There was a child that died in infancy who was born between the patient and the informant.

Mental and Nervous History: A maternal aunt died at the ........ State Hospital about 15 years ago.

Personal History:

Patient was born on February 16, 1905 in .......... It was believed that he was a normal baby and had normal development. It was remarked that he was a beautiful baby. He was not unusually ill with any of the childhood diseases. He was not aggressive as a child and had to be coaxed to play with other children. He was quite attached to his mother. He was 19 years old when his mother died and he took her death quite hard. He brooded a lot after she died and went to church more often. Patient lived with his father who maintained the
home until 1947 when his father took ill. The sister was unable to
work, take care of the home and the father. The home was broken up
and the patient, the informant and the father went to live out of
state with a cousin until February of this year at which time he was
asked to leave because of his drinking. Since then he has been liv-
ing at the Y. M. C. A.

**Education:** He finished grammar school. He never liked school,
just barely got by, but was not known to have been held back. While
living in ...... he attempted to go to night school but lost interest.

**Military Service:** He was refused because of a leg injury.

**Religion:** Catholic. As a young man he was very religious and
received Holy Communion every Sunday for years. After he started to
drink, he did not attend church as regularly. He expressed no unus-
ual ideas about religion.

**Court Record:** He was picked up for intoxication about two times
more than five years ago. He received no penalties.

**Habits:** He has been smoking more in the last few months. Pa-
tient started to drink about 1927 while he was recovering from a leg
injury. At that time he had time to think and had time heavy on his
hands and the informant believes he got into some wrong company. Since
then he has been drinking sherry wine chiefly and has had poor toler-
ance. When intoxicated he was unsteady on his feet and his mind was
confused and his disposition ugly. He usually drank for a couple
of days and then would not touch a drop for a week when he would start
the whole process all over again. He did his drinking at home, and
would sit listening to the radio, drinking wine for hours. Between 1947 and 1948, he went almost a year without drinking at all. After his father died, he began drinking again. Since he has been in ........., he has contacted the Alcoholics Anonymous and went to several meetings but was not helped. The informant was critical of the Alcoholics Anonymous group because of lack of interest sustained in the alcoholic. He was referred to the rehabilitation center but was not given any aid, and it was then referred to the unemployment office, but there was no job available for him. In the past he drank quite a bit of coffee, but since he has been back in ........., he stopped this because he said it made his heart jump. Between 1947 and 1948, while his leg ulcers were opened, he took a lot of aspirin and emprin compound. The informant stated that whenever his leg healed, he would stop taking this medication. He has been taking aspirin and emprin lately, but the informant did not know how much. He always ate well, but never slept too well.

**Interests and Personality:** Patient was always quiet and shy and never mixed well. It was difficult for him to talk. However, he seldom complained and kept his feelings to himself. He was sensitive and easily hurt. He became more talkative when he was drunk. Things did not seem to bother him and he was not easily upset at these times. When he was a young man, became angry quickly but in later years, he did not seem to become angry at all. However, he never stayed angry or held grudges. He was clean but not particular about his personal ap-
pearance. He had little interest beside reading, listening to the radio and drinking.

**Occupational History:** He enjoyed working as a clerk in stores and was ambitious to get ahead until he sustained his leg injury. Following his recovery he returned to work but always lost his job because of drinking. He had worked for the ...... company for several years until it went out of business. He then worked at the ...... during the war and at the ...... and ...... but lost his jobs because of his drinking and staying out. At one time he was ambitious to become a pharmacist but after he was injured he gave up the idea. While living with the cousin, he did odd jobs around the place. Since he has been back in ......, he has not worked at all. The informant and the cousin supported him.

**Psychosexual History:** The patient has never been married. However, he has been interested in girls and following his leg injury he went steady with a girl for some time. The informant presumed that they did not get married because he had little to offer and she did not seem to be interested in settling down. He has never been interested in any other girl. Since he returned to ......, he met his former girlfriend on the street and talked with her. She has not married either. Informant stated that he talked about it, telling about his meeting her, quite a bit. The informant did not know whether the patient indulged in any sex practices.

**Illnesses:** The patient was injured in 1925 while riding a motorcycle. At that time his left leg was badly injured. He also sustained
a concussion and was unconscious for two weeks. He also had a compound fracture of the leg. He was hospitalized at the ... Memorial Hospital in ... for several weeks and during that time the flesh and muscle removed. The leg became ulcerated from time to time, aggravated by his drinking. He suffers much pain when the leg is open. The leg was in a cast for many weeks and he walked on crutches for a long time. Informant was very bitter when she stated that the patient's doctor advised a quick settlement, especially since subsequent doctors stated that his leg would never heal. About 10 years ago, he had a bone splinter removed at the ...... Hospital in ...... . The informant believed that the patient turned to drink because he became discouraged about his leg never healing well. Because of his leg, he was limited in the type of work he could do. At times he complained of headaches.

Previous Attacks: None

Onset of Present Illness:

Since returning to ... in February of 1950, he has been living alone at the Y. M. C. A. and drinking wine constantly. He has not been eating well and not sleeping well. He was seen by Dr. ...... to whom he complained that his heart jumped. He was prescribed digitalis and sleeping pills. This spring he had a bad cold and cough.

Recently he has had diarrhea which was due to his not eating adequately and because of this he became very weak and depressed. Informant did not know where he obtained money for drinking as they did not give him any spending money and bought his meat tickets. Informant stated that tremors of the face began four or five years ago but that tremors of
the hands appeared only a week ago. It was denied that patient had delirium tremens. The management of the Y. M. C. A. wanted the patient to leave because of his drinking. Informant realized that he needed institutional care but none was available to him except this hospital and Dr. .... advised that he be sent here. He was admitted ........, 1950.
Test Pattern

Patient B

<table>
<thead>
<tr>
<th>Wechsler-Bellevue Subtest</th>
<th>Weighted Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informant</td>
<td>11</td>
</tr>
<tr>
<td>Comprehension</td>
<td>11</td>
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<td>Digit Span</td>
<td>3</td>
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<td>Arithmetic</td>
<td>9</td>
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<td>Similarities</td>
<td>7</td>
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<tr>
<td>Vocabulary</td>
<td>11</td>
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<td>Picture Arrangement</td>
<td>7</td>
</tr>
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<td>Picture Completion</td>
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<tr>
<td>Block Design</td>
<td>4</td>
</tr>
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<td>Object Assembly</td>
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<td>Digit Symbol</td>
<td>7</td>
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</table>
Name: Patient B  Age: 45
Date of Test: June 29, 1950
Purpose: General Evaluation
Test Used: Wechsler-Bellevue, Form 1

Summary and Conclusions:

The patient is operating with average intelligence. Performance and Verbal scores on the Wechsler are approximately equal showing no evidence of abnormal patterns.

The low score on the Digit Span may be partially explained in that the condition of the patient at the time of the examination was shaky and it is felt that his recent alcoholic experience may well have been the cause of this behavior, preventing him doing much new learning. Abstract ability in the Performance sphere seems rather low, while that of the Verbal sphere seems not too lacking.

The fairly high Deterioration Quotient can probably also be justified by reference to his present post-alcoholic state. This would easily account for his inability to concentrate during the interview, for it was noted that most of the information and instructions had to be repeated before the subject seemed to understand what was wanted of him.

Best performance was seen on Object Assembly, Information and Comprehension, the latter two being indices of social awareness. However, these scores were not excessively superior to the remaining subtests nor very high in themselves.

General Behavior:

The patient, although showing somewhat marked tremors and these
Involving most of the body, was cooperative and interested in the test materials. He showed very poor method of attack on Block Design, but was perseverative in his trial and error method of the latter as well as on Object Assembly, not evidenced by his relatively high score on the latter.

Test Results:

<table>
<thead>
<tr>
<th>Test</th>
<th>Full I. Q.</th>
<th>Perform. I. Q.</th>
<th>Verbal I. Q.</th>
<th>D. Q.</th>
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<td>99</td>
<td>103</td>
<td>97</td>
<td>36%</td>
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</table>
Name: Patient C  Age: 25

Born: October 9, 1925

Diagnosis: Alcoholism (visual hallucinations)

Family History:

Father: Living; the informant in this case.

Mother: Living, and in good health.

Siblings: Patient has one sister in good health and living in New York.

Nervous and Mental History: As far as known there is no history of any nervous or mental illness in the family.

Personal History:

Patient was born in 1925. He was a full term baby; birth was normal. He was breast fed for a short time and then was put on formula. Development appears to have been normal. He walked and talked at the usual age. He had the usual childhood diseases from which he recovered with no ill after-effects. He was said to have been a sociable, obedient good-natured child. There appeared to be no jealousy or rivalry between him and his sister. It was said that his mother favored him.

Religion: The patient is Catholic and apparently has a normal interest in his religion. He does not attend services regularly. When he was a young boy, he served as an altar boy. Patient has never expressed any unusual ideas concerning religion.

Education: Patient graduated from high school when he was about 18. It was said that he got along very well in school and was popular.
He was an outstanding basketball player and was captain of his team.

**Military Service:** Patient was drafted in August of 1943 and received an honorable discharge in February 1944 at .... Physical condition at time of discharge was poor and it was believed that he probably had a medical discharge. The informant stated that he had a cold which developed into bronchitis. He also became very nervous while he was in the service and has been nervous ever since.

**Occupational History:** Patient has made a very poor working adjustment. He apparently doesn't want to work. He gets a job, works for about a week or so and then leaves. He has tried various types of work and at one time worked in this hospital. His last job was with the ...... park department and lasted about a month during the fall. Patient complains that he is given too much to do and also does not like to take orders.

**Habits:** Patient smokes about a package of cigarettes a day. He has been drinking quite heavily for the past five years, according to the informant. He drinks everything and anything he can get his hands on and will drink every day if he can get it. When drinking he has a tendency to get very irritable, argumentative, quarrelsome and assaultive. Patient also gambles and plays the horses. He does not use sedatives.

**Court Record:** He has been convicted eight times for drunkenness, most of which sentences have been dismissed. He has been sent to the House of Correction, Leeds, placed on probation and in general has a very poor record.

**Personality:** The informant describes the patient as being a friendly sociable person who is inclined to be somewhat moody at times.
However, he takes things very casually and never worries. He is self-centered and selfish and does not seem to benefit from his past mistakes and experiences. He shows no regret for any of the wrongs he has done. He has a quick temper which at times becomes uncontrollable. He, however, does not seem to hold grudges. He feels that he is smarter than other people and can get away with things. He has no ambition and appears content to stay at home and let his parents support him. He shows no consideration in the home or towards his friends. He uses people to get what he wants from them. He borrows money and seldom repays it. He does not pay his debts. He is totally unreliable and irresponsible. He has no judgement concerning his friends and the crowd he goes out with. He spends his time with a crowd of friends who are also unemployed, drink heavily, and pick up their spending money through gambling. He likes a great deal of attention and enjoys being waited on. He is very dependent on his parents, looking to them to get him out of his difficulties and to maintain him. He is unappreciative and has a tendency to order his parents around. He feels that the world owes him a living. He is said to be highstrung. At one time he was very much interested in sports, being a good athlete, but he does not seem to show as much interest now. He spends most of his time in bars drinking and playing cards for money.

**Psychosexual History:** Patient showed a normal interest in girls. At one time he was supposedly engaged. Recently, he does not seem to bother too much with women; feels that they are too much of a responsibility.
**Physical Health:** Patient's physical health has been good. He has not had any serious illnesses or operations. Occasionally he had some trouble with bronchitis. He had his appendix removed when he was 12. He eats satisfactorily and although he is out until very late at night, he usually sleeps all the next morning so that he gets sufficient rest. Occasionally he complains that he has pains in his fingers and also in his legs; these running down to his feet.

**Previous Attacks:** Patient was in Leeds about two years ago but stayed there only a month when he escaped. He was sent back, remained a short time and called to his father to take him home. His father took him out against doctor's advice.

**Onset of Present Illness:**

Patient has been drinking quite heavily for some time. When drinking he becomes involved in barroom fights and his present hospitalization was precipitated because he became involved in a fight in a bar in .... Apparently there has been no change in the patient's disposition, personality or behavior in recent months. The father, however, states that the patient has not been the same since he went into the service. The patient was only out of school for a very short time when he was drafted. According to the father, patient has always been highstrung and nervous since he has been home from the service. Patient on occasion when drinking has been threatening and assaultive towards his parents and he is inclined to think that people are against him, but other than this, no other unusual or abnormal features could be elicited. Patient was involved in a brawl which did considerable damage to the bar in ..... He was picked up and when
he was booked, the parents apparently requested that he be sent to this hospital, in view of the fact that he had been drinking for a number of years. He began drinking when he was in high school. He is said to have a pleasant personality when he is sober but he is very irresponsible and will accept advice from no one. Patient was a very good ballplayer and is an attractive looking man. He apparently started to get quite conceited when he was in high school. He refused to apply himself and he is out for anything he can get without working for it. He has a great line and shallow sense of value. When drunk, his conduct is deplorable. He becomes involved in barroom brawls. He also seems to have a bad influence on the younger fellows who admire his swagger and try to emulate him. Patient was admitted ....... 1950.
Veteran's Administration Hospital  

Abstract

Patient was admitted to this hospital originally on 1946, for excessive alcoholism, which led to a great many difficulties. He was born October 9, 1925 in Mass. Patient was discharged by request of his mother, Against Medical Advice, on May 15, 1946.

......... was readmitted to this hospital 1947 for acute alcoholism, and for abusive and threatening behavior. He had delirium tremens four months prior to his readmission. A month later he had a seizure while drinking, and five days before readmission experienced another seizure. After a week on the infirmary ward, patient was transferred to the reception service where he went AWOL three times. On ........., 1943, patient's AWOL status was changed to 90-day trial visit as of ........., 1947 in care of his mother.

He voluntarily returned to the hospital ........., 1943 after drinking excessively for three months prior to return. Several days later at the request of his father, patient was discharged again Against Medical Advice, .......... At that time he was still tremulous and not quite recovered from his alcoholism.

Patient is a World War II veteran who was discharged from the Army six months after induction with a diagnosis of "psychoneurosis and enuresis."
**Test Pattern**

**Patient C**

<table>
<thead>
<tr>
<th>Wechsler-Bellevue Subtest</th>
<th>Weighted Score</th>
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<td>Information</td>
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<tr>
<td>Comprehension</td>
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<td>Digit Span</td>
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<td>Arithmetic</td>
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<tr>
<td>Similarities</td>
<td>6</td>
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<tr>
<td>Vocabulary</td>
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<tr>
<td>Picture Arrangement</td>
<td>16</td>
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<td>Picture Completion</td>
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<td>Block Design</td>
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<tr>
<td>Object Assembly</td>
<td>11</td>
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<tr>
<td>Digit Symbol</td>
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</table>
Name: Patient C  Age: 25

Date of Test: December 22, 1949

Purpose: General Evaluation

Test Used: Wechsler-Bellevue, Form I.

Summary and Conclusions:

The patient is operating with high average intelligence and commensurate vocabulary. There is no Deterioration Quotient. His highest functions are Picture Arrangement showing his excellent ability to sum up a total situation and social awareness. His lowest function is Similarities showing his abstract attitude is not too well developed in the Verbal sphere, although it is still intact in the Performance sphere. His Wechsler record shows several psychopathic features.

General Behavior:

The patient was cooperative although somewhat of a "wise guy" type who gave facetious answers and then gave answers "for the Book."

Test Results:

- Wechsler-Bellevue: Full I. Q. 114
  - Verbal I. Q. 107
  - Perform. I. Q. 113
  - D. Q. None

(Mrs. Fox)
Test Pattern

Patient C (retest)

<table>
<thead>
<tr>
<th>Wechsler-Bellevue Subtest</th>
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</tr>
</thead>
<tbody>
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<tr>
<td>Comprehension</td>
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<td>Digit Span</td>
<td>9</td>
</tr>
<tr>
<td>Arithmetic</td>
<td>15</td>
</tr>
<tr>
<td>Similarities</td>
<td>11</td>
</tr>
<tr>
<td>Vocabulary</td>
<td>11</td>
</tr>
<tr>
<td>Picture Arrangement</td>
<td>17</td>
</tr>
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<td>Picture Completion</td>
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<td>Block Design</td>
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<tr>
<td>Object Assembly</td>
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<td>Digit Symbol</td>
<td>12</td>
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</table>
Name: Patient C  Age: 25
Date of Test: July 14, 1950
Purpose: General Evaluation
Test Used: Wechsler-Bellevue, Form 1

Note: The results of this test will not be used for the evaluatory portion of the study. Rather, the preceding test results will be used for this purpose. The following information is included only for the interest of the reader and to show how the test results may change appreciably within so short a period as intervened between the two test administrations due to practice effect.

Summary and Conclusions:

The patient is operating with high average intelligence. Close approximation of Verbal and Performance scores is seen, with some intertest scatter noted on both of these sections. High scores on Comprehension and Arithmetic are indicative of good social contact as well as ability to do well in new learning situations. A comparatively low score on Digit Span probably does little more than show that the patient is still slightly shaky from his previous alcoholic episode. Picture Arrangement once again shows excellent social facilitation and awareness, whereas a fairly low score on Picture Completion is probably indicative again of the patient's inability to concentrate too much due to his nervous state as a result of intoxication.

Due to the fact that the patient is color blind, he was seriously handicapped on Block Design, but in spite of this infirmity, he did quite well. In view of the condition of the patient and his recent alcoholic bout, it is felt that the scatter noted on the Wechsler
is not indicative of any clinical syndromes and should not be counted in any clinical evaluation of the test results. Previous test given December, 1949, may have given "practice effect" boost to Verbal scores; i.e., Comprehension and Similarities.

General Behavior:

The patient was at all times interested and cooperative during the test period, stating only that he felt "shaky". It was also noted that he smoked incessantly during the interview and his hand was quite unsteady except when he was very interested in some particular subtest. His performance was also a bit unsteady during such tests as Object Assembly and Digit Symbol. Due to his color blind condition, he was penalized on Block Design but still attempted this test with seeming perseverance even when it was evident that his eyes were bothering him a great deal.

Test Results:

Wechsler-Bellevue

<table>
<thead>
<tr>
<th></th>
<th>Full I. Q.</th>
<th>Verbal I. Q.</th>
<th>Perform. I. Q.</th>
<th>D. Q.</th>
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<tbody>
<tr>
<td></td>
<td>118</td>
<td>117</td>
<td>116</td>
<td>None</td>
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</table>
Name: Patient D  
Age: 54  
Born: June 1, 1396  
Diagnosis: Alcoholism (auditory hallucinations)  

Family History:  
Father: .......... died at the age of 63 of a heart attack suddenly in ....... He drank, but not to excess.  
Mother: .......... died at about the age of 67 of cancer of the stomach.  

Siblings: Nine. Five siblings died very young, some of them of scarlet fever. Patient is the oldest.  

.........., informant, age 48, well, married, has five children. He is employed as a clerk in the ....... department of the .... Railroad in .......  

.........., age about 38, living at ......., Mass. She has five children and her husband is a store helper in the same department as the informant.  

Personal History:  
Patient was born in 1396 in .... and had a normal childhood and development.  

Education: He left school during his first year of high school to go to work.  

Military History: He served in the Navy during WW I for 23 months, most of which time was spent in the North Sea. He received an honorable discharge.  

Religion: Catholic. He attended church regularly until his mother died. Since then he has only gone to church occasionally.
for the last four or five weeks. Patient has been a social drinker for years. He began to drink to excess two years ago, but was not affected until five or six months ago. He drank whiskey and had a very good tolerance until March of 1943. At that time he had his first case of delirium tremens and snapped out of it about two weeks later. While drinking he does not eat. He used no drugs or medications; only on doctor's orders.

**Interests and Personality:** He was described as looking young for his years. He has always been nervous and always chewed his nails. He was sociable and liked to be with people and mixed very well. He has a great many friends. Ordinarily he is quiet, but is easily excited. He is sensitive and easily hurt. He was quick-tempered but did not stay angry or hold grudges. Very often when he became angry with anyone, he would apologize the following day. He became upset when things did not go right and felt sorry for himself. He was neat and clean, very particular about his clothes, would not wear a shirt if it had a wrinkle in it. He has always been a poor eater. He goes to the movies and was often at fights and ballgames. He liked to read True Detective Magazine, Look and Reader's Digest. In recent years he spent much time hanging around the Club.

**Occupational History:** He first went to work as a buffer in a cutlery and worked there six to seven years. His next job was in a silver shop in where he worked for five years before he went into service in WW I. Following return from service he worked for a hardware company for many years until it went out of business. He was out
of work for some time after that and then went to work for the Co., where he worked for ten to twelve years until 1943. At that time he sustained a double hernia and following his operation, he asked for easier work which he was denied, so he resigned. He had been working as a part-time bartender and following his resignation at the company he went to work as a full-time steward and bartender at the Club in Greenfield. He last worked there the day before admission.

Marital History: He was married for fifteen years to who was about twelve years his senior. She died 11 years ago following a cesarean delivery. He took her death very hard. He has one child, age 11, who is living with his sister. He is very fond of this child and gives her everything, in a material way. He has been interested in other women since his wife's death, but has not been interested in getting married. He has been going with a girl steady for some time. The informant did not believe that there has been any difficulty between them. After his wife died, he went to live with his mother who took care of his child. His mother died about 1944 and since then he has been living alone in the apartment which is located above the Club. Two years ago, at the time he went to have his hernia operation, he asked the informant to come and live in the apartment while he was in the hospital and they have continued to do so until this date.

Illnesses: He has been very healthy all his life. Two years ago he was operated on for a double hernia at the Hospital in and was attended by Dr. He made a good recovery and has had no difficulty since.
Previous Attacks: He had his first attack of delirium tremens in March, 1943, and his last in March of 1950.

Onset of Present Illness:

About six months ago, the patient woke the informant early one morning saying that someone was after him. He thought that a group of men at the club where he worked were trying to have him ousted and the informant thought that this possibly might be true. He was seen by a Dr. ... who gave him some medication to quiet his nerves. His sister has been able to manage him in the past better than anyone else. He had an attack of delirium tremens in March. He eased up on his drinking and after he returned home he continued drinking very heavily. His face broke out about a week prior to admission and he was given medication by Dr. ... who said it was shingles. He has been eating poorly and sleeping poorly. The night before admission, the patient woke the informant again and stated that someone was after him and named a couple of people who are supposedly his best friends. He became very nervous and was constantly on the move. Dr. .... was contacted and advised him to be sent to this hospital. He was admitted ........, 1950.
Test Pattern

**Patient D**

<table>
<thead>
<tr>
<th>Wechsler-Bellevue Subtest</th>
<th>Weighted Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information</td>
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<td>Comprehension</td>
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<td></td>
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<tr>
<td><strong>Vocabulary</strong></td>
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<td>Object Assembly</td>
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</table>
**Name:** Patient D  
**Age:** 54

**Date of Test:** July 10, 1950

**Purpose:** General Evaluation

**Test Used:** Wechsler-Bellevue, Form I

**Summary and Conclusions:**

The results of this test indicate that the patient is of average intelligence. His I. Q. V. shows that he commands an average vocabulary. His highest function is Picture Completion showing that he has a fair ability to differentiate essential from unessential details.

The patient does equally well in both Verbal and Performance tests. He also did well on Information and Comprehension, showing first, that he has a fair range of information, and second, a fair ability to evaluate past experiences. His poorest test was Digit Span which was slightly surpassed by his low score on Digit Symbol. The Digit Symbol score is partly explainable to his apparent visual disability. (The patient states that he has trouble reading because he is nearsighted.)

However, the zero score obtained on the Digit Span is indicative of lack of attention plus his inability to memorize by rote. Both tests deteriorate with age (or alcohol) and this fact cannot be overlooked in this case. However, his opinion is contradicted by the lack of discrepancy between Vocabulary and Verbal scores. His low score of 4 on the Picture Arrangement test may also be due to his visual handicap or it may show his inability to comprehend and size up the total situation. Other than the above-mentioned subtest variation, no great intratest deviations were noted.
In summary, it might be said that the patient is of average intelligence and he shows some degree of deterioration. Because of his age and his hallucinatory condition upon admission plus this high degree of deterioration found on this test, it is felt that his subtest scores are not unlike that found in other patients who have been found to be psychotic due to alcoholism.

General Behavior:

The patient was cooperative, a bit nervous, insisted upon calling the examiner, "sir", and seemed to be in good contact with the testing procedure. He uses trial and error approach in solving the Performance problems. He seemed to take his condition and situation rather casually by saying that he just went on a "toot", but that he will try to stay away from alcohol when he gets out. He also stated that it was hard to keep away from it because he was a bartender.

Test Results:

Wechsler-Bellevue

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<td>96</td>
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<td>97</td>
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<tr>
<td>D. Q.</td>
<td>42%</td>
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</tbody>
</table>

(Mr. Weinstein)
APPROVED:

Claude C. Flett

Mervi Lucchesi, M.D.

J.D. Valerius

Date August 4, 1930