Ronald Schouten, MD, JD (summary)
Jeremy Schmahmann, MD (neurology)
David Medoff, PhD (clinical psychology)
Thomas Deters, PhD (neuropsychology)

Cover letter of Tyson report

October 12, 1998

Dr. Elias Ghanam
Chairman, Nevada State Athletic Commission
555 East Washington Avenue, Suite 1500
Las Vegas, Nevada 89101

Re: Michael Gerard Tyson

Dear Dr. Ghanam:

Enclosed is the report of our independent medical evaluation of Mr. Michael Tyson, conducted at the request of the Nevada State Athletic Commission pursuant to your letter of September 21, 1998.

As you will recall from my letter of September 24, 1998, sent by facsimile to you and Dr. Homansky, we are opposed to the public disclosure of Mr. Tyson's diagnoses and the complete clinical information contained in this report. However, we have been instructed by Mr. Tyson to provide you with the enclosed clinical information. As a result, we are providing you with more clinical detail than is our practice in similar matters, and remain opposed to the dissemination of this personal information to anyone other than Commission members. The members of the evaluation team urge you to take whatever steps possible to preserve Mr. Tyson's privacy, including limiting the scope of your questions when we appear before you.

Please feel free to contact me if you have any questions prior to our testimony before the Commission.

Yours truly,

Ronald Schouten, MD, JD

Independent Medical Evaluation of
Michael Gerard Tyson
for the Nevada State Athletic Commission
September 30, 1998
Circumstances of the Evaluation:

This evaluation was requested by the Nevada State Athletic Commission in order to provide medical input regarding Mr. Tyson's request for reinstatement of his boxing license. Pursuant to your letter of September 21, 1998, we have completed an evaluation by a team of psychiatrists, psychologists, and neurologists. To the extent possible, we utilized the assessment measures which you requested. Where other measures were used, the reasons for their use will be discussed.

Members of the evaluation team:

The following individuals took direct part in the evaluation.

- Thomas Deters, Ph.D, Neuropsychologist, Law and Psychiatry Service Massachusetts General Hospital and Spaulding Rehabilitation Hospital, Boston, Massachusetts
- David Henderson, MD, Psychiatrist, Massachusetts General Hospital and Freedom Trail Clinic, Boston, Massachusetts
- Barry D. Jordan, MD, Neurologist, Charles R. Drew University of Medicine and Science, Los Angeles, California
- David Medoff, Ph.D, Psychologist, Law and Psychiatry Service, Massachusetts General Hospital, Boston, Massachusetts
- Jeremy D. Schmahmann, MD, Department of Neurology, Massachusetts General Hospital, Boston, Massachusetts
- Ronald Schouten, MD, JD, Director, Law & Psychiatry Service, Massachusetts General Hospital

Sources of Information:

The following sources of information were relied upon in conducting this evaluation and in reaching the conclusions contained herein.

- Multiple formal interviews with Mr. Tyson over a five-day period, in addition to frequent contact wit Mr. Tyson and opportunities to observe him in the clinical setting over the course of five days. Dr. Schouten's interview time was six hours, Dr. Henderson's 1.5 hours, and Dr. Jordan's one hour. Drs. Deters and Madoff conducted additional clinical interviews as part of the testing.
- Neurological evaluation by Drs. Schmahmann and Jordan.
- Psychological testing by Dr. Medoff
- Neuropsychological testing by Dr. Deters
- Telephone conference between Dr. Schouten and Larry Curry, MSW.

- Telephone conference between Monica Tyson, MD and Dr. Schouten.
- Electroencephalogram (EEG)
- Magnetic Resonance Imaging of the brain (MRI)
- Laboratory testing including toxic screens (blood and urine)
- Review of the exhibits submitted to the Las Vegas Athletic Commission hearing on September 19, 1998
- Review of Dr. Goldberg's letter to Attorney Fusco
- Review of the following videotapes:

-- Holyfield-Tyson 2
-- New Jersey Athletic Commission hearing on July 29, 1998
-- Nevada Athletic Commission hearing on September 19, 1998

Warning of Limitation on Confidentiality:
At the initiation of the evaluation, Mr. Tyson was informed that the contents of the evaluation would not be protected by the usual rules of confidentiality. He was further informed that he could refuse to answer any or all questions posed to him. Mr. Tyson expressed a clear understanding of these limitations and agreed to proceed. He indicated his ongoing understanding of these conditions throughout the evaluation process.

Relevant history:

Mr. Tyson is a 32-year-old, African-American, married man. He has four children. Mr. Tyson spent his early childhood in Brooklyn, New York, where he attended school. Due to behavioral difficulties he was placed in a school in upstate New York. He reports receiving special education services because of these behavioral problems. At approximately age 12 he was taken into the home of Cus D'Amato and Camille Ewald where he came under Mr. D'Amato's tutelage and trained as a boxer. Mr. Tyson attended Catskill High School but left school after the 10th grade. He studied for the Graduate Equivalency Diploma but failed to pass the examination by a narrow margin.

Mr. Tyson became very close to Mr. D'Amato and Ms. Ewald. The relationship between these individuals and Mr. Tyson has been described by Mr. Tyson and others as a relationship between parents and a child. Mr. D'Amato died in 1985 and Mr. Tyson describes his reaction to Mr. D'Amato's death as that of a child losing a parent. He continues to maintain contact with Ms. Ewald and continues to support her. Mr. Tyson's biological parents are both deceased, as is his sister. He has one brother who lives in California.

Mr. Tyson gave a history of repeated head injuries as a child, including multiple episodes of loss of consciousness as a result of being struck with objects in fights. He denied any loss of consciousness as an adult and particularly denies loss of consciousness while boxing. He has no history of serious illness, surgeries, or seizures. There is no history of headache or other neurological difficulties. He denied current substance abuse, including steroids.

In 1992, Mr. Tyson's successful boxing career was interrupted by a prison sentence of six years. Mr. Tyson was released in three years due to a reduction in sentence for good behavior while incarcerated. Upon release from prison he returned to boxing. His career was once again interrupted on June 28, 1997. On that date, during a bout with Evander Holyfield, Mr. Tyson committed a major foul by biting Mr. Holyfield on the ear. After a two-point deduction, the fight resumed and Mr. Tyson again bit Mr. Holyfield. After the end of the round, Mr. Tyson was disqualified as a result of the second biting.

Mike Tyson following his psychological evaluation at Massachusetts General Hospital.

As part of the evaluation process, Mr. Tyson was asked about symptoms of depression and other illnesses at the time of the Holyfield fight. He reported that he was experiencing

When asked about the foul, Mr. Tyson reports that he was very angry because he felt he had been the victim of head-butting from Mr. Holyfield in their previous bout and nothing had been done. His head been cut in that fight, and was cut again in Tyson-Holyfield II. After protesting the head butt and getting no response, Mr. Tyson reported that he felt that this was no longer a prize fight, but had become a street fight. He reported that when that occurred, he simply "snapped" and retaliated against Mr. Holyfield by biting him. While he did not have perfect recall for all the events that occurred during this bout, there was no evidence from Mr. Tyson's account of the incident or from the videotape that the incident occurred during a dissociative state, psychotic episode, or in any other state of loss of awareness. Review of the tape indicates that the initial bite occurred after a few blows from Mr. Holyfield and immediately after another clashing of heads. This had been preceded by at least one head butt.

Mr. Tyson had his license revoked for life by the Nevada Athletic Commission after this incident. It is our understanding that he became eligible to apply for reinstatement after one year. This report is requested in connection with that application for reinstatement.

Since the fight in June 1998, Mr. Tyson has asked Mr. Holyfield to forgive him, and Mr. Holyfield has written in support of Mr. Tyson's reinstatement. Mr. Tyson reported that the biting incident, and loss of his license, has ruined his career and his life. He expressed remorse about the incident, as well as great concern that he will not be able to fulfill his obligation to support his family if he cannot box. Mr. Tyson was adamant that he will never let anything like that happen again.

Mr. Tyson has changed his management team since June 1997. He feels that he was betrayed by members of that team and has has a civil lawsuit pending against them for monetary damages. He noted that "people let me down. People I would have died for."

According to Mr. Tyson, he underwent some psychological evaluation and some counseling as a child. The exact nature of those evaluations is unclear, and the records of the evaluations and any testing he may have had are not available at this time. Mr. Tyson reported that he has felt depressed all of his life. He received a diagnosis of Manic Depressive Illness several years ago and was placed on lithium carbonate, a mood stabilizer. He stated that this slowed him down considerably and that he stopped taking the medication after several doses.

In December of 1997, Mr. Tyson entered treatment with Richard Goldberg, MD, Professor and Chair of the Department of Psychiatry at Georgetown Medical School. Mr. Tyson saw Dr. Goldberg for seven or eight visits until Mr. Tyson relocated to Denver to begin training. He subsequently contacted Larry Curry, MSW, who is a psychotherapist with expertise in anger management and working with professional athletes. Mr. Tyson has been on an antidepressant medication prescribed by Dr. Goldberg; however, he reported that this has not been particularly helpful to him. He has had discussions with Dr. Goldberg about the possibility of increasing the dosage of this medication. The frequency of meetings between Mr. Tyson and Dr. Goldberg remains uncertain, as Mr. Tyson has relocated to Denver for the present time.

The relationship with Dr. Goldberg appears to be a solid one. Mr. Tyson reported that he derives great benefit from working with Dr. Goldberg and wishes to continue the relationship

if at all possible. Mr. Tyson was particularly protective of that relationship and is hesitant to have the content of their discussions revealed in detail. Dr. Goldberg's findings on examination and his impressions of Mr. Tyson are similar to those derived by this evaluation team as outlined below. On September 29, the evaluation team received a copy of Dr. Goldberg's letter of July 21, 1998 to Attorney Fusco in which he indicated that Mr. Tyson suffers from "dysthymic disorder (chronic depression) and issues related to his personality."

Members of the evaluation team reviewed the videotape of the July 27, 1998 New Jersey hearing. We noted that Mr. Tyson maintained excellent behavioral control during the course of the extensive and detailed questioning. He indicated that he did not want to speak any further because he was "angry" and did so in a calm voice. Mr. Tyson did raise his voice plaintively when Attorney Fusco began advocating for him, asking Mr. Fusco if he knew what Mr. Tyson meant. he subsequently used an expletive, wondering out loud what he was expected to do. It was the impression of the evaluation team the Mr. Tyson's behavior at the New Jersey hearing was not indicative of a significant problem with impulse control. In fact, we interpreted it as an example of reasonable control under significant pressure. Similarly, we found Mr. Tyson's behavior during the Nevada hearing on September 19, 1998 to be appropriate and evidence of good control under stress.

Several incidents have occurred over the last months involving Mr. Tyson which have raised concerns about his impulse control and anger management. The evaluation team has reviewed testimony and evidence involving these incidents. The evidence regarding the restaurant incident in Washington, D.C, is consistent with Mr. Tyson's account that while words were exchanged between Mr. Tyson and a young woman in a restaurant, Mr. Tyson did not engage in any form of physical assault towards the individual. A second incident, involving a motor-vehicle accident in Gaithersburg, Maryland, was explained by Mr. Tyson in a manner consistent with his representations to others. No further details of that incident are outlined here in light of the fact that the alleged incident is potentially the subject of an ongoing criminal hearing.

Mental Status Examination by Drs. Schouten and Henderson:

Mr. Tyson appeared at the Law and Psychiatry Service for the first evaluation in a timely fashion on the morning of Wednesday, September 23. He was casually dressed, as he was throughout the five days of evaluation. Mr. Tyson was alert and oriented; his speech was clear with no evidence of aphenia or paraphasic errors. Upon initial presentation, Mr. Tyson was cordial but guarded. He expressed an interest in the professional books or Dr. Schouten's shelf, as well as an interest in social issues, especially the plight of the poor and victims of persecution. He expressed a desire to help the underprivileged and those who are suffering. Throughout the five-day evaluation period, Mr. Tyson repeated indicated his sense of responsibility to his family and community, as well as his feelings of guilt over his own success.

Mr. Tyson reported that "I have no self esteem but the biggest ego in the world." Upon further exploration, he was aware that his inflated ego was a psychological defense to his poor self-esteem. He stated that he is uncomfortable with his celebrity status, indicating "I don't want super stardom."

Mr. Tyson reported his mood as being depressed. His effect was marked by instability, with a tendency to shift over the course of the day in response to events in his life. He reported that he experiences several symptoms of depression, and that these are chronic. He reported these symptoms to include depressed mood, decreased energy, feelings of guilt, and increased appetite. Mr. Tyson denied a desire to harm himself or others. He noted that he feels better when training and doesn't find fighting stressful. He gave a history of periods of increased energy and rapid thoughts, although these were not confirmed by his wife. He reported feeling anxious and described a state of hypervigilance (hyperalertness to the people and events around him) which he attributes to the number of times his trust has been betrayed. Other than this general level of alertness, there are no other indicators of an anxiety disorder, including Post-Traumatic Stress Disorder. Mr. Tyson denied symptoms of a psychotic disorder and no signs or symptoms of psychosis were detected. He specifically denied episodes of dissociation, macropsia, micropsia, déjà vu, hypergraphia, or olfactory hallucinations. Mr. Tyson did not report or exhibit signs and symptoms of Intermittent Explosive Disorder.

During the course of the evaluation, Mr. Tyson was anxious at times and very aware of the activities around him, as well as sensitive to their implications. Mr. Tyson was open and direct throughout the evaluation. Part of his openness and honesty, however, was to express clearly to us his sense of humiliation at being asked to undergo an evaluation by mental health professionals. He reported being deeply embarrassed that everyone knew he was here and at the possibility that people would think he was "psycho." He expressed his frustration at being required to undergo this evaluation, which he believes to be unprecedented. In spite of this degree of humiliation and frustration, Mr. Tyson did agree to proceed with the evaluation and cooperated with the process. There were times, particularly early on, when his anger over the

process made it difficult for him to continue. Appropriate breaks were taken throughout the five days of evaluation as a result of the mental strain and fatigue caused by the pressured setting, especially by the psychological and neuropsychological testing.

Neurological Evaluation: Dr. Jeremy Schmahmann conducted a neurological examination of Mr. Tyson, with consultation from Dr. Barry Jordan. In preparation for the examination, Mr. Tyson underwent an EEG and MRI of the brain. Both of these studies were normal. Mr. Tyson was found to have a normal neurological evaluation. He did exhibit some difficulties with "working memory, sequencing and switching sets ... and some difficulty with perseveration. ... These findings, minor as they are, are consistent with a problem of the executive control system. There is no accompanying electrophysiologic abnormality as shown by the EEG, or anatomic abnormality as shown by the normal MRI."

Neurological Evaluation: The neuropsychological testing administered by Dr. Deters indicated that Mr. Tyson is a man with a mixture of cognitive strengths and weaknesses. His relative weaknesses are in the areas of attention, short term/working memory, verbal learning and memory, and fine motor coordination. He also has deficits on some select measures of executive control. Dr. Deters notes that Mr. Tyson has both emotional and executive control problems. These executive control problems are not such degree that they would prevent Mr. Tyson from appropriate participation in boxing if he is able to address his emotional issues.

Psychological Evaluation:

The results of the psychological evaluation conducted by Dr. Medoff revealed Mr. Tyson's moderate depression, self-criticisim, irritability, anger, individualism, and difficulty in interpersonal relationships. His profile was consistent with those of people who experience anger and irritability but are ordinarily able to control these feelings. It also revealed a tendency to rely on others to a greater extent than expected, as well as naiveté in these relationships. The testing did not suggest the presence of any major mental illness or personality disorder. These findings are consistent with our clinical observations.
Laboratory Testing, MRI, and EEG: Mr. Tyson underwent a series of laboratory studies. All of these studies, including the blood and urine toxicology screens, were unremarkable except for minor abnormalities in his urinalysis. These are probably of no clinical significance and can be addressed by his internist. Copies of these results are attached.

Clinical Impression: Mr. Tyson is a 32-year-old married man who reports a long history of low-level depression. His personal history is marked by significant psychological and physical trauma, as well as a belief that he has been betrayed by individuals close to him. This has caused Mr. Tyson to have significant problems with trust, as he fears being betrayed. In addition, he struggles with low self-esteem.

On mental status examination, neurological evaluation, and psychological and neuropsychological examination, Mr. Tyson exhibited shifts in his mood in response to events around him. Mr. Tyson's changes from normal mood to anger seem to be triggered by his belief that he is being used, victimized, and treated unfairly. When this occurs, he becomes defensive and uses anger to push people away. These mood shifts are responsive to intervention, structure, and clear expectations. Mr. Tyson denies any desire to harm others. While he has difficulty trusting others, Mr. Tyson was able to develop rapport with the evaluators, and he has the capacity to establish appropriate interpersonal relationships.

Mr. Tyson demonstrated relative cognitive difficulties in the areas of attention, short term/working memory, verbal learning and memory, and fine motor coordination. He also has deficits on some select measures of executive control. These deficits are not necessarily the result of boxing, and may well have been present prior to the initiation of Mr. Tyson's boxing career. They are not of such proportion that they would preclude Mr. Tyson from boxing. In

conjunction with his psychological vulnerabilities, however, they place him at some increased risk of impulsivity and poor judgment. We emphasize that because of the lack of an appropriate comparison group, caution must be taken in the interpretation of these test results. We recommend that Mr. Tyson repeat a neuropsychological evaluation in one year to document that these deficits are nonprogressive, in light of the fact that there is no comparison group.

Responses to Specific Inquiries: 1. What is the current diagnosis of Mr. Tyson with reference to all axes?

Axis I: Dysthymic Disorder 314.00; Cognitive Disorder NOS 294.9

Axis II: Borderline personality traits

Axis III: None

Axis IV: Problems related to social environment; economic problems; problems related to interaction with the legal system

Axis V: GAF = 70 (current)

2. What is the current necessary or proposed treatment, if any, recommended for Mr. Tyson?

It is the unanimous opinion of the evaluation team that Mr. Tyson should be engaged in a course of regular psychotherapy with the goal of building trusting relationships, understanding and managing his emotional responses to specific situations, and anger management skills. It is expected that this therapy will help him compensate for his relative deficits in executive control. Mr. Tyson should have a primary treating therapist with whom he will have personal or telephone contact at least weekly. In light of Mr. Tyson's training and travel schedules, it will be helpful to him to have a team of treating clinicians who can be available to him when his location changes.

While antidepressant medications can be a useful adjunct in Dysthymic Disorder, they are not always necessary or helpful. When medications are recommended, that recommendation is based on numerous factors, including the necessity of the medications, the side effects of the medication and the effect on the patient's lifestyle, and the availability of alternative treatments. In Mr. Tyson's situation, it is our recommendation that his treatment be centered on the management of emotions through psychotherapeutic interventions rather than medication. Such treatment is more likely to have persistent benefits in terms of Mr. Tyson's modification of his behavior over the long term. We do not feel that medication is necessary for him to return to boxing at this time. We believe that a return to boxing will help alleviate some of the stresses contributing to his depression.

While we found no indication that Mr. Tyson was abusing substances, we would recommend continued screening for such substances, including steroids, in order to insure that there are no additional factors which might exacerbate his anger-control problems.

3. What is Mr. Tyson's ability to handle stress in unpredictable situations?

Based upon our observations, Mr. Tyson's ability in this area appears to be fair to good. We observed Mr. Tyson under circumstances of high stress. In addition to his feeling humiliated and singled-out by the process, his physical and mental processes were the subject of intense scrutiny with the knowledge that this information might be produced for public consumption once submitted. These are the circumstances in which Mr. Tyson says he ordinarily becomes angry and defensive. While we saw irritability and outright anger on Mr. Tyson's part on

several occasions in connection with the evaluation process, he was able to recompose himself and responded readily to support and encouragement from members of his support staff. Mr. Tyson's awareness of the importance of the evaluation overrode his frustration at being required to undergo the process and his desire, at times, to flee. Thus, under these stressful circumstances, he showed good judgment and was able to modify his impulses.

Boxing provides a different set of stresses, in many ways less troubling for Mr. Tyson than the process he underwent in our offices. His sense of mastery in boxing is much greater than his comfort level in an unfamiliar clinical setting aimed at probing his emotional state and intellectual function. We saw no definitive evidence that Mr. Tyson would be unable to handle unpredictable events in the ring.

4. What is the potential that Mr. Tyson could commit another major foul in the boxing ring?

It is not possible to predict the future behavior of any individual. Fouls are committed in boxing, as they are in other sports. There is thus some risk of a foul occurring by virtue of being a boxer or an athlete in general. While past behavior is the best predictor of future behavior, that fact argues both ways for Mr. Tyson. On the one hand, it could be said that his commission of a foul puts him at increased risk of committing another offense. On the other hand, Mr. Tyson's history of limited point deductions in 48 previous bouts suggest that he is at low risk of another foul, especially given the consequences to date of the June 28, 1997 incident.

It appears that Mr. Tyson's foul was the product of several factors: depression, impulse control problems exacerbated by depression, a sense that no one was protecting his interests, and a variety of social and financial pressures. Mr. Tyson has changed his management and support staff and has begun addressing his depression. Continued efforts in this regard, including specific therapy to address his anger-management and trust issues, should help reduce his risk further. It is also important to note that Mr. Tyson is acutely aware of the harm he has done to his career, his family, and his life as a result of the incident in question. He is remorseful regarding the incident, and is highly motivated to avoid repetition of that behavior. We believe that the risk of such a re-offense is low.

5. Does the chosen medical institution believe that Mr. Tyson is mentally fit to compete within the rules and regulations of the sport of boxing, without succumbing to another incident wherein Mr. Tyson says he "snapped?"

It is the opinion of the evaluation team that Mr. Tyson is mentally fit to return to boxing, to comply with the rules and regulations, and to do so without repetition of the events of June 28, 1997. While we take note of the impulsivity, emotional problems, and cognitive problems, and cognitive problems outlined above, it is our opinion that none of these, alone or in combination, render Mr. Tyson mentally unfit in this regard. We feel that the treatment recommended above will further increase his fitness and ability to participate successfully in boxing.

Respectfully submitted,

Ronald Schouten, M.D., J.D.

Neuropsychological evaluation

(From Thomas J. Deters, Ph.D)

Reason for referral

At the request of Dr. Ronald Schouten, I have undertaken a comprehensive neuropsychological evaluation of Mr. Michael Tyson. This evaluation was requested to assist in the evaluation of Mr. Tyson's fitness for duty as a professional boxer. This evaluation was part of a team evaluation. The team members and their roles in this evaluation are outlined in the summary report prepared by Dr. Schouten. The specific referral questions that were outlined by the Nevada State Athletic Commission are also addressed in this summary report.

Since Mr. Tyson was interviewed by various members of our evaluation team, I did not conduct a comprehensive diagnostic interview. I briefly interviewed him on each of the days that I saw him, and I relied on interview data that was acquired through interviews conducted by other team members. I also relied on the evaluation results of our entire team in arriving at my conclusions.

Procedures

The Commission requested Comprehensive Neuropsychological Testing. There are different, but widely accepted approaches to conducting this type of evaluation, including the use of the Halstead-Reitan Battery which was requested by the Commission. I did not use the Halstead-Reitan Battery as it is not as widely used in this part of the country, where many or most psychologists are trained to use a flexible approach to neuropsychological assessments. It is my opinion that this provides at least an equivalent or a more comprehensive evaluation than would be represented by the Halstead-Reitan Battery. The following is a list of the tests used in this evaluation and is typical of the flexible approach.

Neurobehavioral Interview (Multiple brief interviews)
Temporal Orientation Test

Wechsler Adult Intelligence Scale-Revised
Trail Making Tests A and B
California Verbal Learning Test
Rey-Osterrieth Complex Figure Test (Copy and Delayed Recall)
Wechsler Memory Scale-Revised (selected subtests)
Boston Diagnostic Aphasic Examination (reading comprehension subtest)
Visual Naming Test
Controlled Oral Word Association Test
Token Test

Speech Articulation Rating Scale
Writing Praxis Rating Scale
Wide Range Achievement Test-3 (Reading Subtest)
Draw a Clock Test
Test of Directed Attention
Judgment of Line Orientation Test
Alternating Visual Patterns Test
Wisconsin Card Sorting Test
Booklet Category Test
Stroop Neuropsychological Screening Test
Finger Tapping Test
Grooved Pegboard Test
Beck Depression Inventory
Profile of Mood States

Background

(From my interview and interviews conducted by other evaluation team members)

Mr. Tyson is a 32-year-old, right-handed, black male. He indicated that he is currently is good health. With the exception of a history of multiple traumas to the head, he denied any significant medical history.

Mr. Tyson reported a history of head traumas dating back to early childhood. He indicated that he was in many street fights, and was hit with bars, bricks, and other objects. He estimated that he lost consciousness on approximately five occasions. He was never taken to the hospital as his family was unable to afford it. He was vague about the details of these incidents, indicating that he had a poor recollection of them. He would get home by various means, and recover at home. He also sustained a trauma to the head in a motor-vehicle accident with an estimated 20-minute loss of consciousness. He indicated that he has sustained many blows to his head during his boxing career, but that he never lost consciousness.

Mr. Tyson indicated that he completed the 10th grade. He dropped out of Catskill High School in the 11th grade. He indicated that he received special education services, but that this was due to his behavior problems, and not due to academic difficulties. He attempted the GED on one occasion but failed it. While he denied receiving special educational services for academic difficulties, he indicated that he has a history of difficulties with reading, spelling, and math.

As you know, Mr. Tyson was seen by Dr. Jeremy Schmahmann on 9/25/98 for a neurological evaluation. The elementary neurological evaluation was normal, with the exception of vision in the left eye being 20/25 uncorrected. On the mental status examination he found minor executive control system problems. Magnetic resonance imaging of the brain and electroencephalogram were both normal. He denied a significant alcohol or other drug history. Dr. Schmahmann recommended that Mr. Tyson engage in ongoing counseling.

Mr. Tyson seemed to be extremely candid in his discussion of his history, and gave no indication of efforts to impress me with discussions of part or current virtuous behavior. When I asked him about the incident with Mr. Holyfield, he fully acknowledged that his behavior was grossly inappropriate. He indicated that this behavior was a manifestation of self-protective behaviors that he learned on the streets of New York. He expressed remorse for his behavior, but also indicated that it was in response to the head-butts of Mr. Holyfield and the failure of the referee to intervene. This did not appear to be a rationalization of his

behavior, and he indicated that he would have never behaved in this manner had he known the penalty that he would have to pay. He indicated that if he were in a similar situation in a future fight, he would persist in notifying the referee of the perceived fouls of his opponent.

Medications

None at the present time, but he has been treated with Zoloft and Lithium in recent years.

Behavioral observations

As indicated above, I saw Mr. Tyson on three separate dates. On the first occasion (9/23/98), I met him with Dr. Schouten. This was his first morning in Boston, and immediately after Dr. Schouten had conducted a brief interview with him. His demeanor was initially friendly, and in fact he was quite insistent that I refer to him as "Mike" as opposed to "Mr. Tyson." He appeared anxious, and while not appearing angry with me or Dr. Schouten, he indicated that he was angry and apprehensive about having to undergo our evaluation. During our efforts to introduce him to the evaluation and to put him at ease about it, I inquired about his reading ability. He indicated that he was not very good at reading, and that he preferred not to take any tests that required reading. I did not push the issue. However, soon after this his demeanor seemed to change. He became much less engaged in the interview, and at one point he expressed deep feelings of anger directed at me and the evaluation process. He quickly assured me that he had no intention to act on these feelings. We were able to continue our introduction and interview. He seemed to be well-engaged in the interview, but clearly felt affronted when Dr. Schouten indicated that he had to see another patient. I indicated that I wanted to see him at that time to conduct the interview, but he refused to see me.

Due to scheduling conflicts, I was not able to Mr. Tyson again until 9/26/98. In the interim, Dr. Schouten discussed with him the fact that he would be seeing me again. It is my understanding that he agreed with little or no hesitation. He acknowledged to Dr. Schouten his acute sensitivity to difficulties that he has had with academic tests, and realized that he overreacted during our first encounter.

At our second and third meeting, Mr. Tyson presented a friendly, cooperative demeanor. His manner suggested that he was not enthusiastic about the evaluation process, but he did not express any overt resistance to it. During a brief interview, he talked openly and candidly about his history and current circumstances. He exhibited a thoughtful and emphatic dimension of his personality, with expressions of concern about oppressed social groups. He exhibited a good sense of humor and a genuine concern about the well-being of others. He expressed warm and loving feeling toward his children, while admitting to some difficulties in his marriage. He indicated that his wife is embarrassed about his behavior, and that he is regretful that she has had to be exposed to his public humiliation.

Mr. Tyson agreed to participate in all aspects of the evaluation process. He appeared somewhat restless, with indications of difficulties with sustained attention. He seemed to be making a good effort, but seemed to have difficulty remaining focused. He put his face down in his arms on the table on numerous occasions, but continued his participation in the evaluation. I asked him if he was tired, and he acknowledged that he was not sleeping well as a result of numerous stressors in his life. Since he seemed to remain well-engaged in the evaluation, I did not discourage this behavior. Additionally, it was my impression that this behavior may have been a compensatory technique to help him in focusing his attention. While sustaining attention on the examination seemed difficult for him, he did not request frequent breaks and he did not display any overt resistance to the process. He frequently responded with a polite "yes, sir" when asked to complete another task.

On a number of occasions when experiencing difficulties on a task he seemed to give up prematurely. In general, his failure to persist on some tasks appeared to be a manifestation of feelings of frustration and some embarrassment about his difficulties on the task. For example, it was clear that he refused to write a sentence that I dictated to him due to embarrassment about spelling deficiencies. He reluctantly agreed to write another less complex sentence. On a number of occasions he gave up on timed tasks before expiration of the time limit. I encouraged him to continue, and in most cases he made some further effort. On some measures, due to what appeared to be difficulties with attention and executive control, he did not follow the standard procedures for completion of the task. For example, on a visual memory task he was instructed to study a design for 10 seconds and then draw it when it was taken away. On one of the items, he started drawing the item before the design was removed. His failure to follow the standard procedure seemed primarily due to difficulties with attention and anxiety, as contrasted with an intentional effort to circumvent the rules.

On a number of occasions when he was succeeding on a task he referred to the testing as "fun" and seemed to enjoy the challenge of the evaluation process. In general, he remained well-engaged throughout the evaluation and persisted to the end of the tasks. Overall, this appears to be a valid assessment of his current functioning.

Summary of results/impressions

Mr. Tyson was seen for a comprehensive neuropsychological evaluation and for limited assessment of his emotional state. This evaluation was part of a team evaluation, and the findings of other team members were made available to me. I relied on information that was obtained by other team members, as well as my own findings. I personally administered, scored and interpreted all of the tests listed in an earlier section of this report. I did not take a complete medical or psychiatric history as this was being conducted by other team members. I briefly interviewed Mr. Tyson on each of the occasions that I saw him. I had the opportunity to evaluate him on three separate days. My conclusions reflect a synthesis of my personal observations and results from the testing that I conducted, in addition to information obtained from the evaluations of other team members.

There are a number of limitations that need to be kept in mind when reviewing these results. Given significant time constraints placed on the completion of the evaluation, we did not have access to many of Mr. Tyson's records. As a result, we had to rely on his self-report regarding matters such as his medical history and his educational history. School and prison records which document learning or behavioral problems would have been very useful.

In my interpretation of the results I have attempted to keep in mind moderator variables including age, gender, educational level, occupation, and race. I have attempted to use the most appropriate standardization samples available, many of which were adjusted for some of these variables, but some do not include these adjustments.

Results on neuropsychological testing was highly variable, with scores ranging from the superior range to the impaired range. However, functioning on most measures was in the average-to-borderline range. General intellectual functioning was in the average range. His greatest relative strength was on a measure of verbal fluency. Other relative strengths (high average to low average range) were in the areas of: temporal orientation, remote memory/fund of knowledge, functional expressive and receptive language, expressive vocabulary, receptive language, verbal concept formation and verbal social reasoning, reading recognition and reading comprehension, fundamental visuoperceptual and visuoconstructional abilities, non-verbal reasoning and problem solving on select measures, and visual memory.

Relative weaknesses were found in the areas of: attention/mental tracking; short-term memory/working memory; verbal learning and memory; executive functions on select measures, and bilateral motor speed/coordinations. My observation of his performance also revealed mild difficulties with impulsivity and executive control.

Functioning on neuropsychological measures was likely decreased due to emotional factors including depression, frustration, anger and other emotional factors which are outlined in the psychological test report. Additionally, he experienced significant stress related to the outcome of this evaluation. While he reported and appeared to be fatigued at times, there were indications on some personality scales that he had a high level of energy, and there were no clear observable indications of psychomotor slowing.

Given the complex interplay of cognitive and emotional factors, it is difficult to determine the degree to which his reduced performance on some neuropsychological measures is a manifestation of a neurobehavioral syndrome and to what degree it is a reflection of his emotional state. This is conflicting data with regard to this matter. However, it is my impression that neuropsychological test results reflect mild to possibly moderate neurobehavioral compromise. There is evidence of a developmental learning disability. I did not examine this in depth due to his acute sensitivity regarding his difficulties with reading and spelling, and because this was not the focus of the referral question. He may have residual Attention Deficit/Hyperactivity Disorder, but I would need more detailed developmental history from individuals who were familiar with his childhood behavior to make this diagnosis. He reported experiencing numerous serious traumas to the head during his childhood with a loss of consciousness on approximately 4-5 occasions. He was also involved in a motor-vehicle accident in which he struck his head and lost consciousness for approximately 20 minutes. He also experienced many traumas to the head during his boxing career, but with no reported loss of consciousness. While I do not have detailed history of these events, they appear to be the major factors which contribute to his current neuropsychological status.

Mr. Tyson exhibits a constellation of neurobehavioral deficits that appear to be largely consistent with the findings on a neurological examination. My findings seem to be somewhat more pronounced, which is likely a manifestation of the fact that I conducted more detailed mental status testing. While specific neurobehavioral deficits are outlined above, the key issue related to this referral question appears to be findings which are consistent across the neurological and neuropsychological evaluations which demonstrate executive control deficits. Individuals with this neurobehavioral profile often have difficulties with impulse control, inhibition of behavior, judgment, and rapid decision-making. These findings also need to be considered in the context of an apparent history of depression and significant mood fluctuations, which may serve to mediate the expression of these behaviors. If his mood can be adequately managed, he will likely have better control over the neurobehavioral deficits. With deteriorations in his mood, he is likely to be more susceptible to acting on impulse and showing poor judgment.

The above findings are a concern to me. However there are other positive findings that need to be considered in the determination of Mr. Tyson's fitness to return to boxing. While he exhibited difficulties on some measures of executive control, he performed normally on others. Functioning was normal on some measures of social reasoning, abstract concept formation, planning, and problem solving.

I did not observe any behavioral control problems during the three days that I had contact with Mr. Tyson. While he expressed anger on the first day of our meeting, he gave no indication of acting on this, and was very affable during the remainder of his stay. I also had a few opportunities to observe his behavior outside of the hospital. He was playful and

generous when approached by strangers on the street. On the final day of his evaluation he indicated that he wished he could stay in Boston as he was comfortable with the members of our team, and he enjoyed the people of Boston.

While Mr. Tyson initially presented me with an confrontative demeanor, this seems to be largely a manifestation of low self-esteem related to a history of academic difficulties. He appears to have a developmental learning disability in at least one or more areas. While his intellectual functioning is average or above average in some domains, he is very aware of and sensitive to relative difficulties with reading and spelling. It is my impression that he was likely very aware of this at an early age, and that he developed and maintained an image of being intellectually inferior since that time. While this is somewhat speculative, it is not unusual for young males with learning problems to act out in an aggressive manner, which may at least in part explain early aggressive behavior and numerous fights. The degree to which his emotional state regresses to an earlier developmental stage around learning issues is very remarkable. As mentioned in an earlier section of the report, on my initial meeting with Mr. Tyson he immediately became very angry and refused to meet with me after I inquired about his reading ability. However, when he was engaged in the evaluation and realized that I wasn't criticizing or judging his ability, he became much more relaxed, and actually seemed to be challenged by and to enjoy aspects of the evaluation.

Another strength exhibited by Mr. Tyson was his acute awareness of his current and past emotional state. He indicated on a number of occasions that he believes that he has been depressed his entire life. He apparently had a very tumultuous childhood, raised in a poor neighborhood by his mother who died of cancer at age 14. He apparently had very limited contact with his father. Mr. Cus D'Amato and Ms. Camille Ewald took him in at age 12, which apparently was a stable, supporting, and trusting relationship. Mr. D'Amato has since died, and Ms. Ewald is in her 90s. He is fond of her, and at one point indicated that he would like to be living with her away from the many stressors in his life. It is my understanding that he speaks to her often and that he continues to provide financial support. He candidly stated that there is currently nobody in his life that he trusts, and he seems to realize the adverse implications of this for his emotional functioning. We discussed the possibility of his participation in psychotherapy to address this issue and related matters. He indicated that he would be willing to do so. While he will initially have difficulty trusting a therapist, it is my opinion that he has the capacity for a trusting relationship with the right individual.

With regard to his boxing career, while he has unquestionably been successful as a boxer, he was humble about that success, and minimized his abilities. While he would like to return to boxing, and has a need (to) earn a living, he was strikingly unassuming about his boxing career. He repeatedly expressed a desire to return to boxing as it is the only way that he can support his children.

Mr. Tyson spontaneously discussed his religious beliefs on a number of occasions. He doesn't consider himself particularly religious, and gave no indication of trying to pass this off as a panacea for his troubles. However, it was evident that this has become a stabilizing force in his life.

Conclusions

Mr. Tyson exhibited neurobehavioral and emotional difficulties, as well as many strengths. He seems to be very resilient in light of a history of many obstacles. He exhibited intelligence that seemed to be beyond what is reflected in some of his test scores. He seems to have a clear recognition that his behavior in the Holyfield fight was completely inappropriate and he

expressed remorse for his behavior. While his behavior in the Holyfield fight was deplorable, it is my understanding that he has not exhibited similar behaviors in the past, and that he has a boxing record of few fouls.

I am unable to predict whether or not Mr. Tyson will lose control of his behavior in a future boxing match. He exhibits neurobehavioral and emotional deficits that make him susceptible to this, but are by no means predictive of it. It is my opinion that if he is able to better understand his emotional life, he will be in much better position to control impulses and behaviors that my be a manifestation of neurobehavioral deficits. To this end, I strongly recommend that Mr. Tyson be seen for weekly, if not more frequent psychotherapy sessions. This should be a therapist that he chooses, and he should have the opportunity to try a number of therapists until he finds the best match for him. He expressed fondness for Dr. Goldberg, a psychiatrist that he has seen in the past, so he may want to return to him.

It is my understanding that the Commission does not have the authority to stipulate ongoing psychotherapy as a condition for Mr. Tyson's return to boxing. However, I recommend that this treatment be strongly encouraged to the degree that it is possible. It is my opinion that his participation in this treatment will be a pivotal factor in influencing and guiding his future behavior. It will also serve as an ongoing measure of his motivation to examine his behavior and to take responsibility for it. Furthermore, the Commission could be assured that if he was experiencing emotional deterioration, he would have a familiar and trusted individual to confide in and provide necessary support.

It is my opinion that Mr. Tyson's past behavior needs to be viewed in the context of his neuropsychological status, as well as in the context of the sport of boxing. As in many contact sports, overtly aggressive behaviors with go beyond the rules of the game, while not be condoned, are not uncommon during the heat of battle. While there need to be strict controls of these behaviors, Mr. Tyson's behavior, while beyond the norm, was by no means isolated in the world of contact sports.

Mr. Tyson seems to have a clear understanding that he will have no future chance of returning to boxing if he commits the same, or a similar foul. If he is given the opportunity to return to boxing, his behavior will possibly be the most scrutinized behavior in the history of professional sports. I believe that he realizes this, that he has the ability to have an unambiguous understandings of the sanctions should he commit a similar foul, and that he is highly motivated to be fully compliant with all the rules and regulations.

I recommend that Mr. Tyson be seen in one year for a repeat neuropsychological evaluation to make sure that his current cognitive difficulties do not represent a progressive deterioration of functioning. Furthermore, repeat testing may reveal an improvement in his functioning on neuropsychological measures if there is an improvement in his emotional state.

Thank you for referring Mr. Tyson for my evaluation.

Thomas J. Deters, Ph.D
Licensed Psychologist
Commonwealth of Massachusetts #3637
Diplomate in Clinical Neuropsychology
American Board of Professional Psychology

Neurologic component

September 24, 1998

Ronald Schouten, M.D., J.D.
Law and Psychiatry Service
Adult Forensic Services
Massachusetts General Hospital
60 Staniford St.
Boston, Massachusetts 02114

Re: Michael G. Tyson
MGH#: 365-55-42

Dear Ron,

I had the pleasure of meeting Mike Tyson today at your kind referral. Mr. Tyson was referred to this hospital by the State of Nevada Athletic Commission for the question of his competency to re-enter the sport of boxing. I performed the neurologic component of this team evaluation of Mr. Tyson.

I saw Mr. Tyson this morning accompanied by Dr. Barry D. Jordan of the Charles R. Drew University of Medicine and Science in Los Angeles, California. I elicited the history from Mr. Tyson in the company of Dr. Jordan, and Mr. Steve Thomas and Mr. Shelly Finkel, associated of Mr. Tyson. The examination was performed in the company of Dr. Jordan.

Mr. Tyson is a 32-year-old right-handed gentleman who describes no specific complaints. He is aware of his reason for being here today.

Neurologic Review of Systems: Mr. Tyson denied any headaches. He has no difficulty with his vision or hearing. His speech comprehension and swallowing are normal. No difficulty with his balance or gait. No parenthesis in the hands or feet. No difficulty with bowel or bladder. His concentration is unimpaired. His memory is "too good." When asked to expand on this, he describes his recollection of previous loved ones, managers and childhood memories.

Mr. Tyson denied any episodes of loss of consciousness in his boxing career. He has lost consciousness "quite a few times," approximately four times in his life as far as he can remember. He describes episodes of having been hit with a baseball bat on the head, assaulted with a brick on the head, and one time, "beaten so bad that (he) collapsed." During these episodes he was "out cold" but he does not know how long he was unconscious.

No history of seizures. Specifically, no generalized convulsions. He has never woken up in the morning with blood on his pillow or having bitten his tongue. He has never awoken in the morning to find that he had wet the bed during his adult life. No episodes of blackouts, or lack of awareness of events that he has participated in. There is no suggestion of fugue states. No automatisms as far as he knows.

General Medial Review of Systems: The review of other systems reveals no complaints referable to the cardiac system, respiratory system or gastrointestinal tract. He has been flat-footed all his life and tells me that it was predicted early on that he would not be an athlete because of his flat feet. No major medical illnesses in the past.

Social/Medical Review: Mr. Tyson rarely smokes cigarettes. He denies any alcohol use. He takes no illicit substances and denies having done so in the past. He has been given medication in the last few years, including Lithium and Zoloft. When taking Zoloft he finds that he does not have the motivation to participate in sparring exercises as part of his workout. He feels it adversely affects his ability to compete as a boxer.

Family History: Mr. Tyson's mother died of cancer at age 47 and his father died of a heart attack at age 62. One sister died at age 25 in 1990 of "obesity." His brother is well but also has a weight problem. He is married and has four children ages 9, 8, 3½ and 1, and his children and spouse are all medically well.

Examination: Mr. Tyson is generally well, demonstrates no signs or symptoms of physical disability, and has a blood pressure of 110/80 in the right arm while sitting. All the pulses are present and symmetric. There are no carotid bruits or heart murmurs. Chest sounds are clear. He has a number of tattoos.

Cranial Nerves: Sense of smell and taste are intact to questioning and he smells coffee instantly and correctly. The visual acuity is 20/20 in the right eye and 20/25 in the left eye. Funduscopic examination is normal. Visual fields are full to confrontation, with each eye tested separately. The pupils are regular and round, 3mm in diameter and reactive to 2mm directly and consensually to light and accommodation. The pursuit movements are smooth. Saccades are normal. There is no nystagmus. The eye movements are full in all directions. Convergence is present. The facial sensation is normal to touch and pin in all three divisions. Facial movements are normal and symmetric throughout. Hearing is intact to high and low tones bilaterally. Palate and tongue move in the midline. There is no dysarthria, and the tongue movements are normal.

Motor System: Mr. Tyson is obviously very muscular, and the tone is normal in both upper and lower extremities. Strength is normal in both upper and lower extremities proximally and distally and symmetric across both sides. The rapid tapping of the index finger and thumb is normal in both hands. Rapid alternating movements of each hand tested separately are normal. The finger-to-note test is normal in both upper extremities. The rapid finger-following test was performed and showed a mild overshoot when first attempted, and after further instruction to follow the examiner's hand precisely there was no further evidence of overshoot. There was a hint of rebound with the testing of the upper extremities, but again this settled down with further instruction. The gait is normal. Tandem is normally performed. Standing in a tandem position is intact. Standing on each leg for 10 seconds is normal. Romberg test is negative. Stress gait produces no posturing of either upper extremity.

Reflexes: The deep tendon reflexes are 1+ at biceps, triceps, and brachioradialis, and 2 at the knee and ankle. The plantar responses are bilaterally flexor. There is no evidence of a snout, root or grasp reflex. Jaw jerk is negative.

Sensation: Appreciation of pin is normal in each digit in the hands, and is normal in both arms, both legs and in the trunk anteriorly and posteriorly. Appreciation of light touch is normal throughout. Vibration sense is present and normal at the toes and hands. Position sense is normal in the great toe bilsterally. Double simultaneous visual stimulation produces no extinction. Graphesthesia is normal in both hands.

The mental state examination was performed in the following manner.

Attention and orientation: Mr. Tyson knew the date and place. He repeated seven numbers forwards on the second try, as he transposed one of the numbers on the first attempt. He was able to repeat three numbers in reverse sequence but could not give five numbers in reverse sequence or four numbers in reverse sequence. He was attentive throughout the interview and fully cooperative.

Memory: Mr. Tyson learned four words on the second attempt. Five minutes later he gave three back spontaneously and one with a clue. He knew the major figures in the current Washington crisis including Clinton, Lewinsky, Starr, Tripp, and Hillary. When he gave the last name he said "She's pissed off." He recalled in detail events of his earlier life and demonstrated no evidence of loss of memory for these events.

Executive Function: Performance of the fist-palm-side test was abnormal on the first attempt. He followed the examiner's example very rapidly and in doing so made mistakes in the sequencing of the motor gestures. When redirected and requested to perform this task more slowly there was no difficulty with sequencing or recollection of the sequences. When copying the Luria diagram, he showed two instances of perseveration of the triangle component; once in the middle of the diagram and once at the end. His drawing of a clock with the numbers on it and the hands reading ten after ten was perfect. When copying a spiral loop diagram, he did not perseverate. He named thirty animals in one minute. He had difficulty with working memory as tested by the reverse sequence of numbers as referred to above.

Language: Mr. Tyson's comprehension was perfect. His output was fluent with no paraphasic errors. His repetition was intact. Naming for both low-frequency items and common items was intact. He denies any difficulty with reading or writing.

Abstract Reasoning: He was able to give me the similarities between different kinds of fruit, and a mirror and a window. When asked about the similarity between a poem and a statue he responded that "they both described something."

Spatial Cognition was tested by his copy of a three-dimensional box. He said he was unable to draw a cube and when I drew a cube for him he copied this with a couple of minor errors. His drawing of a clock was normal.

Praxis was perfectly performed for limb movements; buccofacial movements and ideational praxis was perfectly performed as well.

Judgment was tested by the "stamped letter on the ground" question. Mr. Tyson responded that he would put it in the mailbox; and then he paused for a moment and said that it depends on what kind of mood he is in -- "they never ask that." He "might just read it or tip it up depending on (his) mood."

Other Pertinent Observations: Mr. Tyson was cooperative throughout the interview and examination. When I first met him and introduced myself, he commented "I feel like I'm in a concentration camp." He demonstrated an ability to be both gentle and generous in his interactions with some of the hospital staff who asked him for his autograph. This contrasted with the personal discussions that Mr. Tyson engaged in with Dr. Jordan and myself at the

completion of the formal component of the history and examination. Whereas these fall more within the domain of the psychologist and psychiatrist, it is pertinent both to the history and to my findings on the examination today that there is a wellspring of psychologically relevant material dating back to childhood and psychological traumatic events earlier in Mr. Tyson's life that most certainly have a role to play in his ability to monitor his own performance in circumstances of stress. He expressed feelings of pent-up hostility and hurt, a sense of mistrust, disappointment, and suspicion, and a sense of being isolated and alone that stands in stark contract to his external demeanor and behavior.

The electroencephalogram (EEG) was personally reviewed and is normal during waking, drowsy and sleep states. This was consistent with the official interpretation of the study.

Magnetic resonance imaging of the brain. MRI scan of the brain using T1, T2, and gradient echo as well as flair sequences were performed. The scans are completely normal, demonstrating no evidence of disease of the white matter, no focal areas of abnormal enhancement with contrast, and no evidence of focal atrophy in the anterior temporal, anterior prefrontal, or interhemispheric regions. There is a cavum septum pellucidum which is a normal finding. No evidence of prior hemorrhage is seen on these scans.

I have not seen the neuropsychological assessment or the psychiatric evaluation.

Neurological Assessment: Mr. Tyson has a normal elementary neurologic examination in all respects with the single exception of vision in the left eye being 20/25 uncorrected. In the mental-state examination, there is some difficulty with working memory, sequencing and switching sets of evidence in the Luria fist-to-palm side test initially, and some difficulty with perseveration as seen in the Luria diagram. These findings, minor as they are, are consistent with a problem of the executive control system. There is no accompanying electrophysiologic abnormality as shown by the EEG, or anatomic abnormality as shown by the normal MRI.

Recommendations: Given the subtle problems shown on the simple bedside mental-state tests pointing to difficulty with executive systems, and the history of impulsivity, combined with the complex past history that Mr. Tyson described to Dr. Jordan and myself, it is the recommendation of both Dr. Jordan and myself that Mr. Tyson continue to engage in counseling with an experienced therapist. Mr. Tyson apparently already has established a positive therapeutic relationship with Dr. Goldberg in Washington, and it is recommended that this be continued. It is impossible from a clinical neurologic perspective to predict whether Mr. Tyson is likely to lose control of his actions in the future. What is apparent, however, is that the stressors in the past, combined with the relative weakness in the executive control system, make it imperative that Mr. Tyson have some outlet other than boxing to vent his frustrations and deal with the psychological issues that have caused him trouble in the past. Given that athletic performance could be retarded by the use of psychoactive medication, the counseling route will be critical in Mr. Tyson's personal well-being and in his ability to successfully compete in the athletic arenas.

Thank you once again for inviting my involvement in this case.

Yours sincerely,

Jeremy D. Schmahmann, M.D.
JDS/mn

Report of Psychological Testing

Name: Michael Tyson
Date of Birth: June 30, 1966
Age: 32 years
Evaluator: David Medoff, Ph.D.
Date of Report: September 30, 1998

Identifying Information and Reason for Referral

Michael Tyson was referred for psychological testing by Doctor Ronald Schouten of the Law and Psychiatry Service of the Massachusetts General Hospital. This testing was requested as part of a more comprehensive clincial evaluation being conducted by a team of clinicians led by Doctor Schouten. This consultation report contains information based on behavioral observations and psychological testing only, and needs to be considered in the context of the overall evaluation conducted here at the Massachusetts General Hospital. Please see the final team report written by Doctor Schouten for additional information.

Sources of Information

- Testing sessions with Mr. Tyson on Sept. 24 and Sept. 25, 1998
- Consultation with Thomas Deters, Ph.D., Department of Psychiatry, Law and Psychiatry Service, Massachusetts General Hospital and Spaulding Rehabilitation Hospital;
- Consultation with Mark Blais, Psy.D., Department of Psychiatry, Massachusetts General Hospital;
- Consultation with David Pogge, Ph.D., Director of Psychology, Four Winds Hospital, Katonah, New York.

Tests Administered

- Brief clinical interview
- Bender Gestalt Visual-Motor Integration Test
- Rorschach Inkblot Test (Exner Comprehensive Scoring System)
- Minnesota Multiphasic Personality Inventory -- Second Edition (MMPI-2)

Background Information

This evaluator briefly interviewed Mr. Tyson in order to obtain information relevant to the interpretation of current test data and to build rapport. The following is a description of the information obtained from the interview.

Mr. Tyson is a 32-year-old African-American male who maintains several residences. His wife and four children live in Bethesda, Maryland. Mr. Tyson reported that both of his biological parents are deceased, and that his sister died of obesity in 1990 at the age of 25 years. He recalled that his one brother, who is approximately 36 years old, lives in Los Angeles, California.

Mr. Tyson reported that he was born and raised in Brooklyn, New York, and has been a professional boxer for 17 years. He attended the New York public schools until he was 12 years old, at which time he moved to Catskill, New York, to live and train with Mr. Cus D'Amato. Mr. Tyson stated that he continued attending public schools in Catskill, New York, but dropped out of Catskill High School after completing the 10th grade. He recalled a history of involvement with special education services throughout his educational experience, but was unable to recall when these services first began. Mr. Tyson stated that he received special education services primarily due to his behavioral problems in school, and not due to the difficulty of the academic work itself. He recalled taking the Graduate Equivalency Diploma (GED) examination while in prison in 1992 or 1993, but failing the examination at that time.

Mr. Tyson was asked a brief line of questions to generally assess his history of closed head injury and losses of consciousness, if any. The information that follows is based on a brief line of inquiry and needs to be considered in the context of the more extensive neurological and neuropsychological evaluation conducted as part of Mr. Tyson's overall clinical evaluation. Mr. Tyson reported that he experienced "many" losses of consciousness "as a kid" living in Brooklyn, New York. He stated that these incidents were the result of physical altercations with others, and involved being struck with bricks, baseball bats, and other objects. He recalled receiving no medical attention as a result of these injuries, as his family did not have the financial resources to provide such medical care. When asked about the care he did receive following these injuries, Mr. Tyson recalled that he would "get up" and "go upstairs to bed" where he would go to sleep for varying periods of time. He stated that he has not noticed any sequellae from these injuries.

Mr. Tyson reported that he has not been rendered unconscious in the ring since becoming a professional boxer. He recalled that he has at times been "dazed" while boxing in the ring, but that he has not experienced any losses of consciousness. He denied any vision or hearing problems, and denied ever having experienced a seizure. He characterized his current physical condition as "good."

In reference to his recent mental health status, Mr. Tyson reported no problems in attention or concentration. He did describe a long-standing sleep pattern involving two to three hours of sleep each night. Upon further inquiry, Mr. Tyson reported that this involves a combination of initial insomnia as well as awakening during the night. He also stated that he catches up on sleep approximately once every six months, at which time he experiences a single episode of sleeping for up to 11 hours. Regarding appetite and weight changes, Mr. Tyson recalled that his weight tends to fluctuate between 217 and 260 pounds. He reported that while this weight fluctuation is at times related to his training schedules, and that some weight fluctuation is expected among professional boxers, he has been told that the extent of his weight fluctuation is not good for his heart. He also reported a history of obesity in his family of origin.

Mr. Tyson reported that he has experienced feelings of sadness, hopelessness, and helplessness "all my life." When asked about his history, if any, of suicidal ideation he reported that he has struggled with thoughts of self-destructive behavior for his entire life. Upon further inquiry, Mr. Tyson recalled that he has very low self-esteem, but "the biggest ego in the world." He stated that he has not wanted to kill himself, but recalled engaging in passively self-destructive behavior such as intentionally antagonizing "bad people" so they would harm him.

Psychopharmacologically, Mr. Tyson reported that he has been prescribed Zoloft, an anti-depressant, for the past month with no noticeable benefit or side effects. He did not recall his current dose of the medication. He also stated that he had been involved in a trial of lithium in 1988, but that he took that medication for only a brief period of time. He reported having last consumed alcohol approximately four days prior to the morning of this testing.

Upon inquiry regarding prior psychological testing, Mr. Tyson reported that he had undergone testing several times "as a kid" before moving to Catskill, New York. He also recalled undergoing psychological testing in approximately 1992 while in prison. This 1992 testing was requested as part of this current testing, but was not available in time to be used for this evaluation.

Behavioral Observations

Mr. Tyson presented for testing as a casually dressed 32-year-old African-American male appearing his stated age. He was pleasant and cooperative for the majority of the interview despite both the context of the testing and the potentially significant consequences for his career. It was within this context that Mr. Tyson expressed feelings of shame and humiliation at the necessity of having to undergo this evaluation. At one time he expressed his perception of being singled out as a professional boxer, as he reported that no other boxer has ever been subjected to this kind of psychological scrutiny in the past.

While Mr. Tyson clearly felt shame, anger, and humiliation at the concept of this evaluation, he was able to maintain adequate behavioral control. One example of this was an instance in which he expressed a "wish" to harm this evaluator because of his humiliation at this evaluation. However, at no time did this evaluator feel physically threatened or endangered by Mr. Tyson. It was this evaluator's clinical impression that this incident did not reflect Mr. Tyson's intent to intimidate, but rather that it was an expression of a fantasy in reaction to the frustration of this evaluation. After this statement, Mr. Tyson immediately returned to the task at hand in a quiet and calm manner. Several minutes after continuing with the testing procedure, Mr. Tyson appeared distracted and, due to concern regarding the acquisition of valid data, this evaluator ended the testing session despite Mr. Tyson's request to continue. Following a lunch break, he then engaged in an interview with two other members of the evaluation team as scheduled.

The next morning, Mr. Tyson greeted this evaluator and apologized for his verbal statement made the day before. He was then able and quite willing to engage in the testing process, and did so in a manner with good emotional and behavioral control, producing valid and clinically useful data. Mr. Tyson created and maintained good rapport with this evaluator, and he became increasingly engaged as the testing continued. He exhibited no observable deficits in attention or concentration, and he displayed a full range of emotional expression throughout the testing procedure. His speech was generally of normal rate, volume, and rhythm, and his thought patterns appeared logical, fluent, and goal -directed. Mr. Tyson denited the presence of suicidal or homicidal ideation, intent, or plan as well as auditory or visual hallucinations. At no time did he exhibit any signs of psychotic phenomena.

Test Results and Interpretation

Visual-Perceptual Screening

The Bender Gestalt is a screening measure of visual-perceptual functioning and a test of visual-motor integration skills. While results of this measure do suggest some level of difficulty in organization and planning, findings do not suggest the presence of any major functional impairment in visual-perceptual or visual-motor functions.

Personality Evaluation

Personality assessment typically includes tests that reflect a person's current coping style, approaches to problem solving, and trait-like characteristics that govern both overt behavior and underlying psychological processes. Mr. Tyson was administered the Rorschach Inkblot Test, scored by the Exner Comprehensive System, and the Minnesota Multiphasic Personality Inventory -- Second Edition (MMPI-2), a self-report questionnaire. This evaluator administered, scored, and interpreted the Rorschach. The MMPI-2 was administered by Dr. Deters, and scored and interpreted by this evaluator.

This testing did not include the use of the Millon Clinical Multiaxial Inventory -- Third Edition (MCMI-III) as named in the Athletic Commission's letter to this facility. This measure is not a part of our standard psychological testing battery and is not maintained among our personality test materials. The two personality assessment instruments used for the purposes of this psychological testing are the two most commonly employed personality measures among professionals in the field of personality assessment.

The Exner scoring system contains normative data based on extensive research to which an individual's responses are compared. The MMPI-2 is a self-report questionnaire that utilizes a large research base generated from a diverse clinical population. The MMPI-2 contains several validity scales and generates a personality profile based on 10 clinical domains. An individual's response pattern is calculated and compared to a large base of actuarial data.

It is essential to understand that neither of these measures contain actuarial or normative data for professional boxers. Mr. Tyson's performance on these measures was therefore compared to adult nonpatient subjects for the Rorschach Inkblot Test and the normative and actuarial sample gathered during the standardization of the MMPI-2. It is within this context that the clinical implications of these data must be considered.

During Mr. Tyson's initial attempt at completing the MMPI-2, he at one point appeared to be randomly responding to the questionnaire. However, upon subsequent administration, he generated a valid and clinically interpretable profile. His scores on validity indices suggest that he responded in a manner to present himself in a positive light, with less willingness to endorse negative views of himself. Individuals with scores in this range deny ordinary human faults, and typically maintain inflexible thinking. Mr. Tyson's scores on these scales are associated with a lack of psychological mindedness, limited education, and are common among individuals who come from lower socioeconomic classes.

Descriptively, Mr. Tyson's scores are similar to individuals who are irritable, angry and argumentative, and with whom it may be difficult to interact due to these characteristics. They are usually able to control acting upon their feelings of hostility, but lapses in control can occur. They tend to place the blame for their anger on others, they are suspicious of the motives of others, and they avoid deep emotional involvement. People with this pattern of scores tend to seek sympathy and attention, and are resentful of demands placed upon them. It is common for people with scores similar to this to have long histories of social maladjustment and poor work histories. Marital problems are also common. Mr. Tyson also endorsed a number of items indicative of depressive features. His scores are consistent with individuals who feel unhappy, sad, and pessimistic about the future. They often feel guilty and self-critical, and are lacking in self-confidence.

Based on indicators from the Exner Comprehensive Scoring System, Mr. Tyson produced a valid and clinically useful Rorschach protocol following the production of two invalid Rorschach records. The following description of his personality structure is based on data from the Rorschach.

In reference to thought processes, data indicate that Mr. Tyson experiences instances of faulty judgment and errors in decision-making. However, Mr. Tyson's scores are withn the range of scores provided in the Comprehensive System nonpatient sample. A related finding indicates that he appears to be experiencing an increase in distracting thoughts that, while manageable, are being significantly increased by situational stress. Although this is a temporary condition, it is likely to be creating some distraction in thinking and some interference with attention and concentration. As a result, any instances of faulty judgment or errors in decisions are likely to be worsened by situational stress. In addition, it is again important to note in reference to this test, and all other measures in this testing, that there are no known reference groups or "norms" for professional boxers, therefore making it impossible to confidently determine the clinical implications, if any, of these data.

Mr. Tyson exhibited an information-processing style in which he prefers to consider all evident alternatives prior to making decisions or initiating responses. Individuals such as this tend to be less affected by their emotions during problem solving. Because Mr. Tyson uses an approach based primarily upon thinking, as opposed to trial and error or the consideration of emotions, the difficulties in judgment noted above elevate the potential for errors in decision making. Other data indicate that Mr. Tyson's beliefs and values are well-set and not very flexible. This should be taken into account in reference to the selection of treatment, should that be a consideration, as his attitudes and values may be difficult to change.

The data indicate that Mr. Tyson has an enduring characteristic involving a substantial investment of energy and effort in observing his environment in order to collect relevant bits of information. This is generally seen as an asset, as a more thorough approach to collecting information usually results in the inclusion of the most external cues for the purpose of decision-making and problem-solving.

When faced with problem-solving tasks, Mr. Tyson aslo appears to invest great effort and energy in processing information once it has been received. This can also be seen as an asset, as he appears to maintain adequate resources for this purpose. In addition, the quality of his processing is reasonably sophisticated, a finding that is usually found in more intelligent or well-educated individuals. This simply means that Mr. Tyson's processing of information is of a higher quality than most adults, not that his thinking is more efficient or that his adjustment will be of a higher quality.

The data also reflect Mr. Tyson's strong orientation towards individualism, as he has a tendency to interpret information in a less conventional manner. Therefore, it is likely that most of his conduct will be implemented with less concern for social acceptability. This does not indicate that Mr. Tyson's behavior will be unacceptable or anti-social. He is much more likely to behave in a socially expected manner in response to circumstances that are well-defined.

The findings indicate that Mr. Tyson has a tolerance for stress and a capacity for control that is similar to most nonpatient adults. This suggests that his conduct will usually be the result of deliberate decision-making, and that ordinary daily stressors will not have a significant effect on his decisions.

Mr. Tyson appears to be less interested or willing to process his emotions than are most nonpatient adults. This simply reflects a preference to be less involved with emotion, and is not necessarily a disadvantage. These data also suggest that under ordinary circumstances, Mr. Tyson usually regulates his emotional displays as much as most nonpatient adults. As is the case with most people, however, he will become angry at times, and some lapses in emotional control may occur. Data suggest that he may also be concerned about controlling the manner in which he expresses his emotions.

These data indicate that Mr. Tyson maintains an unusually strong concern with his sense of self. Information obtained during the course of this testing suggests that this may well reflect a sense of dissatisfaction of some kind.

Mr. Tyson may at times rely on others for support and guidance to a greater extent than would be expected. He may also be somewhat naive in his expectations of others, at times expecting others to indulge his needs while tolerant of them. Nevertheless, he is likely to be more cautious in building emotional connections to others, and more careful within his close interpersonal relationships. This is consistent with other data suggesting that Mr. Tyson is socially isolated, and that he likely has difficulty in developing and maintaining meaningful personal ties, even though he is interested in doing so.

Summary and Impressions

Michael Tyson was referred for psychological testing by Doctor Ronald Schouten in the context of a comprehensive clinical evaluation. The data obtained through the course of this testing are considered to be valid indication of his current psychological functioning.

The data from Mr. Tyson's psychological testing do not suggest the presence of any major mental illness or personality disorder. It should be noted that many requisite diagnostic criteria for various psychiatric illnesses are not necessarily discernible from psychological testing data alone, but are better obtained through a combination of test data, clinical interviews, medical record review, and collateral contacts including past and present mental health providers.

Both historical information and test data indicate an elevation in several signs of depression that appear to penetrate the clinical range, but do not clearly suggest the presence of a major depressive disorder. Information from other sources including medical records, clinical interviews, and collateral contacts will be helpful in defining the severity and scope of these symptons.

Data from this testing indicate that Mr. Tyson's capacity for control and tolerance for stress are similar to most people. Findings suggest that he is angry and irritable, and that he is cautious, and even suspicious, of others' motives at times. As is the case with most people, there will be instances in which he becomes increasingly angry and frustrated, and the potential for the direct expression of this anger, and lapses in self-control, may occur. There will also be circumstances in which Mr. Tyson will be fully able to manage his emotions without acting upon them.

While the data indicate that Mr. Tyson experiences instances of poor judgment and faulty decision-making, this may be exacerbated by an increase in distracting thoughts that is being caused by situational stress. Other results indicate that Mr. Tyson is adept at both taking in informational cues from his surroundings, and at processing this information once it has been acquired.

Mr. Tyson appears to be less interested or willing to process emotions than are most people. This reflects a preference to be less involved with the emotional aspects of both relationships and other situations, and is not necessarily a liability. Data also indicates that Mr. Tyson tends to be self-critical, and that he may be dissatisfied with his sense of self.

Information received from various measures used in this testing indicate a high degree of consistency in terms of Mr. Tyson's personality traits. That is, although he is likely to rely upon others for support and guidance, he is generally cautious and conservative in his interpersonal relationships, and he will likely have difficulty in building close emotional connections with others. In addition, his beliefs and values appear to be well-fixed.

It is essential for the data described in this report to be understood as one element of Mr. Tyson's comprehensive clinical evaluation. The findings described in this report are based on psychological testing only. These data need to be combined with information obtained by the evaluation team during the course of Mr. Tyson's comprehensive clinical evaluation in order to formulate more comprehensive impressions and recommendations.

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