

IN THE SUPREME COURT OF THE STATE OF NEVADA

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Case No. 83436

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ZANE FLOYD,  
  
Petitioner,

Electronically Filed  
Dec 28 2021 05:30 p.m.  
Elizabeth A. Brown  
Clerk of Supreme Court

v.

STATE OF NEVADA, et al.,  
  
Respondent.

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Appeal From Clark County District Court  
Eighth Judicial District, Clark County  
The Honorable Michael Villani, District Judge

**PETITIONER'S APPENDIX**

**VOLUME 14 OF 14**

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RENE L. VALLADARES  
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Counsel for Petitioner Zane Floyd

<b>DOCUMENT</b>	<b>DATE</b>	<b>VOLUME</b>	<b>PAGE(S)</b>
Amended State Petition	05.11.2021	10 – 11	2474 – 2530
Civil Order to Statistically Close Case	12.08.2021	14	3496
Decision and Order Denying Motion to Disqualify Clark County District Attorney's Office	05.18.2021	11	2681 – 2684
Decision and Order denying Defendant's Motion for Reconsideration	06.09.2021	13	3040
Decision and Order Denying Defendants Motion to Transfer Case Under EDCR 1.60(H)	06.04.2021	13	3005 – 3007
Exhibits in Support of Amended Petition for WHC	05.11.2021	11	2531 – 2647
Exhibits in Support of Motion for Leave to File Amended PWHC	05.11.2021	10	2354 – 2473
Exhibits in Support of Motion to Strike, or Alternatively, Motion to Stay the Second Supplemental Order of Execution and Second Supplemental Warrant of Execution	05.11.2021	10	2321 – 2346
Exhibits in Support of Motion to Transfer	04.14.2021	2–6	0010 – 1366

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Exhibits in Support of Petition for Writ of Habeas Corpus	04.15.2021	6	1414 – 1485
Exhibits in Support of Reply to Response to Second Amended Petition for Writ of Habeas Corpus (Post–Conviction)	06.18.2021	13	3092 – 3105
Exhibits in Support of Second Amended Petition for Writ of Habeas Corpus	06.03.2021	12	2823 – 2959
Exhibits to Motion for Leave to File Second Amended Petition	06.03.2021	11 – 12	2705 – 2765
Exhibits to Objection to Order to Denying Motion to Transfer Case Under EDCR 1.60(H)	06.09.2021	13	3017 – 3036
Exhibits to Second Amended Petition in Support of Claim Two	08.10.2021	13 – 14	3178 – 3483
Minute Order	05.14.2021	11	2652 – 2653
Minute Order	06.28.2021	13	3148
Motion for leave to file amended petition	05.11.2021	10	2357 – 2353

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Motion for Leave to File Second Amended Petition	06.03.2021	11	2699 – 2704
Motion for Reconsideration	05.19.2021		2685 – 2693
Motion to Disqualify	04.15.2021	6	1486 – 1500
Motion to Strike, or Alternatively, Motion to Stay the Second Supplemental Order of Execution and Second Supplemental Warrant of Execution	05.11.2021	10	2307 – 2320
Motion to Transfer	04.14.2021	1	0001 – 0009
Notice of Appeal	08.26.2021	14	3493 – 3495
Notice of Dept Reassignment 17	04.16.2021	7	1501 – 1502
Notice of Entry and Findings of Fact and Conclusions of Law, and Order	08.16.2021	14	3484 – 3492
Objection to Order Denying Motion to Transfer Case Under EDCR 1.60(H)	06.22.2021	13	3111 – 3121
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<b>DOCUMENT</b>	<b>DATE</b>	<b>VOLUME</b>	<b>PAGE(S)</b>
Order Denying Defendant's Objection to Order Denying Defendant's Motion to Transfer Case Under EDCR 1.60(H)	06.21.2021	13	3109 – 3110
Petition for Writ of Habeas Corpus	04.15.2021	6	1367 – 1413
Recorder's Transcript of Hearing: All Pending Motions, May 14, 2021	05.14.2021	11	2654 – 2680
Recorder's Transcript of Hearing: Defendant's Motion for Stay of Proceedings Pending Resolution of Petition for Writ of Mandamus and Prohibition of the Nevada Supreme Court, July 9, 2021	07.09.2021	13	3163 – 3177
Recorder's Transcript of Hearing: Petition for Writ of Habeas Corpus, July 9, 2021	07.09.2021	13	3149 – 3162

<b>DOCUMENT</b>	<b>DATE</b>	<b>VOLUME</b>	<b>PAGE(S)</b>
Recorder's Transcript of Hearing: State's Motion and Notice of Motion for the Court to Issue Second Supplemental Order of Execution and Second Supplemental Warrant of Execution. Defendant's Motion to Strike, or Alternatively, Motion to Stay the Second Supplemental Order of Execution and Second Supplemental Warrant of Execution, June 4, 2021	06.04.2021	12 – 13	2979 – 3004
Reply to Opposition to Motion to Disqualify the Clark County District Attorney's Office	04.29.2021	10	2286 – 2299
Reply to Opposition to Motion to Strike	05.20.2021	11	2694 – 2698
Reply to Response to Motion to Transfer Case Under EDCR 1.60(H)	04.29.2021	10	2300 – 2306
Reply to State's Response to Second Amended Petition for Writ of Habeas Corpus (Post-Conviction)	06.18.2021	13	3048 – 3091
Second Amended Floyd State Petition	06.03.2021	12	2766 – 2822

<b>DOCUMENT</b>	<b>DATE</b>	<b>VOLUME</b>	<b>PAGE(S)</b>
State's Opposition to Defendant's Motion to Disqualify Clark County District Attorney's Office	04.26.2021	10	2271 – 2285
State's Opposition to Motion to Strike	05.13.2021	11	2648 – 2651
State's Response to Defendant's Motion to Transfer Case Under EDCR 1.60(H)	04.26.2021	7 – 10	1503 – 2270
State's Response to Defendant's Objection to Order Denying Motion to Transfer Case Under EDCR 1.60(H)	06.17.2021	13	3041 – 3047
State's Response to Petitioner's Third Petition for Writ of Habeas Corpus	06.04.2021	12	2960 – 2978

activities such as eating, gambling, and engaging in sexual acts (La Rossa, 2018). Methamphetamine use can cause hypersexuality leading to unsafe and unintended sexual activities. Methamphetamine use also produces a flat affect, paranoia, and cognitive deficits. Chronic methamphetamine use can lead to MIP, which has an estimated prevalence rate of 13-50% in users. The key characteristics of MIP are numerous. Here only those features of MIP that bear directly on the case involving Mr. Floyd are highlighted.

The most common feature of MIP includes paranoid delusions and persecutions, flat affect, impulsivity, and dissociation, which may be accompanied by violent behavior. Chronic methamphetamine users frequently suffer from a number of cognitive impairments, including deficits in executive functioning, complex information speed, episodic memory, and psychomotor functions. MIP episodes may occur long after drug use ceases yet recur with re-exposure to the drug, or repeated stressful life events. MIP is comorbid with alcohol abuse. Individuals undergoing a MIP episode are highly suicidal. MIP episodes may last from hours to days. The facts show that Mr. Floyd was suffering from a methamphetamine-induced psychotic state prior to, during, and after the shooting incident.

First, Mr. Floyd admitted to being a chronic, heavy methamphetamine user prior to joining the Marine Corps, and began using methamphetamines upon

leaving the Marine Corps.<sup>2</sup> Mr. Floyd ingested methamphetamine the morning of the shootings.

Second, the behavior and symptoms described by Ms. Tracie Carter, the last person to see and to speak to Mr. Floyd before the shootings, are consistent clinically with someone who is experiencing a methamphetamine-induced psychosis and/or under the influence of methamphetamine. Ms. Carter describes Mr. Floyd's behavior as ranging from calm to erratic. Ms. Carter agreed that he was like "two different people switching back and forth." Yet, when asked if he was drunk or intoxicated, she responded by saying, "I didn't think so. I mean, something was wrong with him. . . . I couldn't tell you if he was drunk . . . but I could tell . . . something was wrong." Ms. Carter further described Mr. Floyd's affect as "the thousand-yard stare," reminiscent of how combat veterans were described during the Vietnam War who were so exhausted from weeks of prolonged combat yet somehow managing to carry on.

Third, Mr. Floyd was clearly experiencing hypersexual behavior in which he utilized an outcall service to satisfy his sexual behavior after having a falling out with his girlfriend over losing all his money gambling at blackjack at the *Rio*.

Fourth, Mr. Floyd was clearly actively suicidal on the date in question. Suicidality is highly prevalent during methamphetamine-induced psychosis. Ms. Carter clearly indicated on two separate occasions during her testimony that Mr.

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<sup>2</sup>There is no reason to doubt Mr. Floyd's drug abstinence while serving in the military since the Marine Corps conducts random drug urinalysis and no doubt if Mr. Floyd was using any drugs he would have been caught.

Floyd wanted to die. After the shootings, Mr. Floyd stated categorically that he wanted the police to shoot him when he came out of the store, a clear instance of “suicide by proxy.” However, based on Mr. Floyd’s deep respect for the police, Mr. Floyd was unable to take the necessary, more aggressive actions against the police when he exited the store that would cause them to shoot and kill him.

Finally, several of the behavioral health care professionals that have evaluated Mr. Floyd noted his psychotic and dissociative state. Dr. Edward Dougherty stated that in his professional opinion Mr. Floyd suffered from a “psychotic break or total breakdown of his normal mental functioning...” Dr. Dougherty stated that “He [Mr. Floyd] didn’t at all times act knowing and purposely.” Dr. Jakob Camp in his forensic psychiatric analyses of Mr. Floyd described the “disillusionment and resultant dissociative rage” indicative of dissociation. Mr. Floyd described feeling like his was in a “dream-like” state, watching himself doing these things, yet not doing them himself. Dr. John Podboy’s summary captured the consensus of the mental health experts who directly assessed the mental health status of Mr. Floyd at the time of the shootings with the following description,

“At the time of the incident, Mr. Floyd manifested what is referred to as the "spectator phenomena," wherein he did not experience himself doing anything. Rather, he was watching himself engage in the activities of walking about the supermarket.”

This description of Mr. Floyd’s behaviors and actions represent a classic dissociative state, consistent with a methamphetamine-induced psychosis.

Collectively the facts reviewed indicate that Mr. Floyd was suffering from a methamphetamine-induced psychosis. It is highly likely that early life traumas, including fetal alcohol exposure, and subsequent traumatic experiences in the Marine Corps, especially those experienced at GITMO, contributed to Mr. Floyd's methamphetamine-induced psychosis. It is important to note that during a methamphetamine-induced psychosis the individual experiencing the dissociative state, as mentioned by the mental health experts, is not in control; indeed, what is happening is perceived as not even real. Thus, the individual experiencing a dissociation would see no need to stop what is happening and would see no point in doing so.

Typically, psychotic breaks and the associated dissociate state are accompanied by significant physical incapacitation. However, Mr. Floyd was able to perform numerous highly complex and coordinated actions. How was Mr. Floyd able to do this? The simple answer is that his Marine Corps training and experience enabled him to do so.

Training in the Marine Corps, like training in all the military services, consists of learning a task by performing a series of actions in a specific order over and over until performing that task because automatic, routine, or innate. It is very common, for example, for Marines and Soldiers who were engaged in combat, where they are being shot at and their life was at stake, to describe their subsequent behavior where they returned fire, and maneuvered on the battlefield, and killed numerous insurgents as "being in a video game" or "going on autopilot" or saying

“my training kicked in.” These Marines and Soldiers, while in combat, were clinically in a “dissociative” state; they were doing what they were trained to do. Often, they do not remember all the actions they performed. However, these combat veterans do remember some of their actions, particularly those actions that touch upon a deeply held moral belief, such as the killing or saving a woman or child or saving a fellow team from being injured or killed.

In the current case, the prosecution identified numerous actions performed by Mr. Floyd that purported to demonstrate “purpose and knowledge.” However, the entire episode can easily be accounted for by the training that Mr. Floyd received while in the Marine Corps. Getting dressed in the military gear, the camouflaging of his shotgun with the bathrobe, the route he took to the grocery store, the loading and firing of the shot gun, his movements through the store, acquiring “targets,” were all acts that would have been second nature to Mr. Floyd based on his Marine Corps training. All of these acts were likely performed while he was “on autopilot,” while he was experiencing a MIP (a psychotic break). That Mr. Floyd referred to his victims as “targets” and not as people is further evidence that he was dissociating.

### **Suicide by proxy**

Mr. Floyd possessed numerous risk factors for dying by suicide: he lost his job, he lost all his money gambling at blackjack, his girlfriend broke up with him, and he was forced to move back in with his parents because he couldn’t pay his rent. To Mr. Floyd, his prospects and future were bleak. He viewed himself as a “loser.”



He felt like he was a burden to everyone around him. Mr. Floyd was actively suicidal. He wanted his life to end.

Mr. Floyd was high on methamphetamine and experiencing a psychotic break. Suicidal thoughts are heightened during methamphetamine-induced psychosis. These are all immediate risk factors for dying by suicide.

### **Mr. Floyd's post-arrest statements**

Mr. Floyd's post-arrest audio statement can best be described as confused. Throughout his statement, Mr. Floyd was constantly searching for answers as to why he shot the people in the grocery store. Mr. Floyd repeatedly said, "I don't know why!," when asked by the police, "Why did you do it?" When one listens to that audio closely, the tone and pitch of Mr. Floyd's voice and speech presents as if he is still in a psychotic state. Mr. Floyd's speech is slurred, almost as if he is out of breath. Towards the end of the audio recording, Mr. Floyd is still searching for an answer as to why he did it, like he was asking himself the same question. Mr. Floyd eventually said, "I am thinking what's it going to be like to shoot somebody?" However, this is not a declarative answer to the question, "Why did you do it?" It is not a definitive statement of his motivation. It is a searching question that he is asking of himself. The only definitive statement that Mr. Floyd does make involves the uncertainty about his own mental sanity, "I don't know what's wrong with me!" This is a cry for help. A statement of desperation. In all the testimonies involving interviews with mental health experts, Mr. Floyd constantly asks the mental health

experts to whom he spoke the same question, “Why did I do it?” Importantly, Mr. Floyd is asking this question not to avoid taking responsibility but to understand who he is.

Further, in none of the psychiatric interviews reviewed does Mr. Floyd ever say, “...he wanted to know what it would feel like to kill” or “he wanted to know what it was like to kill.” The only witness who claimed that Mr. Floyd made these statements was Ms. Carter, who made these claims weeks after the incident.

It is doubtful that Mr. Floyd will ever be able to recount what happened given his mental state at the time. Nevertheless, all the available evidence indicates that Mr. Floyd was in a methamphetamine-induced psychotic state.

Dated: April 26, 2021

A handwritten signature in black ink, appearing to read 'Carl Andrew Castro', with a stylized flourish at the end.

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Carl Andrew Castro, Ph.D.

## **CURRICULUM VITAE**

**CARL ANDREW CASTRO, Ph.D.**  
**Professor and Director**  
**Colonel, U.S. Army (Retired)**

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Los Angeles, CA 90089-0411

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(240) 529-4678, Mobile  
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### **SUMMARY OF CV**

- 154 peer-reviewed publication and 30 book chapters
- 65 published technical reports, letters and proceedings
- 9 books (authored or edited)
- \$30,903,085 in funded, federal research grants (PI or co-PI)
- 27 national or international advisory boards served or chaired

H-index: 58 (Google Scholar)

### **EDUCATION**

Ph.D.	1989	University of Colorado, Boulder, Psychology
M.A.	1987	University of Colorado, Boulder, Psychology
B.A.	1985	Wichita State University, Psychology (Summa Cum Laude)

### **SUB-FIELDS AND AREAS OF RESEARCH**

Military and Behavioral Health Theory; Global Military Health; Military Transitions; Trauma; Leadership and Health; Organizational Interventions; Cultural Integration (Diversity, Acceptance)

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and Equity); Work Stress and Performance; PTSD, Suicide and Risk-Taking Behaviors; Sexual Assault; Bullying and Hazing; Resilience and Mental Health Training; Moral Injury

## **ACADEMIC POSITIONS**

2020 – Present	Professor, Suzanne Dworak-Peck School of Social Work, University of Southern California, Los Angeles, CA
2020 – Present	Professor, Department of Psychology, University of Southern California, Los Angeles, CA
2017 – Present	Director, Military and Veteran Programs, Suzanne Dworak-Peck School of Social Work, University of Southern California, Los Angeles, CA
2017 – Present	Director, Military Academic Center, Suzanne Dworak-Peck School of Social Work, University of Southern California, Los Angeles, CA
2015 – Present	Director, Center for Innovation and Research on Veterans and Military Families, Suzanne Dworak-Peck School of Social Work, University of Southern California, Los Angeles, CA
2016 – 2020	Associate Professor, Suzanne Dworak-Peck School of Social Work, University of Southern California, Los Angeles, CA
2013 – 2016	Assistant Professor, Suzanne Dworak-Peck School of Social Work, University of Southern California, Los Angeles, CA
2013 – 2015	Director of Research, Center for Innovation and Research on Veterans and Military Families, Suzanne Dworak-Peck School of Social Work, University of Southern California, Los Angeles, CA
2002 – 2013	Adjunct Lecturer for graduate students in Clinical Psychology, Uniform Services University of the Health Sciences, Bethesda, Maryland
1985 – 1989	Research Assistant, Department of Psychology, University of Colorado, Boulder
1985 – 1989	NSF Graduate Fellow, Department of Psychology, University of Colorado, Boulder

CARL A. CASTRO (213) 821-3623; [carl.castro@usc.edu](mailto:carl.castro@usc.edu)  
Current as 1 APR 2021

1983 – 1985                      Research Assistant, Department of Psychology,  
Wichita State University, Kansas

## **MILITARY PROFESSIONAL EXPERIENCE**

2007 – 2013                      Director, Military Operational Medicine Research Program  
Headquarters, U.S. Army Medical Research and Materiel Command,  
Fort Detrick, Maryland

2004 - 2007                      Chief, Department of Military Psychiatry  
Walter Reed Army Institute of Research,  
Washington D.C.

2003-2004                      Team Leader, Mental Health Advisory Team (IV)  
Multi-National Forces-Iraq (MNF-I), Camp Victory, Iraq

2002-2003                      Chief, Soldier and Family Readiness Branch  
Walter Reed Army Institute of Research,  
Washington D.C.

2002                                Senior Science Officer, Mental Health Advisory Team (I)  
V Corps, Green Zone, Iraq

2001 - 2002                      Chief, Soldier and Family Readiness Branch  
Walter Reed Army Institute of Research,  
Washington D.C.  
- Deployed to Kosovo (2002)

1997 - 2001                      Commander, U.S. Army Medical Research Unit-Europe,  
Heidelberg, Germany  
- Deployed to Bosnia (1998-1999)  
- Deployed to Kosovo (1999)

1996 – 1997                      Team Leader, TF XXI Human Dimensions Assessment,  
Department of Military Psychiatry.  
Walter Reed Army Institute of Research, Washington D.C.

1995 – 1996                      Program Director, Primate Research Facility,  
Division of Neuropsychiatry, Department of Medical Neurosciences.  
Walter Reed Army Institute of Research, Washington D.C.

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- 1994 Assistant Program Director, Depleted Uranium, Radiation Biophysics Department.  
Armed Forces Radiobiology Research Institute, Bethesda, Maryland
- 1992 - 1994 Assistant Program Director, Program in Sensory and Motor Behavior, Behavioral Science Department.  
Armed Forces Radiobiology Research Institute, Bethesda, Maryland
- 1991 - 1992 Program Manager, Operational Performance Evaluation, Advanced Assessment Branch, Drug Assessment Division.  
U.S. Army Medical Research Institute of Chemical Defense, Aberdeen, Maryland
- 1991 Chief (Acting), Applied Pharmacology Branch, Pharmacology Division, U.S. Army Medical Research Institute of Chemical Defense, Aberdeen, Maryland
- 1989 - 1990 Research Psychologist, Advanced Assessment Branch, Drug Assessment Division, U.S. Army Medical Research Institute of Chemical Defense, Aberdeen, Maryland

### **HONORS AND SPECIAL AWARDS**

- 2019 Society for Military Psychology Presidential Citation. The American Psychological Association.
- 2019 Sterling C. Franklin Distinguished Faculty Award. The USC Suzanne Dworak-Peck School of Social Work
- 2018 Outstanding Research Accomplishment Team/Academia for Senior Advisor of the Military Suicide Research Consortium, the Department of Defense Military Health Systems Research Symposium
- 2017 Scientific Achievement Award for Research and Technology Group on Military Suicides, NATO Human Factors and Medicine Panel
- 2017 Gersoni Award, Outstanding contribution for research accomplishment in the area of military psychology. The Society of Military Psychology, American Psychological Association

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2014	Appointed Fulbright Specialist, J. William Fulbright Foreign Scholarship Board
2013	President's Special Recognition Award, Suicide Prevention Society
2008, 2012, 2013	Legion of Merit Medal, U.S Army (second highest medal awarded by the US Army for outstanding service), awarded 23 other military medals and decorations
2008 – 2012	Consultant (Research Psychology) to the Surgeon General of the U.S. Army
2011	The Foster Award, NATO Human Factors and Medicine Panel, Bergen, Norway (awarded once a year to the most outstanding Chair of a NATO research activity)
2010	Order of Military Medical Merit (awarded to the top 1% of Army Medical Department personnel.)
2007	Promoted to Colonel, U.S Army (highest ranking field grade officer just below the ranks of general)
2006 – Present	Fellow, Military Psychology (Division 19), American Psychological Association
2003	Combat Casualty Care Award for Innovative Technology Excellence
2000	The Commander's Award for Excellence in Improving Healthcare
1999	International Applied Military Psychology Symposium Award for Efforts to Foster International Collaboration
1990	Chief of the Medical Service Corps Award of Excellence (for the most outstanding junior officer)
1988 – 1989	Graduate School Fellowship
1988	Fellow, Cognitive Neuroscience, Harvard University, Cambridge, MA
1985 – 1988	Patricia Roberts Harris Fellowship

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1985 – 1988	Arnold Trust Fellowship
1985	Academic Research Scholarship
1983 – 1984	Charles Rickman Academic Scholarship
1982 – 1985	Myrral Houck Academic Scholarship
1981 – 1985	Army National Guard Scholarship
1981	Kansas State Scholar

### **FUNDED RESEARCH: Federal Grants**

2019-2023	<b>Co-Principal Investigator</b> (PI: Hazel Atuel), Title: Exploring the Social Network of Homegrown Violent Extremist (HVE) Military Veterans, National Institute of Justice. Total Award: \$1,670,395).
2018 – 2022	<b>Co-Principal Investigator</b> (PI: Michalle Mor Borak), Title: <i>Performance Outcomes of Inclusion Policy-Practice Decoupling: Diversity, Leadership and Climate for Inclusion</i> , Army Research Institute for the Behavioral and Social Sciences. Total Award: \$1,020,050.
2017 – 2020	<b>Consultant</b> (PI: Bradley Nindl), Title: <i>Characterization of Psychological Resilience and Readiness: Cross-Validation of Cognitive and Behavioral Metrics during Acute Military Operational Stress</i> , Department of Defense. Total Award: \$2,500,000.
2017- 2019	<b>Co-Principal Investigator</b> (PI: Eric Rice), Title: <i>Predictive Modeling for Early Identification of Suicidal Thinking in Social Networks</i> , Army Research Office. Total Award: \$597,055.
2017–2019	<b>Consultant</b> , (PI: Hendler, Tel Aviv; USC Site PI: Jeremy Goldbach). <i>Talk 2UR Brain</i> . Department of Defense. \$502,201.
2016 – 2018	<b>Consultant</b> (PI: Jae Yop Kim), Title: <i>Developing a Korean Military Social Work Program to Improve Quality of Life among Personnel and Veterans: A Global network with the U.K, the U.S. and South Korean</i> , Korean National Institute of Health. Total Award: \$438,000.

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Current as 1 APR 2021



2016	<b>Principal Investigator</b> , Title: <i>Comprehensive Soldier and Family Fitness II</i> , Department of the Army. Total Award: \$95,406
2015 - 2018	<b>Principal Investigator</b> (multiple PI's: J. Goldbach and I. Holloway), Title: <i>Improving Acceptance, Integration, and Health among LGBT Service Members</i> , Department of Defense. Total Award: \$1,894,846
2015 - 2018	<b>Mentor</b> (PI: Kathryn Sullivan), Title: <i>Health and Mental Health Outcomes Associated with Profiles of Risk and Resilience among Military-Connected Youth</i> , National Institutes of Health (F31). Total Award: \$34,135
2015 – 2017	<b>Consultant</b> (PI: Tamika Gilreath), Title: <i>Measuring Stress in Military-Connected Adolescents</i> , National Institutes of Health (R21). Total Award: \$475,000.
2014-2018	<b>Consultant</b> (PI: Hazel Atuel), Title: <i>Virtual Reality as a Tool for Enhancing the Proficiency of Behavioral Health Providers</i> , Department of Defense. Total Award: \$5,157,314.
2014 – 2015	<b>Principal Investigator</b> , Title: <i>Comprehensive Soldier and Family Fitness</i> , Department of the Army. Total Award: \$84,222
2013 – 2015	<b>Principal Investigator</b> , Title: <i>Military Suicide Research Consortium</i> . Department of Defense/Denver Research Institute. Total Award: \$43,537
2004 – 2010	<b>Principal Investigator</b> , Title: <i>Battlemind Training</i> , Department of the Army. Total Award: \$5,000,000
2002 – 2010	<b>Principal Investigator</b> , Title: <i>The Land Combat Study</i> , Department of the Army. Total Award: \$18,000,000
2001 – 2008	<b>Co-Principal Investigator</b> , <i>USAREUR Family OPTEMPO Study</i> , Department of the Army. Total Award: \$250, 000
2001 – 2004	<b>Co-Principal Investigator</b> , Title: <i>Psychological Debriefing in Soldiers Returning from Combat</i> , Department of the Army. Total Award: \$900,000
1998 – 2004	<b>Co-Principal Investigator</b> , Title: <i>Post-deployment Mental Health Screening</i> , Department of the Army. Total Award: \$490,000

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1998 – 2002      **Principal Investigator**, Title: *USAREUR Soldier Study*, Department of the Army. Total Award: \$900,000

### **FUNDED RESEARCH: Foundations and Corporations**

2018 – 2019      **Principal Investigator**, Title: *Veterans Employment Strategy (VES)*, Carl and Roberta Deutsch Foundation. Total Award: \$60,000

2018 – 2020      **Principal Investigator**, Title: *Boys in the Barracks Revisited*, Cohen Veterans Network. Total Award: \$245,520

2016 – 2018      **Principal Investigator**, Title: *Cohen Veterans Network Program Evaluation and Implementation*, Cohen Veterans Network. Total: \$1,193,569

2015 – 2017      **Principal Investigator**, Title: *The San Francisco Veterans Study*, Wells Fargo. Total Award: \$350,000

2016 – 2017      **Principal Investigator**, Title: *The San Francisco Veterans Study Supplement*, Deloitte. Total Award: \$60,000

2015 – 2017      **Principal Investigator**, Title: *Prevention of suicide and suicidal behaviors*, Wounded Warrior Project. Total Award: \$116,587.

2015 – 2016      **Co-Principal Investigator**, Title: *The Veteran Needs of Chicagoland*, McCormick Foundation. Total Award: \$316,000

2013 – 2015      **Principal Investigator** (multiple PI's: A. Hassan), Title: *The Los Angeles Veterans Study*, Newman's Own, Deloitte, UniHealth Foundation, Prudential. Total Award: \$400,000

2013 – 2016      **Principal Investigator**, Title: *Orange County Veterans Study*, Orange County Community Foundation, UniHealth Foundation. Total Award: \$200,000

### **FUNDED NON-RESEARCH Grants**

2016 – present      Endowment, *Center for Innovation and Research on Veterans*

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Current as 1 APR 2021

*and Military Families.* Total: \$105,500; Target: \$10 million

- 2019 – 2020 **Principal Investigator**, *Center for Innovation and Research on Veterans and Military Families Operations*, Prudential Financial Foundation. Total Award: \$350,000
- 2016 – 2020 **Principal Investigator**, Title: *The Ahmanson Foundation Veteran Scholarship Initiative (AVSI) Military*. The Ahmanson Foundation. Total Award: \$300,000
- 2018 – 2019 **Principal Investigator**, *Center for Innovation and Research on Veterans and Military Families Operations*, Prudential Financial Foundation. Total Award: \$250,000
- 2017 – 2018 **Principal Investigator**, *Center for Innovation and Research on Veterans and Military Families (CIR): Military Academic Center*, Cigna Foundation Healthier Communities Grant. Total: \$120,000
- 2017- 2018 **Principal Investigator**, *Center for Innovation and Research on Veterans and Military Families Operations*, Prudential Financial Foundation. Total Award: \$300,000
- 2017 - 2019 **Principal Investigator**, *Center for Innovation and Research on Veterans and Military Families Operations*, May and Stanley Smith Charitable Trust. Total: \$200,000
- 2016 **Principal Investigator**, Title: *The forgotten wounds of war-an interdisciplinary and international discourse on healing the wounds of moral injury*. The Borchard Foundation. Total Award: \$35,000
- 2015 - 2016 **Principal Investigator**, *Center for Innovation and Research on Veterans and Military Families Operations*, Prudential Financial Foundation, May and Stanley Smith Charitable Trust, and Ralph M. Parsons Foundation. Total: \$850,000

## **SUBMITTED AND PENDING RESEARCH GRANTS**

**Co-Principal Investigator.** Title: *Integrating Social Network Analysis and Sexual Assault Prevention: Targeted Effective Skills Training (EST) for Ending Sexual Assault*. PI: Sara Kintzle. DoD. Total: \$2,029,666

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**Co-Investigator.** Title: Exploring Lived Experiences of Military Spouses on Foreign Postings Across the Readiness Cycle. PI: Kate Sullivan. DoD. Total: 1,967,836

**Co-Principal Investigator.** Title: *Targeted Alcohol Problem Prevention for Enlisted Personnel: an Empirically Driven Approach*. PI: John Clapp. DoD. Total: \$2,483,141

**Co-Principal Investigator.** Title: *Motherhood and Military Readiness: Examining the Return to Active Duty after Childbirth for Women in the Armed Forces*. PI: Sara Kintzle. DoD. Total: \$1,250,048

**Principal Investigator,** *Center for Innovation and Research on Veterans and Military Families Operations*, Prudential Financial Foundation. Total Award: \$200,000

### **SUBMITTED, NOT FUNDED RESEARCH GRANTS**

**Co-Principal Investigator.** Title: *Comprehensive Suicide Communications Research Program Adopting a Suicide Assessment Virtual Experience (SAVE GAME)*; PI: Thomas Talbot, PI (Main). CIR Subcontract (Hazel Atuel, PI; Sara Kintzle, Co-PI; and, Carl Castro, Co-PI). Department of Defense.

**Co-Investigator.** Title: *Mobile Mindfulness Intervention for Alcohol Use Disorder and PTSD among OEF/OIF Veterans*. PI: Davis & Pedersen. NIAAA. Total Award: \$2,820,209

**Co-Investigator.** Title: *A Mobile Mindfulness Intervention to Address Problematic Cannabis Use among Veterans with PTSD*. PI: Davis & Pedersen. NIDA. Total Award: \$2,890,064

### **PUBLICATIONS**

#### **Research Papers - Peer reviewed**

\*Mentor role since arriving at the University of Southern California.

\*\*Principal Investigator on the study the findings are based.

Goldbach, J., Schragar, S., Mamey, M. Klemmer, C., Holloway, I. & Castro, C. A. (submitted). Development and Validation of the Military Minority Stress Scale. Applied Psychological Measurement.

Markowitz, F. E., Kintzle, S. M. & **Castro, C. A.** Military-to-civilian adjustment strains and risky and illegal behavior among U.S. veterans (submitted). *Criminology*.

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Davis, J. P., Lee, D. S., Saba, S., Fitzke, R. E., Ring, C., **Castro, C. A.**, & Pedersen, E. R. (submitted). Applying poly-victimization theory to veterans: Associations with substance use and mental health. Manuscript submitted for publication. *PLOS ONE*.

Saba, S., Davis, J., **Castro, C. A.** & Pedersen, E. (submitted). Associations between Symptoms of Posttraumatic Stress Disorder, Pain, and Alcohol Use Disorder among Veterans. *Drug and Alcohol Dependence*.

O'Loughlin, J. I., Cox, D. W., Ogrodniczuk, J. S., & **Castro, C. A.** (submitted). Disentangling the individual and group effects of traditional masculinity ideology on PTSD symptom change: Veteran men in a group treatment. *Psychology of Men and Masculinities*.

Atuel, H. R., Schuyler, A., Ursich, L., Kintzle, S. & **Castro, C. A.** (submitted). A mixed-method study implementing cognitive processing therapy among community-based mental health providers. *Implementation Science*.

Atuel, H. R., Strauss, K. & **Castro, C. A.** (submitted). Exploring mass shootings and violence among military veterans. *American Journal of Public Health*.

Kintzle, S., Schuyler, A. C. & **Castro, C. A.** (submitted). The continuum of sexual trauma: An examination of stalking and sexual assault in former US service members. *Journal of Interpersonal Violence*.

McNamara, K. A., Goldbach, J. T., Kintzle, S. & **Castro, C. A.** (submitted). Sexual minority status as a predictor of mental health and help-seeking among U.S. veterans. *American Journal of Public Health*.

Raymond, H. F., Holloway, I. W., Wu, El, Tan, D., Mamey, M. R. Goldbach, J. T., **Castro, C. A.**, Schrager, S. M. (revise and resubmit). Recruiting sexual and gender minority United States military personnel for research via peer networks: Successes and challenges.

**Castro, C.A.**, Schuyler, A., Kintzle, S. & Warner, C. (revise and resubmit). Responding to campus-based sexual assaults. *Current Psychiatry Reports*.

Atuel, H., Kintzle & **Castro, C. A.** (submitted). A mixed method study on implementing cognitive processing therapy among community-based mental health providers. *Journal of Evidence-based Research*.

\*McNamara, K., Lucas, C. L., Goldbach, J. T., Holloway, I. W. & **Castro, C. A.** (revise and resubmit). Even if the policy changes, the culture remains the same: A mixed methods analyses

of LGBT service members' Outness patterns post-LGBT military service bans. *Armed Forces and Society*.

Atuel, H., Kintzle, S. & **Castro, C.A.** (submitted). Tri-ethnic comparison of veterans' military to civilian transition difficulty: The case for cultural competence.

Atuel, H., Jones, E., Greenberg, N., Williamson, V., Barr, N., Vermetten, E., Jetly, R. & **Castro, C. A.** (in press). Understanding moral injury from a character domain perspective. *Journal of Theoretical and Philosophical Psychology*. DOI: 10.1037/teo0000161.

Fulginiti, A., Segal, A., Wilson, J., Hill, C., Tambe, M., **Castro, C.**, & Rice, E. (in press). Getting to the root of the problem: A decision-tree analysis for suicide risk among homeless youth. *Journal of the Society for Social Work and Research*.

Sullivan, K.S., Dodge, J., Williamson, V., Alves-Costa, F., Barr, N., Kintzle, S. Fear, N. T., **Castro, C. A.** (in press). Preliminary exploration of the relationship between veteran family membership, school climate, and adverse outcomes among school-aged youth. *Education and Urban Society*.

\*Sullivan, K., Barr, N., Kintzle, S. & **Castro, C. A.** (in press). Impact of mental and physical health on the family functioning of veterans. *Journal of Marriage and Family*.

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- \*144. Sullivan, K. S., Hawkins, S. A., Gilreath, T. D. & **Castro, C. A.** (2020). Mental health outcomes associated with profiles of risk and resilience among U. S. Army spouses. *Journal of Family Psychology*.
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[doi:http://dx.doi.org.libproxy1.usc.edu/10.1080/15332985.2018.1503214](http://dx.doi.org.libproxy1.usc.edu/10.1080/15332985.2018.1503214)
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- \*126. Sullivan, K., Kintzle, S., Barr, N. Gilreath, T., & **Castro, C.A.** (2018). Veterans' social/emotional and physical functioning informs perceptions of family and child functioning. *Journal of Military, Veteran and Family Health*, 4, 37-47. DOI: 10.3138/jmvfh.2017-0008
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## **LECTURES AND CONFERENCES**

### **Refereed Conferences (selected and since arriving at USC in 2013)**

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| August, 2021 | Kintzle, S. & <b>Castro, C. A.</b> (2021). The Impact of COVID-19 on Loneliness in Veterans. Poster to be presented at the annual meeting of the American Psychological Association Convention, San Diego, CA.   |
| August, 2021 | Kintzle, S., <b>Castro, C. A.</b> , Carlton, M. A., & Mor Barak, M. (2021). Factors Related to Exclusion in the U.S. Army. Poster to be presented at the annual meeting of the American Psychological Association Convention, San Diego, CA.             |
| August, 2021 | Alday, E., Corletto, G., Kintzle, S., & <b>Castro, C.</b> (2021). The Impact of COVID-19 on Telehealth Use for US Veterans. Poster to be presented at the annual meeting of the American Psychological Association Convention, San Diego, CA.            |
| August, 2021 | <b>Castro, C.A.</b> & Atuel, H.R. Exploring Homegrown Extremism (HVE) among Military Veterans and Civilians. Poster to be presented at the annual meeting of the American Psychological Association Convention, San Diego, CA.                           |
| August, 2021 | <b>Castro, C.A.</b> & Atuel, H.R. The Beliefs that Kill Us: Homegrown Violent Extremist ideologies of Civilians and Military Veterans. Poster to be presented at the annual meeting of the American Psychological Association Convention, San Diego, CA. |

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Current as 1 APR 2021

- August, 2021      \*Nations, M., Atuel, H.R., \*Calfo, C., \*Mickle, J., \*Uruburu, K., Darst, M, & **Castro, C.A.** The terrors that bind: Women who engage in homegrown violent extremism. Poster to be presented at the annual meeting of the American Psychological Association Convention, San Diego, CA.
- August, 2021      \*Mickle, J., Atuel, H.R., \*Uruburu, K., \*Calfo, C., \*Nations, M., Darst, M, & **Castro, C.A.** Dangerous liaisons: Exploring dyadic homegrown violent extremism among civilians and military veterans, Poster to be presented at the annual meeting of the American Psychological Association Convention, San Diego, CA.
- August, 2021      \*Uruburu, K., Atuel, H.R., \*Mickle, J., \*Calfo, C., \*Nations, M., Darst, M., & **Castro, C.A.** The lone wolf terrorists among us. Poster to be presented at the annual meeting of the American Psychological Association Convention, San Diego, CA.
- March, 2021      Saba, S. K., Davis, J. P., Prindle, J. J., **Castro, C. A.** & Pedersen, E. R. Associations between symptoms of posttraumatic stress disorder, pain, and alcohol use disorder among veterans [Poster presentation]. 9th Annual Collaborative Perspectives on Addiction Conference.
- October, 2020      **Castro, C. A.** The impact of COVID-19 on the health and wellbeing of military service members and veterans from an international perspective. Panel Chair, Military Psychology Summit during COVID-19, Washington, D.C. Hosted Virtually.
- August, 2019      Atuel, H. R. & **Castro, C. A.** Exploring Mass Shootings and Violence among Military Veterans. Talk presented at the American Psychological Association annual meeting, Chicago, IL.
- August, 2019      McNamara, K. A., Goldbach, J. T., Holloway, I. W. & **Castro, C. A.** Beyond Don't Ask, Don't Tell: Outness" patterns of LGBT service members. Talk presented at the American Psychological Association annual meeting, Chicago, IL.
- August, 2019      McNamara, K. & **Castro, C. A.** Lesbian, gay, bisexual and transgender (LGBT) service members: a mediation analysis explores the relationship between LGBT-affirming workplace climate, unit-level cohesion, and social support in mental health outcomes. Talk presented at the Military Health System Research Symposium annual meeting, Kissimmee, Florida.

- July, 2019 **Castro, C. A.** Acceptance, integration, and mental health among active duty LGBT and non-LGBT service members. Talk presented at the International Congress on Law and Mental Health annual meeting, Rome, Italy.
- May, 2019 Heimdal, J. O. & **Castro, C. A.** NATO leader development framework for future multinational operations. Talk presented at the International Applied Military Psychology Symposium annual meeting, Sarajevo, Bosnia and Herzegovina.
- January, 2019 Sullivan, K., Hawkins, S., Gilreath, T. & **Castro, C. A.** Mental health outcomes associated with profiles of risk and resilience among Army spouses. Paper presented at the Annual Conference of the Society for Social Work and Research, San Francisco, CA.
- January, 2019 Lucas, C., Harris, T., Cederbaum, J., Kintzle, S. & **Castro, C. A.** A narrative inquiry of mental health treatment: barriers, facilitators, and military identity among female veterans who experienced military sexual assault. Paper presented at the Annual Conference of the Society for Social Work and Research, San Francisco, CA.
- January, 2019 Schuyler, A., Kintzle, S. & **Castro, C. A.** Ending Military Sexual Assault: Development and Pilot Testing of Skills-Based Sexual Assault Prevention Training for Military Service Members. Poster presented at the Annual Conference of the Society for Social Work and Research, San Francisco, CA.
- January, 2019 **Castro, C.A.** & Kintzle, S. Financial health amongst U.S. military veterans: Implications for practice. Paper presented in the symposium entitled, “Financial Upheaval in U.S. Households: Systems of Guidance” at the Annual Conference of the Society for Social Work and Research, San Francisco, CA.
- January, 2019 Sherraden, M., Huang, J., Bernacchi, J., Johnson, L. & **Castro, C. A.** Models of financial guidance for disadvantaged families. Paper presented in the symposium entitled, “Financial Upheaval in U.S. Households: Systems of Guidance” at the Annual Conference of the Society for Social Work and Research, San Francisco, CA.
- January, 2019 **Castro, C.A.** Bullying and hazing among active duty LGBT and non-

LGBT service members. Paper presented in the symposium entitled, “The Military Acceptance Project: Disclosure, Discrimination, Bullying, Harassment, and Violence Among Active Duty LGBT Military Service Members” at the Annual Conference of the Society for Social Work and Research, San Francisco, CA.

- January, 2019 Schuyler, A., Klemmer, C., Mamey, M. R., Schrager, S. M., **Castro, C. A.**, Goldbach, J. & Holloway, I. W. Experiences with sexual harassment, stalking, and sexual assault during military service among LGBT and non-LGBT service members. Paper presented in the symposium entitled, “The Military Acceptance Project: Disclosure, Discrimination, Bullying, Harassment, and Violence Among Active Duty LGBT Military Service Members” at the Annual Conference of the Society for Social Work and Research, San Francisco, CA.
- January, 2019 Schrager, S., Holloway, I., Goldbach, J., **Castro, C. A.** & Mamey, R. R. Recruitment and data collection with active duty sexual and gender minority service members: methods of the military acceptance project. Paper presented in the symposium entitled, “The Military Acceptance Project: Disclosure, Discrimination, Bullying, Harassment, and Violence Among Active Duty LGBT Military Service Members” at the Annual Conference of the Society for Social Work and Research, San Francisco, CA.
- January, 2019 McNamara, K.A., Lucas, C.L., Goldbach, J.T., Holloway, I.W. & **Castro, C.A.** “You don’t want to be a candidate for punishment”: A qualitative analysis of LGBT service members’ disclosure decision-making post-Don’t Ask, Don’t Tell. Paper presented in the symposium entitled, “The Military Acceptance Project: Disclosure, Discrimination, Bullying, Harassment, and Violence Among Active Duty LGBT Military Service Members” at the Annual Conference of the Society for Social Work and Research, San Francisco, CA.
- January, 2019 Dodge, J. McNamara, K., Kintzle, S., Lancaster, S. & **Castro, C.A.** What Does It All Mean? Using Sensemaking Theory with the Warrior Identity Scale to Examine Military Transition Preparedness Among U.S. Veterans. Poster presented at the 23rd Annual Conference of the Society for Social Work and Research, San Francisco, CA.
- January, 2019 Lucas, C., Harris, T., Stevelink, S., Rafferty, L., McNamara, K., Dunn, R., Kwan, J., Fear, N. Kintzle, S. & **Castro, C. A.** Homelessness Among

Male Veterans and the Role of Military Sexual Assault and Posttraumatic Stress Disorder. Poster presented at the 23rd Annual Conference of the Society for Social Work and Research, San Francisco, CA.

- August, 2018      Atuel, Hazel & **Castro, C.A.** A Tri-Ethnic Comparison of Veteran and Ethnic Identity: Implications for Civilian Healthcare Setting. Paper presented at the annual meeting of the American Psychiatric Association, San Francisco, CA.
- March, 2018      Atuel, H. R. & **Castro, C. A.** A (Very Preliminary and Alternative) Framework to Understanding Moral Injury. Paper presented at the Association for Practical and Professional Ethics Annual Meeting, Chicago, IL,
- January, 2018      Barr, N., Kintzle, S. & **Castro, C.A.** How Does Discharge Status Affect Military Veterans' Mental and Physical Health and Suicide Risk? Paper presented at the 22nd Annual Conference of the Society for Social Work and Research (SSWR) Annual Meeting, Washington, DC.
- January, 2018      McNamara, K., Goldbach, J. & **Castro, C.A.** Mental health, physical health, and help-seeking disparities among lesbian, gay and bisexual US veterans. Poster presented at the 22nd Annual Conference of the Society for Social Work and Research (SSWR) Annual Meeting, Washington, DC.
- January, 2018      Lucas, C., Kintzle, S. & **Castro, C.A.** An Examination of Stalking Among Female and Male Veterans and Associations with PTSD and Depression. Poster presented at the 22nd Annual Conference of the Society for Social Work and Research (SSWR) Annual Meeting, Washington, DC.
- November, 2017      Schuyler A, Kintzle S, **Castro C.A.** Stalking in the US Military and Associations with Experiences of Military Sexual Assault. Poster presented at the American Public Health Association (APHA) Annual Meeting. Atlanta, GA.
- September, 2017      **Castro, C.A.** & Atuel, Hazel. Virtual Reality as a Tool for Enhancing the Proficiency of Behavioral Health Providers: The Virtual Client-Trainer. Paper presented in the symposium entitled, "Artificial Intelligence for Social Good: A Transformative Approach to Social Services," University of Southern California Global Conference, Tokyo, Japan.
- August, 2017      **Castro, C.A.**, Holloway, I.W. & Goldbach, J. Hazing, harassment, and

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life for LGBT members of the military. Paper presented at the annual meeting of the American Psychological Association, Washington, D.C.

- August, 2017      Atuel, H., Kintzle, S. & **Castro, C.A.** Implementing the knowledge of CPT-C critical skills (KACCS) scale. Poster presented at the annual Military Health System Research Symposium, Kissimmee, FL.
- June, 2017      Schuyler, A., Kintzle, S. & **Castro, C.A.** Sexual difficulties within relationships and associated factors among male veterans living in Chicagoland. Poster presented at the annual National Sexual Health Conference, Denver, CO.
- January, 2017      Lucas, C., Goldbach, J, Kintzle, S. & **Castro, C.A.** Military Sexual Assault as a Mediator of Post-Traumatic Stress Disorder and Depression Among Lesbian, Gay, and Bisexual Veterans. Paper presented at the annual Conference of the Society for Social Work and Research, New Orleans, LA.
- January, 2017      Ozuna, S., Corletto, G., Kintzle, S. & **Castro, C. A.** Social Connectedness: An Exploratory Analysis of Pre 9/11 and Post 9/11 Male and Female Veterans Feelings of Connectedness to Society. Paper presented at the annual Conference of the Society for Social Work and Research, New Orleans, LA.
- January, 2017      Sullivan, K., Kintzle, S., Barr, N., Gilreath, T. & **Castro, C. A.** The Association of Military Veterans' Social/Emotional and Physical Functioning with Child and Family Outcomes. Paper presented at the annual Conference of the Society for Social Work and Research, New Orleans, LA.
- January, 2017      Barr, N., Kintzle, S., Sullivan, K. & **Castro, C. A.** How Do Somatic Symptoms and Barriers to Care Affect Mental Health Service Use for Veterans with PTSD? Paper presented at the annual Conference of the Society for Social Work and Research, New Orleans, LA.
- November, 2016      Schuyler, A., Atuel, H., Ursich, L., Dax, B., Kintzle, S. & **Castro, C.A.** Virtual Training in Cognitive Processing (CPT-C) for Military/Veteran Behavioral Health Providers. Paper presented at the annual meeting of the International Society for Traumatic Stress Studies, Atlanta, Georgia.

- November, 2016 Fletcher, K. L., Albright, D. L., Borah, E. V. & **Castro, C. A.** Unpacking Grand Social Work Challenges and its application for military social work. Panel presented at the Annual Program Meeting of the Council on Social Work Education, Atlanta, GA.
- November, 2016 Atuel, H.R. & **Castro, C.A.** Exploring veteran identity and perceived veteran discrimination in civilian settings: A tri-ethnic comparison. Paper presented at the annual meeting of the Canadian Institute for Military and Veteran Health Research, Ontario, Canada.
- May, 2016 **Castro, C. A.** & Goldbach, J. Lesbian, Gay, Bisexual, and Transgender (LGBT) Service Members: Life After Don't Ask, Don't Tell. Paper presented at the annual meeting of the American Psychiatric Association, Atlanta, Georgia.
- January, 2016 **Castro, C. A.** Grand Challenges for Military Behavioral Research. Roundtable presented at the annual Conference of the Society for Social Work and Research. Washington, D.C.
- January, 2016 Keeling, M, E., Kintzle, S. & **Castro, C. A.** A Qualitative Study of Veteran Clients Using Employment and Housing Services in Southern California: Exploring the Risk Factors to Persistent Employment Problems. Paper presented at the annual Conference of the Society for Social Work and Research. Washington, D.C.
- January, 2016 Ray-Letourneau, D., Kintzle, S., & **Castro, C. A.** Health and Disability among Veterans. Poster presented at the annual Conference of the Society for Social Work and Research. Washington, D.C.
- January, 2016 Kintzle, S. and **Castro, C. A.** Difficulty Adjusting to Civilian Life after Military Transition: The impact on current physical and mental health status in Pre and Post 9/11 Veterans. Poster presented at the annual Conference of the Society for Social Work and Research. Washington, D.C.
- January, 2016 Ozuna, S. M., Schuyler, A. C., Keeling, M., Kintzle, S., & **Castro, C. A.** An Exploration of Female Veteran's Perception of Military Service in the Context of a Male-Dominated Environment. Poster presented at the annual Conference of the Society for Social Work and Research. Washington, D.C.



- January, 2016 Lucas, C. L., Kintzle, S., & **Castro, C. A.** Military Sexual Trauma with Military Transition as a Moderator for Relationship Issues Among Veterans. Paper presented at the annual Conference of the Society for Social Work and Research. Washington, D.C.
- January, 2016 Schuyler AC, Lucas CL, Moore H, Kintzle S, & **Castro CA.** Military sexual trauma (MST) among male and female veterans in Southern California and associated physical and psychological health, and risk behavior outcomes. Paper presented at the annual Conference of the Society for Social Work and Research. Washington, D.C.
- January, 2016 Barr, N., Kintzle, S., **Castro, C.** & Sullivan, K. What Can Specific PTSD Symptom Profiles Tell Us about Suicidality and Non-Suicidal High Risk Behavior in Military Veterans? Paper presented at the annual Conference of the Society for Social Work and Research. Washington, D.C.
- January, 2016 Sullivan, K., Barr, N., Kintzle, S., & **Castro, C. A.** The Impact of Mental Health, Physical Health and Previous Deployments on the Family Functioning of Veterans. Paper presented at the annual meeting of the Society for Social Work Research, Washington, DC.
- January, 2016 Belton, J., Adler, A. B., **Castro, C. A.** & Shields, J. J. Beyond Combat Exposure: Non-Traumatic Deployment Stressors and Anger as Risk Factors for Developing Posttraumatic Stress Symptoms. Poster presented at the annual meeting of the Society for Social Work and Research. Washington, D.C.
- November, 2015 Keeling, M., Kintzle, S., and **Castro, C. A.** Exploring the Risk Factors to Persistent Employment Problems among Veteran's Using Employment and Housing Services in Southern California: A Qualitative Study. Poster presented at the annual meeting of the British Psychological Society, Basingstoke, England.
- November, 2015 Schuyler, A., Kintzle, S., Hassan, A., and **Castro, C.** *Military sexual trauma among male veterans: Impact on health and risk behaviors.* Poster presented at the annual meeting of the American Public Health Association, Chicago, IL.
- August, 2015 **Castro, C.A.** & Kintzle, S. Military transition theory and the Los Angeles veterans study. In **C.A. Castro** (Chair), *Returning home from war – The military transition theory*. Symposium presented at the annual meeting of



the American Psychological Association, Toronto, Canada.

- August, 2015      Keeling, M. Kintzle, S. & **Castro, C.A.** PTSD and Depression in Pre and Post-9/11 Veterans. In **C.A. Castro** (Chair), *Returning home from war – The military transition theory*. Symposium presented at the annual meeting of the American Psychological Association, Toronto, Canada.
- August, 2015      Kintzle, S. & **Castro, C.A.** Suicidality in Los Angeles County Veterans. In **C.A. Castro** (Chair), *Returning home from war – The military transition theory*. Symposium presented at the annual meeting of the American Psychological Association, Toronto, Canada.
- August, 2015      Schuyler, A., Kintzle, S. & **Castro, C.A.** Experiences of Military Sexual Trauma, and Associated Health Outcomes and Behaviors, among Veterans. In **C.A. Castro** (Chair), *Returning home from war – The military transition theory*. Symposium presented at the annual meeting of the American Psychological Association, Toronto, Canada.
- May, 2015          **Castro, C.A.** Effectiveness and limitations of resiliency programs. In C.H. Warner (Chair), *Resiliency's role in force health protection: Determining the effectiveness of international military efforts*. Symposium presented at the annual meeting of the annual American Psychiatric Association, Toronto, Canada.
- May, 2015          **Castro, C.A.** & Kintzle, S. Myths of sexual harassment and assault in the military. In C.H. Warner (Chair), *Military sexual assault: Root causes, prevention effectiveness, and challenges in treatment*. Symposium presented at the annual meeting of the American Psychiatric Association, Toronto, Canada.
- May, 2015          Kintzle, S. & **Castro, C.A.** Root causes of sexual assault in the military. In C.H. Warner (Chair), *Military sexual assault: Root causes, prevention effectiveness, and challenges in treatment*. Symposium presented at the annual meeting of the American Psychiatric Association, Toronto, Canada.
- May, 2015          **Castro, C.A.** Military transition theory. In C.H. Warner (Chair), *Transitioning from servicemember to veteran: Impact, assistance, and a way ahead*. Symposium presented at the annual meeting of the American Psychiatric Association, Toronto, Canada.

- May, 2015 **Castro, C.A.** Prior DoD research efforts and response to the IOM report. In C.H. Warner (Chair), *Posttraumatic stress disorder treatment in the military: The impact of the IOM report*. Symposium presented at the annual meeting of the American Psychiatric Association, Toronto, Canada.
- October 2014 Kim, A.K., **Castro, C.**, Brunning, M. & Wilcox, S. *Joining Forces: An Intercollegiate Approach to Teaching Interprofessional, Patient-Centered Military Health Care*. Symposium presented at the annual meeting of the Council on Social Work Education, Miami, FL.
- April 2014 Pearson, J., Nassauer, K. Brenner, L., Satow, P. & **Castro, C.** *Multiple Approaches to Measuring Suicide Research Progress: Updates from the National Research Action Plan and the Prioritized Suicide Research Agenda Portfolio Analyses*. Symposium presented at the annual meeting of the American Association of Suicidology, Los Angeles, CA.
- November 2013 **Castro, C.A.** *Defense Against Suicide: Worldwide Military Suicide Prevention and Continuum of Care Efforts*. Symposium presented at the annual meeting of the International Applied Suicide Prevention Conference, Oslo, Norway.
- November 2013 Zamorski, M., Adler, A., **Castro, C.**, Greenberg, N., Sadler, N. & Sudom, K. *An International Consensus Definition of Psychological Resilience for Military Organizations*. Paper presented at the annual meeting of the International Society for Traumatic Stress Studies, Philadelphia, PA.
- November 2013 **Castro, C.A.** *What We Know about Combat and Mental and Behavioral Health*. Paper presented at the annual meeting of the International Society for Traumatic Stress Studies, Philadelphia, PA.
- September 2012 Gutierrez, P.M., Joiner, T. & **Castro, C.A.** *Preventing Suicide in the United States Military: Research Challenges and Opportunities*. Paper presented at the European Symposium of Suicide and Suicidal Behavior, Tel Aviv, Israel.
- June 2012 Gutierrez, P.M., **Castro, C.A.**, Fitek, D.J., Jobes, D. & Holloway, M. *Status of Department of Defense Funded Suicide Research*. Symposium presented at the Departments of Defense and Veterans Affairs Suicide Prevention Conference, Washington, D.C.

- May 2011 **Castro, C.A.** *Learning from Observations Already Learned.* Paper presented at the annual meeting of the International Applied Military Psychology Symposium, Vienna, Austria.
- November 2010 **Castro, C.A.** *Developing a Valid Definition of mTBI/Concussion.* Paper presented at the annual meeting of the International Society of Stress Studies, Montreal, Canada.

**Invited presentations/Key note addresses (selected and since arriving at USC in 2013)**

- September, 2020 **Castro, C. A.** Risks, Leadership and Virtual Care. Professorial and Discussant at the Confronting the Pandemic: A Mental Health Perspective and Maintaining Operational Readiness of NATO Forces Symposium. Hosted Virtually.
- October, 2019 **Castro, C. A.** Lessons Learned After 15 Years of War: Thoughts for Senior Leaders. Talk present at the Swiss Federal Institute of Technology, Zurich, Switzerland.
- October, 2019 **Castro, C. A.** Military and Family Mental Health: A Global Perspective. Talk presented at the Swiss Military Academy at ETH Zurich Kaserne, Zurich, Switzerland.
- October, 2019 **Castro, C. A.** Castro, C. A. Lessons Learned After 15 Years of War: Role of Military Psychology. Talk presented at the Swiss Military Academy at ETH Zurich Kaserne, Zurich, Switzerland.
- November, 2019 **Castro, C. A.** The role of Social Connectedness in Service Member and Family Transition. Talk presented at the Bristol-Myers Squibb Foundation Veterans Mental Health and Well-being Grantee Summit, Tampa Bay, Florida.
- June, 2019 **Castro, C. A.** Military and Veteran Health: A Global Perspective. Talk presented at the Conference Series on Military Social Work, Health and Intervention for the Military, Veterans, and Their Families, Seoul, South Korea.
- June, 2019 **Castro, C. A.** The Health and Well-being of the U.S. Military and Veteran Family. Talk presented at the Conference Series on Military Social Work,

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Health and Intervention for the Military, Veterans, and Their Families, Seoul, South Korea.

- May, 2019                    **Castro, C. A.** PTSD and Moral Injury. Talk presented at the 53<sup>rd</sup> International Applied Military Psychology Symposium annual meeting, Sarajevo, Bosnia and Herzegovina.
  
- October, 2018            **Castro C. A.** Moral Injury from a Character Disruption Perspective. Talk presented at the Defence Ethics Programme Speaker Series, Symposium on Moral Injury, RCAF 17 Wing, Winnipeg, Manitoba, Canada.
  
- October, 2018            **Castro, C.A.** Global Perspectives on Military and Family Mental Health. Talk presented at the Cohen Veterans Care Summit, Washington, D.C.
  
- June, 2018                **Castro, C.A.** Mental Health Advisory Team (MHAT) IV. Talk presented at the Moral Decisions and Mental Health NATO Lecture Series Human Factors and Medicine (HFM-284), London, England.
  
- May, 2018                **Castro, C.A.** Military Transitions: Resilience and Risk Post-Deployment. Talk presented at the 52<sup>nd</sup> International Applied Military Psychology Symposium annual meeting, Bucharest, Romania.
  
- May, 2018                **Castro, C.A.** The Military (and Veteran) Family. Workshop presented at the 52<sup>nd</sup> International Applied Military Psychology Symposium annual meeting, Bucharest, Romania.
  
- April, 2018               **Castro, C.A.** Military Transition: A NATO Research and Technology Group Perspective. Talk presented at Veteran Empowerment and Transition Summit, Kiev, Ukraine.
  
- April, 2018               **Castro, C.A.** Transitions and the Veteran. Talk presented at the Joint Department of Veterans Affairs and the Department of Defense Military to Civilian Transition Summit 2.0, Washington, D.C.
  
- March, 2018              **Castro, C.A.** Military Transition, Identity and Health. Talk presented at Queen's University, Kingston, Ontario, Canada.
  
- March, 2018              **Castro, C.A.** Military Transition is King. Talk presented at the Veteran's Mental Health conference. London, England.

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- November, 2017 **Castro, C.A.** Military Transition Theory. Talk presented at the Marne Behavioral Health Summit annual meeting. Fort Stewart, GA.
- May, 2017 **Castro, C.A.** GI Bill: Overview and Analysis. Talk presented at the Association of Pacific Rim Universities. Los Angeles, CA.
- May, 2017 **Castro, C.A.** Military Transition Theory. Talk presented at the Association of Pacific Rim Universities. Los Angeles, CA.
- April, 2017 **Castro, C.A.** Differentiating TBI and PTSD: Language and definitions. Talk presented at the annual World Brain Mapping conference. Los Angeles, CA.
- January, 2017 **Castro, C.A.** Things to Know about Veterans. Talk presented at the quarterly meeting of the Valley Industrial Association. Santa Clarita, CA.
- January, 2017 **Castro, C.A.** Communities Working with Veterans. Talk presented at the monthly Santa Clarita Veterans Collaborative. Santa Clarita, CA.
- November, 2016 **Castro, C.A.** Moving Beyond the Repeal of Don't Ask, Don't Tell: Welcoming LGBT Service Members in the Military. Talk presented at the Marne Behavioral Health Summit. Fort Stewart, GA.
- September, 2016 **Castro, C.A.** The Combat Veteran Paradox and the Transition Back to Civilian Life. Keynote talk presented at the Service Member to Civilian (S2C) Summit, Birmingham, Alabama.
- April, 2016 **Castro, C.A.** *Combat Veteran Paradox, Sexual Trauma in the Military, and Combat and Mental Health*. Three talks presented as part of the Distinguished Visitors Program of the Conflict Management and Resolution Program, The Ben Gurion University of the Negev, Israel.
- September, 2015 **Castro, C.A.** *Military Family Research*. Talk presented at the Battle Plan for Supporting Families Symposium, Washington, D.C.
- July, 2015 **Castro, C.A.** *Combat Veteran Paradox*. TED-like Talk presented at the Military Child Education Coalition Conference pre-event, Addressing the Emotional Needs of Military and Veteran Children: Building Connections and Supportive Communities, Washington, D.C.

- June, 2015 **Castro, C.A.** *The Military Transition Theory*. Paper presented at the Department of Defense's Transition Research Summit, Washington, D.C.
- May, 2015 **Castro, C.A.** *Military Social Work Research: Theory and Framework*. Paper presented at the International Symposium on Military Social Work Theories and Practice, Nanjing, China.
- March, 2015 **Castro, C.A.** & Hassan, A.M. *Enhancing Mental Healthcare in a Military Setting* (multiple presentations). Workshop (three days) presented to the Ministry of Defense, Singapore.
- November, 2014 **Castro, C.A.** *Coming Home: The Impact of Combat Duty on Civilian Integration*. Paper presented at the Canadian Institute for Military and Veteran Health Research, Toronto, Canada
- September 2014 **Castro, C.A.** *The Influence of Combat on Veterans*. Paper presented at the Native American Veterans Association (NAVA) Summit, Los Angeles, CA.
- April 2014 **Castro, C.A.** *Brain Health: Defining a Movement*. Paper presented at the Army Medicine Brain Health Consortium, Washington, D.C.
- March 2014 **Castro, C.A.** & Hassan, A. *Advice for Military Social Workers: Facing Tough Facts to Become More Effective*. Paper presented at Fu Hsing Kang College, Taipei, China.
- September 2013 **Castro, C. A.** *A Comprehensive Approach to Caring for Service Members, Veterans, and their Families*. Paper presented at the Pacific Armies' Chiefs' Conference VIII (PACC) and Pacific Armies' Management Seminar XXXVII (PAMS), Auckland, New Zealand.
- September 2013 **Castro, C.A.** *Veteran Transition*. Paper presented at True Love Patriot Conference, Canada House, London, England.
- April 2012 Ruzek, J., Shalev, A., **Castro, C.A.**, de Jong, J., Keane, T., Rosen, R. & Vermetten, E. *Reaching Vulnerable Populations Worldwide: Applying Evidence-Based Training and Core Psychological Change Processes to Disseminate Effective Services for Trauma Survivors*. NATO Advanced Research Workshop, Amsterdam, The Netherlands.
- December 2011 **Castro, C.A.** *Combat and the Mind of the Veteran*. Paper presented at

the Chicago Institute for Psychoanalysis, Chicago, IL.

- March 2011 **Castro, C.A.** *10 Things We Think We Know about the Mental Health and Well-being of U.S. Soldiers Returning from Combat Duty in Iraq*. Paper presented at the Royal Higher Institute for Defence, Brussels, Belgium.
- February 2011 **Castro, C.A.** *Definition of Mild Traumatic Brain Injury*. Paper presented at Wounds of War III: Coping with Blast-related Traumatic Brain Injury in Returning Troops, Vienna, Austria.
- October 2010 **Castro, C.A.** *Reconceptualizing the Diagnosis of Combat-related Posttraumatic Stress Disorder*. Paper presented at the Military Mental Health Group, University Medical Center, Utrecht, The Netherlands.
- June 2009 **Castro, C.A.** *Impact of Combat on the Mental Health and Well-being of Soldiers and Marines*. Paper presented at the Royal United Services Institute, London, England.
- October, 2007 **Castro, C.A.** *Military Mental Health*. Paper presented at the conference on the occasion of the 140<sup>th</sup> anniversary of the The Netherlands Red Cross entitled, “Protecting human dignity in armed conflict,” The Peace Palace, The Hague, The Netherlands.
- May, 2005 **Castro, C. A. & Clark, J. C.** Work–family balance in soldiers and their families. Paper presented at the Defense Department Advisory Committee on Women in the Services Business Meeting, Arlington, VA.

### **Podcasts and Blogs**

1. Huggins, J. (Producer) & Hoffberg A.S. (Host). (2017, February 22). Dr. **Carl Castro** on the Military Suicide Transition Theory, The Hemingway Effect and the Importance of Understanding the Military Family. Rocky Mountain MIRECC Short Takes on Suicide Prevention [Audio podcast]. Retrieved from [https://www.mirecc.va.gov/visn19/education/media/#podcast\\_castro\\_transitions](https://www.mirecc.va.gov/visn19/education/media/#podcast_castro_transitions)
2. Bustamante, C. (Producer & Host). (2017, April 24). Dr. **Carl Castro**, CIR Director discusses sexual assault in the military [Audio Podcast]. Retrieved from <https://soundcloud.com/usc-cir/cir-director-carl-castro-discusses-sexual-assault-in-the-military>.



3. Bustamante, C. (Producer & Host). (2017, June 9). Professors Jeremy Goldbach and **Carl Castro** discuss LGBT in military [Audio podcast]. Retrieved from <https://soundcloud.com/usc-cir/professors-goldbach-and-castro-discuss-lgbt-in-military>
4. Schuyler, A.C., Klemmer, C., Mamey, M.R., Schrager, S.M., Goldbach, J.T., Holloway, I.W. and Castro, C.A. (2020, April 1). LGBT Service Members Report More Sexual Assault, Sexual Harassment and Stalking than their Cisgender Heterosexual Peers. <https://istss.org/public-resources/trauma-blog/2020-april/lgbt-service-members-report-more-sexual-assault,-s>
5. Arrendone P. (Producer & Host). (2020, September 30). Dr. **Carl Castro** on the struggles of veterans, military service members and their families have faced during the coronavirus pandemic. Blazing Battles with MVP Episode 1: The Impacts of Covid-19 on the Military Community. Retrieved from <https://youtu.be/8GlARFiehAc>.

## **TEACHING, MENTORING AND CURRICULUM DEVELOPMENT**

2019	Clinical Practice with Service Members and Veterans (SOWK 641) Small Systems Theories (SOWK 703)
2018	Clinical Practice with the Military Family (SOWK 640) Small Systems Theories (SOWK 703)
2017	Small Systems Theories (SOWK 703)
2017	Developed Military Theoretical Foundations for Military Social Work Theories and Applications (SOWK 633)
2016	Human Behavior in the Context of Social Environments: Behavioral and Social Science Theory and Research (SOWK 702)
2015	Developed Military and Veteran Policy and Program Management (SOWK 650)
2014 -2015	Clinical Practice with Service Members and Veterans (SOWK 641) Independent Research for 7 students (SOWK 590) Evaluation in Mental Health Settings (SOWK 625)

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2013 – 2014	Clinical Practice with the Military Family (SOWK 640)
2013	Co-developer and lecturer, Interprofessional Education Workshop, Mount St Mary's College, Los Angeles, CA
2005 – 2007	Developed the Battlemind Resilience Training System which was validated in three large group randomized trials. Battlemind was subsequently adopted by the U.S. Army as part of their Comprehensive Soldier Fitness Military Resilience Training Program. Battlemind training was also adopted by Canada, The Netherlands and Norway as part of their reintegration training following deployment.
2002 – 2005	Lecturer, Combat and Operational Stress Control Course Army Medical Department Center and School, San Antonio, TX
1993 - 1994	Instructor, Medical Effects of Nuclear Weapons Course Armed Forces Radiobiology Research Institute, Bethesda, Maryland

## **ACADEMIC AND RESEARCH MENTORING**

### **Visiting Scholars**

2016 – 2017	Liu Yan (China)
2015 – 2016	David Pedlar (Canada, Fulbright)
2014 – 2015	Eyal Fructer (Israel)

### **Dissertations/Capstones**

2018 – Present	Julia O’Laughlin, Doctoral Student, University of British Columbia Dissertation Title: “The Impact of Traditional Masculinity Ideology on Military to Civilian Transition in Veteran Men” Member Dissertation Committee
2017 – Present	Jessica Dodge, Doctoral Student, Suzanne Dworak-Peck School of Social Work. Mentored in academic writing and research methods in the area of

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military and veteran families.  
Chaired Qualifying Examination

- 2018 – 2020      Stephen Morgano, Suzanne Dworak-Peck School of Social Work.  
Mentored in academic writing and research methods in the area of  
behavioral care support to military personnel.
- 2017 – 2019      Jenny Paul, MPH Student, University of Washington  
Capstone Title: Analysis of Department of Defense Transgender Service  
Policy: Exploring Facilitators and Barriers to Integration and Acceptance  
Member Capstone Committee (External Member)
- 2016 – 2019      Katie McNamara, Doctoral Student, Suzanne Dworak-Peck School of  
Social Work.  
Dissertation Title: “Disclosure of LGBT Identity Among U.S. Military  
Members After Don’t Ask, Don’t Tell”  
Chaired Qualifying Examination, passed with distinction.  
Chair Dissertation Committee, passed with distinction.  
Current Appointment: Major (U.S. Air Force) and Staff Faculty, Nellis Air  
Force Base, Las Vegas, Nevada
- 2014 – 2018      Nicholas Barr, USC Suzanne Dworak-Peck School of Social Work.  
Dissertation Title: “Mindfulness and Resilience: An Investigation of the  
Role of Mindfulness in Post-9/11 Military Veterans’ Mental Health-  
Related Outcomes.”  
Chaired Qualifying Examination, passed with distinction.  
Chaired Dissertation Committee, passed with distinction  
**Current Appointment:** Assistant Professor, University of Nevada, Las  
Vegas
- 2014 – 2018      Kate Sullivan, USC Suzanne Dworak-Peck School of Social Work.  
Dissertation Title: “Mental Health Outcomes Associated with Profiles of  
Risk and Resilience among Military-Connected Youth.”  
Chaired Qualifying Examination, passed with distinction.  
Chaired Dissertation Committee, passed with distinction  
**Current Appointment:** Assistant Professor, School of Social Work, New  
York University
- 2014 – 2017      Carrie Lucas, USC Suzanne Dworak-Peck School of Social Work.  
Dissertation Title (completed): “An Examination of Sexual Harassment,  
Gender Discrimination, Stalking, and Sexual Assault among Female and

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Current as 1 APR 2021

Male Veterans and Associations with PTSD and Depression.”

Chaired Qualifying Examination, passed with distinction.

Chaired Dissertation Committee.

**Current Appointment:** Major (U.S. Air Force) and Assistant Professor, Uniformed Services University (USU) of the Health Sciences, Bethesda, Maryland.

### **Post Docs**

- |             |  |
|-------------|--|
| 2018 – 2019 | Nicholas Barr, USC Suzanne Dworak-Peck School of Social Work. Mentored in military research grant preparation in the areas of military mindfulness and intervention studies.<br><b>Current Appointment:</b> Assistant Professor, University of Nevada, Las Vegas                                   |
| 2015 – 2018 | Mary Keeling, Post-doc, USC Suzanne Dworak-Peck School of Social Work. Mentored in military research methods, grant management and research grant preparation in the areas of military family and couples.<br><b>Current Appointment:</b> Research Lead, United Kingdom Council of Psychotherapist |
| 2016 – 2017 | Christopher Lamb, Post-doc, USC Suzanne Dworak-Peck School of Social Work. Mentored in dissemination and implementation of behavioral health care, grant management and research grant preparation.  |

### **Doctoral Tutorials**

- |             |   |
|-------------|---|
| 2015 – 2016 | Tayler Harris, Doctoral Student, USC Suzanne Dworak-Peck School of Social Work, Tutorial on military veteran homelessness and risk-taking behaviors.  |
| 2014 – 2016 | Hadass Moore, Doctoral Student, USC Suzanne Dworak-Peck School of Social Work. Mentored in academic writing, statistical methods, research methods and study design in the area of military female transitions. |

### **MSW Independent Research Study**

- |      |  |
|------|--|
| 2018 | Jessica Dodge, Thesis Title: “How Important Is It to Have a Job Upon |
|------|--|

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Leaving the Military? Examining the Relationship between Current Employment Status, Health Outcomes, and Prior Transitioning Out of the Military Employment Status.”

2016 – 2017 Will Hill, Thesis Title: “Best Practices for Psychological First Aid”

## **SERVICE**

### **University of Southern California Service**

2020 – 2021	Member, USC Tenured and Tenured Track Faculty Affairs Committee
2020 – 2021	Member, USC Research Committee
2015 – Present	Member, USC Military Affairs Committee, Chaired by the Vice Provost
2019	Panel Member, <i>Perspectives on Native American Issues: The Veteran’s Experience</i> . Los Angeles, CA.
2018 – 2019	Member, USC Academic Senate
2018	Chaired and Hosted the fourth annual USC Military Transition Research Summit, <i>Financial Readiness for Transition</i> , Los Angeles, CA.
2017	Co-chaired the Association of Pacific Rim Universities Symposium. Los Angeles, CA.
2017	Co-chaired and Hosted the Northern Arizona University – University of Southern California Veteran – Military Collaborative Research Symposium, USC Suzanne Dworak-Peck School of Social Work,
2017	Co-chaired the third annual USC Military Transition Research Summit, with the Department of Veterans Affairs, <i>Veterans Policy Research Roundtable on Women Veterans</i> , Arlington, VA
2016	Chaired and Hosted the second annual USC Military Transition Research Summit, <i>Military to Civilian Life Transition: Theoretical Consensus</i> . Los Angeles, CA.
2015	Chaired and Hosted the inaugural USC Military Transition Research Summit, <i>Closing the Gap: Planning the Research Agenda for the Next</i>

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*Decade to Address the Needs of Service Members, Veterans and their Families*, Los Angeles, CA.

- 2014                      Lecturer for the Center for Excellence in Research Workshop, Office of Research Presented on *Obtaining Department of Defense (DoD) Medical Research Funding*
- 2014                      Reviewer for Military Scholarships, Provost Pre-College Scholars
- 2013                      Panel Member, *Work and Home: Addressing the Urgent Needs of Returning Veterans*, Sol Price School of Policy, USC

**Suzanne Dworak-Peck School of Social Work Service**

- 2016 – Present              Chair, Military Track Curriculum Committee (formerly Sub-Concentration)
- 2014 – Present              Member, Doctoral Committee
- 2017 – 2019                  Member, Position Management Review Committee
- 2019                          Member, Provost Joint Working Group
- 2018 – 2019                  Chair, Faculty Council
- 2017 – 2018                  Chair, Policy Working Group, Sexual Harassment Task Force
- 2017 – 2018                  Member, Faculty Council
- 2017, 2018                  Member, Promotion Review Committee
- 2016 – 2018                  Member, Search Committee
- 2016 – 2017                  MSW Application Review Committee
- 2015, 2016, 2017              External Reviewer, Associate Professor to Full Professor
- 2015 – 2017                  Member, Research Council
- 2015 – 2016                  Member, Curriculum Committee, Department of Community, Organization and Business Innovation

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2014 – 2017	Chair, Military Behavior and Trauma Research Cluster
2014 – 2018	Member, Annual Performance Review Committee (APR), Department of Social Change and Innovation (formerly Community, Organization and Business Innovation)
2013 – 2017	Member, Management Organization and Policy Transformation Research Cluster
2013 – 2016	Member, Military Sub-Concentration Curriculum Committee
2014 – 2015	Member, Curriculum Council
2014	Presenter, Board of Councilors meeting
2014	Panel Member, All School Day: <i>Serving those who Served in the Military</i>
2013	Presenter, Board of Councilors meeting

### **National and Global Service**

2020 – Present	Board Member, Greater Los Angeles Veterans Research and Educational Foundation (GLAVREF), Los Angeles CA
2020 – Present	Chair, International Military Psychology Committee, Society for Military Psychology, American Psychological Association
2018 – Present	Member, Veteran Peer Access Network Steering Committee, Los Angeles County Department of Mental Health
2018 – Present	Member, Together with Veterans Advisory Board, Department of Veteran
2015 – Present	Member, Advisory Board of the King's Centre for Military Health Research, London (Chaired by Field Marshall The Lord Guthrie)
2015 – Present	Senior Advisor, Cohen Veterans Network (CVN) Scientific Advisory Board
2020 – 2021	Member, Military Family Abstract Review Panel, Military Health Services Research Symposium

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2014 – 2021	Chair, NATO Research and Technology Group – 132, <i>The Transition of Military Veterans from Active Service to Civilian Life</i>
2015 – 2019	Chair, Scientific Review Committee, Military Service Members, Veterans and their Families, Society for Social Work Research
2013 – 2020	Scientific Advisor, Military Suicide Research Consortium, Department of Defense
2014 – 2019	Member, National Academy of Science for the Board on Army Science and Technology (BAST)
2014 – 2019	Member, Scientific Advisory Board, Center of Excellence for Research on Returning War Veterans, Department of Veteran Affairs
2019	Delegate, PREVENTS Task Force, National Association of Social Workers Focus Group, Washington, D.C.
2012 – 2018	Member, Scientific Advisory Board for the Department of Veterans Affairs for the National Centers of PTSD, Department of Veteran Affairs
2018	Consultation, Parliamentary Committee on Veteran Affairs, Chair, Oleksandr Tretiakov, Member of Parliament, Ukraine.
2017	Witness, California Legislature Senate Committee on Veteran Affairs, “Challenges Facing California Veterans during the Transition Back to Civilian Life,” Sacramento, CA
2016 – 2018	Chair, CSWE Advanced Social Work Practice in Military Social Work Guide
2016 – 2018	Member, CSWE Advanced Social Work Practice for Trauma in Social Work Guide
2016	Reviewer (external), Veterans and Families Institute (VFI), Anglia Ruskin University, Chelmsford, United Kingdom
2015 – 2016	Member, National Academy of Medicine (formerly Institute of Medicine, IOM) Committee entitled “Evaluation of Research Management by DoD Congressionally Directed Medical Research Programs (CDMRP)”

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2012 – 2016	Member, NATO Research and Technology Group – 218, <i>Military Suicide</i>
2009 – 2015	Chair, NATO Research and Technology Group – 203, <i>Mental Health Training</i>
2014 – 2015	Scientific Advisor, Consortium to alleviate PTSD, Department of Defense and Department of Veterans Affairs
2013 – 2015	Scientific Advisor, Air Force Scientific Advisory Board, Combating Sexual Assault, Department of Air Force
2012 – 2013	Member, Advisory Board for the Department of Veterans Affairs for the Center of Excellence for Suicide Prevention
2012 – 2013	Member, The White House Executive Order to Establish a National Research Action Plan for TBI, PTSD and Suicide
2011 – 2013	Chair, Military External Advisory Board for the Military Suicide Research Consortium, Department of Defense
2011 – 2013	Chair, External Advisory Board for the Violence within the Military Consortium, Department of Defense
2010 – 2013	Chair, The Joint Program Committee for the Military Operational Medicine, Department of Defense
2008 – 2013	Lead U.S. Technical Science Officer on bi-lateral agreements with United Kingdom, Sweden, France and India, Department of Defense
2008 – 2013	Provided expert testimony on numerous occasions to Congress on the mental health status of service members and their families
2005 – 2012	Chair, The Technical Cooperation Panel (TTCP) - <i>Psychological Support During Military Operations</i> , Department of Defense
2010	Co-Chair, NATO Research Symposium – 205 <i>Psychological Support Across the Military Spectrum</i> , Bergen, Norway
2009	Chair, International workshop - <i>Third Location Decompression</i> Portsmouth, England,

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**Professional Memberships**

2019 – Present          Member, National Association of Social Workers

2013 – Present          Member, Council on Social Work Education (CSWE)

2013 – Present          Member, Society for Social Work and Research (SSWR)

1997 – Present          Member and Fellow, American Psychological Association

**Editorship**

2014 – Present          Editor, *Military Behavioral Health*

**Journal Reviewer**

Journal of the American Medical Association  
British Journal of Psychiatry  
Lancet  
Clinical Psychology Review  
Current Psychiatry Reports  
Journal of Traumatic Stress  
Journal of Head Trauma Rehabilitation  
Archives of General Psychiatry  
Journal of Social and Clinical Psychology  
Psychiatric Research  
Military Medicine  
Military Psychology

**Grant Reviewer**

NASA  
NIDA  
US – Israel Binational Science Foundation  
U.S. Army Medical Research and Develop Command

### **Declaration of Randy Dale Floyd**

I, Randy Dale Floyd, hereby declare as follows:

1. My name is <sup>Randy Dale</sup> Randy ~~Dale~~ Floyd. I am the brother of Michael Floyd, Zane's father. I am married to ~~Marie~~ Marie Floyd, and we have two sons, Zack and Josh. Zack passed away a few years ago. We currently live in Amarillo, Texas.
2. Most of my interaction with Zane was from Zane's childhood to his mid-teenage years. I saw Zane at least once a year at family gatherings at our parent's house in Clovis, New Mexico, at our house in Amarillo, or at Mike's house in Las Vegas.
3. Growing up, Zane was a good kid, well behaved and polite. Zane participated in sports and other positive activities. I never saw Zane as a troublemaker.
4. My sons, Zane's cousins, Zack and Josh, had a very good relationship with Zane and spent time with one another when the families got together. Zane was like a big brother to Josh, who was younger. When the three cousins got together, they usually played games and sports, went to the movies, and hung out with one another.
5. Valerie told me that Zane had suffered some traumatic experiences while stationed in Cuba. I also understood that it was a nerve-racking experience for Zane serving in Cuba. The Cuban soldiers frequently pointed their weapons at Zane and his fellow American troops, and he felt like an attack could take place at any time. Zane remained on guard throughout his time there.
6. When we heard about Zane's arrest, we were surprised and devastated. The shooting was totally out of character from the Zane we knew and loved. To me, the incident does not reflect Zane's character. Zane is a kind and gentle person. I don't believe the shootings would have happened if Zane had been in his right mind.
7. Mike Floyd recently asked Josh to handle his and Zane's burial rites. He asked Josh to take their ashes and spread them in a designated location.

I declare under penalty of perjury that the foregoing is true and correct, and that this declaration was executed on April 26, 2021 in Amarillo, Texas.

  
Randy Dale Floyd

### **Declaration of Aubra Hall-Smithson**

I, Aubra Hall-Smithson, hereby declare as follows:

1. My name is Aubra Hall-Smithson. I am forty-three years old and currently reside in Killen, Texas. My parents, Mike Hall and Tracy Delagardelle, both have remarried. My father lives in Las Vegas, Nevada, where I was raised. My mother lives in Denison, Texas. I have a brother named Robert "Jay" Hall who lives near me in Killeen.
2. I grew up in Las Vegas, Nevada. I met Zane Floyd through his friendship with my brother, Jay, around the time that I was attending elementary school. Zane was at our home on almost a daily basis when we were growing up, and he seemed more like a family member than a friend.
3. Zane was a happy person and tried to make people laugh when we were kids. He treated me like his little sister and was very protective of me. Zane also accompanied me to my high school prom. Zane was always a gentleman and made me feel safe.
4. When Zane came home from military, it seemed like his whole personality changed. He was unhappy, more introverted, did not joke around like he did when we were growing up, and his overall demeanor was sober and serious. Zane was less joyful and was not the same bubbly person that he was prior to his military service.
5. Zane was very dissatisfied with himself when he came home. He was not able to find a good job and had to move back into his parents' home. Zane saw himself as a failure for losing the prestige associated with being a Marine and having to struggle while working at odd jobs.
6. Zane came home with an odd fixation on guns. He was proud of being the youngest weapons trainer at Camp Pendleton, in San Diego, and spoke about guns all the time. During a New Year's Eve gathering in 1998, just months after he came home from the Marines, I recall Zane speaking about guns with my late uncle Danny Hall for several hours. I found Zane's fascination with guns to be very strange because he never talked about guns prior to his military service.
7. Zane discussed some of the things he went through at Guantanamo Bay with my brother and dad. I heard much of these details secondhand. It was clear to me that Zane experienced traumatic events during his tour in Cuba and he never recovered afterwards.
8. Zane said that he hated Gitmo and looked forward to leaving throughout his deployment.
9. I had a chance to see the news footage of Zane being arrested at the Albertson's following the incident and he did not look like anything like himself. In fact, I had to look twice to make certain it was Zane. Eventually, I was able to confirm it was Zane, but he had a distant and empty expression on his face like he was not there. I never saw Zane look this way and it was shocking.

10. Zane's actions were all surreal to me because it was totally out of character. He was a good person who did not engage in violence.
11. I began visiting Zane within the first few days of his arrest. Zane was still out of it and seemed like a Zombie. When he eventually was able to communicate, he was very remorseful. He did not know why he did what he did, and he had little memory of what happened. Zane was deeply regretful and felt great sorrow for the victims and their families.
12. I believe Zane's life should be spare because this was the worst thing Zane had ever done in a life that was otherwise peaceful, loving, and free of any violence. Although his actions on the day of the incident have come to define his character in news, those of us who know Zane best understand that his life has so many more positive dimensions.

I declare under penalty of perjury that the foregoing is true and correct, and that this declaration was executed on April 23, 2021 in Killeen, Texas.

  
Aubra Hall-Smithson

### **Declaration of Robert "Jay" John Hall**

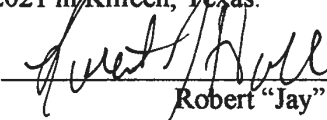
I, Robert "Jay" John Hall, hereby declare as follows:

1. My name is Robert "Jay" John Hall. I am forty-five years old and currently reside in Killeen, Texas. My parents, Mike Hall and Tracey Delagardelle, both have remarried. My father lives in Las Vegas, Nevada, where I was raised. My mother lives in Denison, Texas. I have a sister named Aubra who lives near me in Killeen.
2. I grew up in Las Vegas, Nevada. I met Zane Floyd around the age of 11 and we became best friends.
3. Zane and I met while attending Hyde Park Junior High School. We both also attended Faith Lutheran, Cashman, and Clark High Schools. Zane and I spent more time with one another than anyone else. We also spent a lot of time at each other's homes.
4. Zane was socially awkward. When we first met in the sixth grade, Zane often sat at the back of the class and cracked jokes and did whatever he could to make people laugh. Most of his jokes were self-deprecating and at his own expense. Many of the kids in the class laughed, but Zane did not seem to realize that they were laughing at him and not with him.
5. As a result of this behavior, many of the kids in school thought Zane was weird, and he was bullied. I recall that kids sometimes waited for Zane outside after school. I often had to walk Zane home to make sure no one picked on him or beat him up. I transferred to another school after a few months and Zane did not have anyone to protect him on his walks home.
6. Zane was a good guy, he was not a troublemaker, and liked to help people.
7. Zane did not have many friends growing up nor did he have many girlfriends. Whenever I was not around Zane, he spent most of his time alone.
8. Zane's parents—Mike and Valerie Floyd—drank a lot of alcohol around us. Valerie's drinking intensified during social gatherings and she often passed out before the evenings were over. She would also become verbally abusive to Zane when she drank too much.
9. When Zane was about 14 or 15 years old, Mike Floyd allowed us to drink with him. On one occasion, we all got drunk and Mike started talking trash about Zane living under his roof and having to follow his rules. Without warning, Mike punched Zane in the jaw and Zane fell back and started crying. Mike also controlled Zane by using intimidation.

10. Mike was a harsh disciplinarian. I recall one instance where Zane accidentally lost season tickets that Mike had purchased for "Wet N' Wild" water park. Mike screamed at Zane and then picked him up by his hair and threw him against the window of the car.
11. Zane's grandfather was Wayne Hodson. Mr. Hodson was hard on Zane and he favored his other grandchildren.
12. Zane was drinking a lot and his life did not seem to have a direction at the time he decided to join the marines. I was surprised by Zane's decision to join the military and especially surprised with his decision to join the Marines of all branches. Zane did not seem like the "Marine" type.
13. At some point Zane was stationed at Guantanamo Bay, Cuba. Zane talked to me about his experiences there. Zane said he saw people blown up in landmine fields between the Cuban and American military bases.
14. Zane also talked about bayonetting a Cuban civilian who ran up to his company. Zane said he had no choice to use his bayonet because he did not understand what the civilian was saying, and Zane believed he may have been a hostile.
15. Zane also spoke about the refugee duties he was assigned. The Cubans and Haitians were trying to flee their desperate circumstances, but Zane and his fellow troops had to round them up into detainment camps. Zane wanted to help them but could not, and Zane felt completely powerless.
16. Zane hated Gitmo and could not wait to be reassigned back to San Diego.
17. When Zane came home from military it seemed like his whole personality had changed. He was unhappy, more introverted, and stopped joking around. Zane's overall demeanor was somber and serious. Zane was less joyful and was not the same bubbly person that he was prior to his military service.
18. Zane seemed depressed and was very unhappy with himself when he came home. He was not able to find a good job and had to move back into his parents' home. Zane saw himself as a failure for losing the prestige associated with being a Marine and for having to struggle working at odd jobs.
19. Zane also returned from the military with an odd fixation on guns, talking about them all the time. I recall Zane speaking about guns for hours with my late uncle Danny Hall during a New Year's Eve gathering in 1998 just months after Zane returned home. I found Zane's gun fixation to be very strange because he never talked about guns prior to his military service.

20. I saw the news footage of Zane being arrested at the Albertson's. Zane did not look like himself. He had a distant and empty expression on his face like he was not there. I had never seen Zane in such a state.
21. I was shocked by the crime because it was totally out of character for Zane. Zane led a life free of violence until this episode.
22. I began visiting Zane a few months after his arrest. He was very remorseful and regretful about what he did from our first conversation. He did not know why he did what he did and had virtually no memory of what happened.

I declare under penalty of perjury that the foregoing is true and correct, and that this declaration was executed on April \_\_, 2021 in Killeen, Texas.

  
Robert "Jay" John Hall

### **Declaration of Tracy Delagardelle**

I, Tracy Delagardelle, hereby declare as follows:

1. My name is Tracy Delagardelle. I am sixty-three years old and currently reside in Grayson County, Texas. I am Robert "Jay" Hall's mother. Mike Hall, Jay's father, is my former husband. Mike and I also have a daughter named Aubra. We all lived in Las Vegas, Nevada.
2. Jay and Zane Floyd were friends since around the sixth grade. The two were inseparable until Zane went into the military. Zane was an only child and liked to spend time at our house because Jay and Aubra acted as substitute siblings. Zane became a de facto member of our family.
3. Zane was a good kid. He was well-behaved, very polite, never loud, and did not talk back or use profanity. Zane was not mean-spirited, nor did he bully other children. I enjoyed having Zane around our home; he was funny and quirky. Zane was so trusted by my husband and I that we allowed him to take our daughter, Aubra, to her Jr. High school prom. Zane was always respectful and treated everyone like a gentleman.
4. I knew Zane was hyperactive and had a short attention span. I recall that Zane received medication to help him control this.
5. Mike and I became friends with Mike and Valerie Floyd because our sons were so close. Mike and Valerie liked to drink.
6. Jay told me that he witnessed domestic violence issues in Zane's home.
7. After Zane went into the military, I lost touch with him. And I do not recall having many interactions with Zane when he came home from the military. Nonetheless, I believe it must have had an impact on him based on the experiences I had as a military wife. My former husband Mike was a completely changed person after his experience in the Marines.
8. I watched the news coverage of the shootings and found that Zane was unrecognizable after his arrest. I only knew it was Zane because his name appeared on the screen. I had to look at the new coverage for a while before I was able to tell it was really Zane. His head was shaven, which was unusual, and his face looked distant and empty. It was clear to me that Zane was not all there.
9. My family started visiting Zane regularly within the first couple days of his arrest. At first, Zane was not very coherent. It took about a week or more before Zane seemed more like himself. Nonetheless, Zane took responsibility for his actions and was very remorseful from the start.



10. I am a very conservative person and have always supported the death penalty. However, Zane was not someone I would have thought would have been capable of this kind of crime. He was a good kid who never showed any sort of violent personality or behaviors. I think the circumstances leading up to that point IE: Childhood trauma and Military experiences combined with the alcohol and drugs created a mental break. Zane also took responsibility for his crime and showed sincere remorse from the start.

I declare under penalty of perjury that the foregoing is true and correct and that this declaration was executed on April 22, 2021 in Denison, Texas.

  
Tracy Delagardelle

### **Declaration of James Cobis**

I, James Cobis, hereby declare as follows:

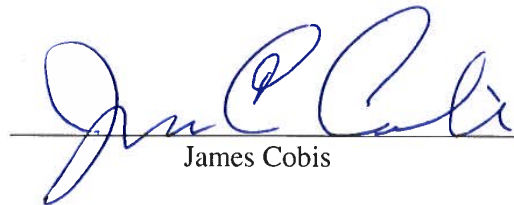
1. I am the ex-husband of Valerie Hudson who is Zane Floyd's mother. I am also the biological father of Zane Floyd. Valerie became pregnant with Zane during the end of our marriage. I have never met Zane. I am 73 years old and I currently reside in Bisbee, Arizona.
2. Valerie and I lived together for three years in what I can only call a "rocky" relationship. The main issues in our troubled relationship was Valerie's overindulgence in alcohol and other substances; her infidelities with other men; and her intent on having children despite our agreement not to have children.
3. I met Valerie in Kodiak, Alaska at a nightclub in 1970 not long after I relocated there. Although I was not aware at the time, Valerie suffered from a severe addiction to alcohol.
4. Valerie went out drinking four to five nights a week during our marriage, and she usually drank at bars that stayed open 24 hours a day. Valerie drank during the night into the morning, while I was at work, and she usually ran up huge tabs that she could not pay. It was not uncommon for bar owners to give me her tabs, which often came out to a few hundred dollars each week. Valerie and I struggled financially during the early years of our marriage. Valerie's addiction to alcohol placed a great burden on our finances.
5. I was not a complete angel in those days myself because I partied, used drugs, and also drank at times. However, my life never became unmanageable like Valerie's. I was always employed and made enough money to support the two of us. I saw to it that all of the bills were paid and we had everything that we needed. Valerie on the other hand was too deeply affected by her addictions and I knew that I could not depend on her. Valerie was not able to hold down jobs and frequently unemployed because she was often fired after showing up to work intoxicated.
6. Valerie and I had a son in 1973, Francisco, prior to Zane's birth. During her pregnancy with Francisco, Valerie drank and abused substances. The baby was born with health problems and ultimately died of SIDS (Sudden Infant Death Syndrome). The loss threw Valerie into a deep depression and her drinking became more severe than it had been previously. To make things worse, Valerie developed an addiction for Valium.
7. Valerie was involved in illegal drug transactions. I recall receiving many calls from Valerie in the middle of the night where she asked me for money to finance drug deals. I always told Valerie that I could not get involved and hung up the phone on

her.

8. My relationship with Valerie became toxic and we were about to split up when Zane was conceived in Kodiak. I did not want children and was upset with Valerie for getting pregnant again. Valerie was compulsive when it came to wanting a baby. I could understand how Valerie got pregnant by accident the first time, but when she conceived the second time with Zane, I realized it was more like a "fix" to her than anything.
9. During the early months of her pregnancy, Valerie continued drinking, smoking cigarettes and marijuana, and abusing cocaine and possibly other drugs.
10. Valerie and I split about two months into her pregnancy with Zane. Valerie moved out of my place and into a boyfriend's home. This person was a drinking buddy of Valerie's named Ken. Valerie eventually left Kodiak and returned to Colorado to live on her family's ranch in Colorado.
11. Mutual friends reported to me that Valerie continued abusing drugs and other substances throughout her pregnancy with Zane. Another mutual friend of Valerie and mine from Kodiak went to Colorado after Zane was born. She told me that while she was there, she saw Zane, who at the time was a little baby, alone in the backseat of a Volkswagen that was parked outside of a bar. Valerie was inside the bar drinking.
12. Although I no longer had contact with Valerie, I agreed to pay child support. Zane and I never made contact although I was open to the possibility.
13. Valerie's immediate family were alcoholics. Her parents were heavy whiskey drinkers and drank daily. I would describe them as functional alcoholics. Many other members of Valerie's nuclear and extended family also suffered from alcohol addictions as well. I had several opportunities to witness the drinking habits of Valerie's family because I spent many nights on the family's ranch. I recalled attending events at the home of Valerie's parents where her mom would sit in a room drinking whiskey for hours behind closed doors, and then would barely be able to walk out of the room to greet guests.
14. Alcoholism was a problem in my family as well. My dad was a drunk, along with his brothers and first cousins. Both of my younger sisters suffered from this disease.
15. I struggled with alcohol and marijuana abuse when I was a young man. When I was in the Navy, my drinking became a problem. I ultimately received a medical discharge under honorable conditions and like Zane, was told not to reenlist.
16. Now that I am older and much wiser, if I had it all to do over again I would never

have gotten involved with a woman like Valerie to begin with. Although Valerie was a nice person and had some redeeming qualities, she lived a lifestyle that was completely incompatible with mine.

I declare under penalty of perjury that the foregoing is true and correct and that this declaration was executed on April 19, 2021 in Bisbee, Arizona.

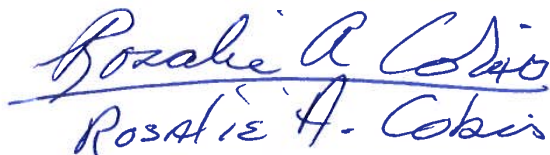


James Cobis

DECLARATION OF Rosalie Ann Cobis

1. I am the sister of James Cobis Jr. I moved to Kodiak Ak. in early 1971. I lived on Noch. dr. next door to my brother and his girlfriend, Valerie Hodson.
2. We were all in our 20's and loved to drink and smoke pot and dance at the Beachcombers Bar. It became obvious after my first winter of observing my new sister that she was on another level with alcohol and drugs.
3. We lived without running water or electricity, life was challenging. We learned to balance our work and play, unfortunately Valerie never could. She had trouble keeping a job for long.
4. In 1973 Valerie became pregnant and I was sure this would be her ticket out of overindulgence but it didn't work that way. She continued to drink and drug during her pregnancy. Francisco was only with us for a few months and then died of SIDS (sudden infant death syndrome)
5. My brother was not happy and he and Valerie were on the verge of breaking up when she announced she was pregnant again.
6. After watching Valerie drink and do drugs for a few more months he asked for a divorce and Valerie moved in with her friend Ken.
7. Sometime after she moved to Colorado to stay with her parents and have the child.
8. If Valerie continued to live as she had in Kodiak then there probably is no doubt that Zane was damaged in many ways. He never had a chance to be normal.

I DECLARE UNDER PENALTY OF PERJURY THAT THE FOREGOING IS TRUE AND CORRECT AND THAT THIS DECLARATION WAS EXICUTED ON APRIL 18TH 2021 IN BISBEE AZ .

  
Rosalie A. Cobis

### **Declaration of Michael Eugene Hall**

I, Michael Eugene Hall, hereby declare as follows:

1. My name is Michael Eugene Hall. I am sixty-three years old and currently reside in Clark County, Nevada. I am Robert "Jay" Hall's father. Jay's mother is my former wife, Tracey Delagardelle.
2. Jay and Zane Floyd were best friends growing up in Las Vegas, Nevada. I first met Zane when he was about 12 or 13 years old when Jay and Zane were attending the same school. Zane was like a member of our family and Jay was like a member of Zane's family.
3. Zane was a sweet kid, polite, quiet, and never rude in my presence. He was a pleasure to be around and our family loved Zane.
4. Zane was socially awkward when he was a kid, was not the best athlete, and was not as popular as Jay. It also appeared to me that Zane lacked self-confidence.
5. Tracey and I befriended Zane's parents, Valerie and Mike. We used to attend social events at the Floyd's home. Mike and I both worked at a test site in Nevada.
6. I believe that Mike had a drinking problem and sometimes became aggressive when he drank too much. On these occasions, I would go over and retrieve Zane and Valerie and bring to them our house so they could have a break from Mike.
7. Zane knew I was a former Marine and we spoke about Zane's plans to enlist. Zane was extremely excited about enlisting and said he looked forward to the experience. Although we never directly spoke about the matter, I believed that Zane's motivation to enlist was an attempt to prove something to himself and others.
8. While my time in the Marines was a positive experience, I know that some troops undergo trauma during their service. When Zane returned from the military, he discussed with me some of the bad things he had experienced while stationed in Guantanamo Bay. Zane seemed to have been negatively impacted by what he saw over there.
9. I recall the day of the shooting, my commute to work was interrupted due to an active shooter at the local Albertson. I had no idea Zane was the shooter until I heard about it from my then wife when she called me at work.
10. Zane was unrecognizable in the media coverage following his arrest at the scene. He had an empty look on his face, like he was out of it, and he looked like a different person.

11. I was completely shocked and caught off guard when I learned of the shooting. It was totally out of character of the Zane I knew.
12. I visited Zane at the county jail on several occasions during the first few weeks after his arrest. Zane had difficulty effectively communicating for the first few days and he seemed like a zombie. I would speak to Zane, but it seemed like Zane did not comprehend what I was saying. He spoke very slowly and incoherently.
13. It was after several days or a week or two that Zane was able to engage in conversation. Zane's first words expressed his extreme remorse over what happened, and Zane took responsibility for what he did. Zane said he did not know why he did what he did and said the entire episode did not seem real. Zane experienced a blackout of the events and could not remember most of what had happened.
14. I told Zane that I would be supportive of him as much as I could. But I also told him that I was supportive of the death penalty and if he was sentenced to death, I would support that outcome. Since that time, I have learned more about Zane's life as I sat through the trial. I now feel that Zane was set up to fail by the adult family members closest to him, including his mother's drinking while carrying Zane; the domestic abuse at home; and Zane's overbearing grandfather. This was also Zane's one and only criminal act. And this act was out of character for Zane. I still believe in the death penalty, but I do not believe it is justified in Zane's case.

I declare under penalty of perjury that the foregoing is true and correct and that this declaration was executed on 13th day of April, 2021 in Las Vegas, Nevada.

  
\_\_\_\_\_  
Michael Eugene Hall

### **Declaration of Michael Eoff**

I, Michael Eoff, hereby declare as follows:

1. My name is Michael Eoff. I am seventy-six years old and currently reside in Clark County, Nevada. I was Zane Floyd's Western Little League baseball coach when Zane was 13 and 15 years old.
2. I remember Zane because I used to pick him up from his house and drive him to practice and then back home. Zane loved to talk baseball during these car trips. He was a good and respectful kid.
3. Zane really liked baseball. He showed up at every game. Zane's position was catcher, which is an important position on the team.
4. While Zane was a typical 13 year old player, and not one of the best hitters. He matured, tried hard, and greatly improved when he played as a 15 year old. Zane greatly assisted in getting the team to first place in the league that year. And because Zane was older than the other boys, he was the team leader. Zane got along well with his teammates.
5. Zane's father did not attend any of the games during Zane's first season. When I coached Zane the second time, Zane's father attended every game, sitting behind the dugout screaming at Zane during each game. Zane was emotionally impacted by this. I asked Zane's father to stop yelling at Zane and to move to another area, but he ignored my request. This was the first time I had trouble with a little league parent while coaching. I understood that Zane's father was a skilled baseball player in his youth and that he had unreasonable expectations for Zane to live up to.
6. I met Zane's mother and she seemed genuinely nice.
7. I saw Zane angry only once, when he was 13 years old. I brought in another batter to replace Zane and he used some profanities and threw his bat. I was surprised by his behavior because it was so out of character. Zane's mother explained that Zane was experiencing side effects from the medication he was taking which caused mood swings.
8. I heard about the shootings that morning on the television. I did not recognize Zane as the boy I had coached before and I wondered what happened in his life between the last time I coached him and the day of the incident. I learned during the trial and news coverage that Zane was a veteran of the Marine Corp. I am a Marine Corp veteran myself and I'm aware of the struggles that some of my fellow servicemen experienced just from boot camp training. The training was a hellish experience that broke individuals down and rebuilt them. The training was sometimes just as bad if not worse



than deployment depending where you were stationed.

I declare under penalty of perjury that the foregoing is true and correct and that this declaration was executed on 15, 2021 in Las Vegas, Nevada.

April

MCE

Michael C Eoff  
Michael Eoff

### **Declaration of Natalie Novick Brown, Ph.D.**

I, Natalie Novick Brown, declare under penalty of perjury that the following is true and correct:

#### **A. BACKGROUND AND QUALIFICATIONS**

1. I have been a licensed psychologist in the State of Washington for approximately 25 years. I also am a licensed psychologist in Florida and Alaska.
2. I completed a Bachelor of Arts Degree in Sociology and Psychology from the University of California at Los Angeles (UCLA). In 1994, I obtained a Ph.D. in Clinical Psychology from the University of Washington in Seattle, which included an internship in forensic psychology. I then completed a postdoctoral fellowship in fetal alcohol spectrum disorders (FASD) at the University of Washington, which involved participation in research on the adverse developmental outcomes in FASD (called “secondary disabilities”). My fellowship advisor Ann Streissguth, Ph.D., was a pioneer researcher in the FASD field. Along with Dr. Kenneth Jones and others, Dr. Streissguth was part of the original medical team that first identified fetal alcohol syndrome (FAS) in the United States and published that discovery in *The Lancet* in 1973. Dr. Streissguth subsequently became the first psychologist in the nation to study the long-range developmental and adaptive behavior of children with FASD in large-scale longitudinal studies that spanned more than 30 years.
3. Since my formal training in the early 1990s, my private practice in psychology has involved a specialization in FASD. I have treated and evaluated several hundred people with FASD in clinical and forensic settings. In the forensic context alone, I have conducted over 450 FASD evaluations involving defendants charged with a range of offenses, including capital murder. I have conducted over 60 post-conviction FASD evaluations at the state and federal levels. I have conducted FASD assessments at the request of both defense and government attorneys. The latter included evaluations referred by the court and by Developmental Disabilities Administration in Washington State, and evaluations of crime victims with FASD referred by state attorneys general.
4. I am a Clinical Assistant Professor (courtesy staff) in the University of Washington’s School of Medicine, Department of Psychiatry and Behavioral Medicine. In this capacity, I consult with staff at the University of Washington’s Fetal Alcohol and Drug Unit regarding criminal behavior in persons with FASD, train judicial staff on FASD in King County, Washington, and conduct pro bono FASD evaluations of crime victims for the Seattle Police Department.
5. I have published over 30 peer-reviewed articles and book chapters on FASD and presented on FASD at many state, national, and international conferences. I helped author the American Bar Association’s 2012 Resolution on FASD. Currently, I am editing a book for Springer on evaluating FASD in the forensic setting, which will be published in 2021. I have

been recognized as an FASD expert in approximately 20 state and federal jurisdictions and have testified in numerous capital murder trials and habeas hearings wherein an FASD diagnosis was found to matter to the court. For example, in *Williams v. Stirling*, the Fourth Circuit Court of Appeals ruled FASD was a “cause-and-effect” diagnosis that had direct bearing on offense conduct.

6. A CV that more fully describes my qualifications is attached as Appendix A to this declaration.

## **B. REFERRAL**

7. I evaluated Zane Floyd in 2006 at the request of habeas counsel at the time and diagnosed him with a fetal alcohol spectrum disorder, hereinafter referred to as “FASD” (see Declaration dated 10/17/06).
8. I have been asked by Zane Floyd’s current counsel, Office of the Federal Public Defender, District of Nevada, to evaluate Mr. Floyd’s adaptive functioning and address the following consultative questions:
  - a. Is Zane Floyd’s adaptive and functional history consistent or inconsistent with the mental defect associated with FASD, which in DSM-5 is diagnosed generally as Other Specified Neurodevelopmental Disorder (Code 315.8) and specifically as *Neurodevelopmental Disorder Associated with Prenatal Alcohol Exposure (ND-PAE)*?
  - b. How does Mr. Floyd’s ND-PAE/FASD compare to intellectual disability (ID) and attention-deficit/hyperactivity disorder (ADHD)?
  - c. Did ND-PAE/FASD make it likely Mr. Floyd had an “immature brain” at the time of the offense given he was 23 years old, and if so, how would that have affected his functioning?

## **C. SUMMARY OF OPINION**

9. Based upon my psychological evaluation of Mr. Floyd, I hold the following opinions to a reasonable level of psychological certainty:
  - a. **Zane Floyd’s adaptive/functional history is consistent with the mental defect associated with FASD, which in DSM-5 is diagnosed generally as Other Specified Neurodevelopmental Disorder (Code 315.8) and specifically as *Neurodevelopmental Disorder Associated with Prenatal Alcohol Exposure (ND-PAE)*.**

- b. **Mr. Floyd's ND-PAE/FASD is a brain-based, congenital, lifelong, impactful disorder deserving of the rubric "ID Equivalence." Regardless of how severity is measured, Mr. Floyd's FASD is similar in severity to ID but substantially more severe than ADHD, with broad ramifications that have affected all important functional domains in his life. Unlike ADHD, Mr. Floyd's ND-PAE/FASD is a cause-and-effect condition that not only explains his attention deficits, impulsivity, and hyperactive behavior during childhood but explains *all* of his behavior – across his entire lifespan.**
- c. **Given that the normally-developing "adolescent brain" does not have mature executive control capacity until at least age 25 and brain development in young adults with FASD lags many years behind rates seen in neurotypical age peers, it is likely Mr. Floyd's brain was not fully developed at the time of the offense due to his ND-PAE/FASD, which would have had an additive and cumulative effect on the brain damage he was born with.**

#### **D. PROCEDURES**

10. Collateral interviews were conducted by telephone with *Carolyn Smith* (family friend and social worker), *Jay Hall* (friend), and *Mike Hall* (father of Jay Hall), each of whom was asked to rate Mr. Floyd's behavior on three standardized measures:
- Behavior Rating Inventory of Executive Function (BRIEF),
  - Vineland Adaptive Behavior Scales – Third Edition (Vineland-3), and
  - Fetal Alcohol Behavior Scale (FABS).
11. Record review consisted of prior mental health evaluation reports/declarations (Drs. Maria Cardle, 1989; David Schmidt, 2000; Thomas Kinsora, 2000; Jakob Camp, 2000; Frank Paul, 2000; Edward Dougherty, 2000; Norton Roitman, 2000; Natalie Novick Brown, 2006; Jonathan Mack, 2006; Jonathan Lipman, 2006); expert penalty phase testimony (Drs. Dougherty and Roitman); penalty phase testimony and declaration of Robert J. Hall; declaration of Robert "Jay" Hall; 9<sup>th</sup> Circuit Opinion; and NOFAS Amicus.
12. I consulted with Neuropsychologist Paul Connor, PhD (formally trained in FASD at the University of Washington Fetal Alcohol and Drug Unit) regarding test result patterns. At my request, Dr. Connor produced two graphs of Mr. Floyd's neuropsychological test results (see later in this declaration).
13. I also consulted with Stephen Greenspan, PhD, regarding the comparison of FASD with ID and ADHD.

## E. BRIEF SUMMARY OF FASD

14. Human behavior is a direct reflection of the anatomy and physiology of the central nervous system (CNS).<sup>1</sup> Consequently, behavior is disrupted to the extent anatomy and physiology of the CNS are disrupted.

A fetus is susceptible to damage from alcohol exposure throughout pregnancy. The first few weeks of pregnancy when brain cells are developing and forming brain structures are especially vulnerable.<sup>2</sup> Within minutes after a pregnant woman consumes alcohol, the substance crosses the placenta and blood-brain barrier, and the blood alcohol level in the fetus equals that of the mother.<sup>3</sup> Prenatal alcohol exposure typically causes widespread structural damage throughout the brain.<sup>4, 5, 6</sup> Even mild structural brain damage that is difficult to see in standard brain scans significantly impairs brain *function*.<sup>7</sup> Research has found there is no “safe” time, amount, or type of alcohol consumption during pregnancy.<sup>8, 9</sup>

Beyond brain damage, prenatal alcohol exposure also may cause defects in cardiac, skeletal, renal, visual, auditory, immune, and other systems.<sup>10</sup>

Alcohol exposure during pregnancy is a major known cause of birth defects, neurodevelopmental impairments, and learning problems in the United States.<sup>11</sup>

“Fetal alcohol spectrum disorder(s) (FASD)” is a non-diagnostic umbrella term that encompasses all of the medical conditions caused by prenatal alcohol exposure that were described in diagnostic guidelines published in 1996 by the Institute of Medicine (IOM).<sup>12</sup> Four medical diagnoses under the FASD umbrella were listed: (a) fetal alcohol syndrome (FAS), (b) partial FAS (pFAS), (c) alcohol related neurodevelopmental disorder (ARND),

<sup>1</sup> Garrett, B. (2015). *Brain and behavior: An introduction to biological psychology*. 4th Ed. New York: Sage Publications.

<sup>2</sup> Whitty, J.E., & Sokol, R.J. (1996). Alcohol teratogenicity in humans: critical period, thresholds, specificity and vulnerability. In Spohr, H.L. & Steinhausen, H.C., Eds. *Alcohol, pregnancy and the developing child: Fetal Alcohol Syndrome*. Cambridge, England: Cambridge University Press, 3–13.

<sup>3</sup> Grant, T.M., Novick Brown, N., Dubovsky, D., Sparrow, J., & Ries, R. (2013). *Journal of Addiction Medicine*, 7, 87-95.

<sup>4</sup> Nunez, S.C., Roussotte, F., & Sowell, E.R. (2011). Focus on: Structural and functional brain abnormalities in fetal alcohol spectrum disorders. *Alcohol Research and Health*, 34, 121-132.

<sup>5</sup> Moore, E.M., Migliorini, R., Infante, M. A., & Riley, E.P. (2014). Fetal alcohol spectrum disorders: Recent neuroimaging findings. *Current Developmental Disorders Reports*, 1, 161-172.

<sup>6</sup> Ware, A.L., Infante, M.A., O'Brien, J.W., Tapert, S.F., Jones, K.L., Riley, E.P., & Mattson, S.N. (2015). An fMRI study of behavioral response inhibition in adolescents with and without histories of heavy prenatal alcohol exposure. *Behavioral Brain Research*, 278, 137-146.

<sup>7</sup> [https://www.niaaa.nih.gov/sites/default/files/publications/ICCFASD/NCJFCJ\\_FASD\\_Guide\\_Final-12012016.pdf](https://www.niaaa.nih.gov/sites/default/files/publications/ICCFASD/NCJFCJ_FASD_Guide_Final-12012016.pdf), accessed 1/15/20

<sup>8</sup> Centers for Disease Control and Prevention. (2005). Notice to readers: Surgeon General's advisory on alcohol use in pregnancy. *Morbidity Mortal Weekly Report*, 54, 229.

<sup>9</sup> [https://www.niaaa.nih.gov/sites/default/files/publications/ICCFASD/NCJFCJ\\_FASD\\_Guide\\_Final-12012016.pdf](https://www.niaaa.nih.gov/sites/default/files/publications/ICCFASD/NCJFCJ_FASD_Guide_Final-12012016.pdf), accessed 1/15/20

<sup>10</sup> O'Leary, C.M., Nassar, N., Kurinczuk, J.J., de Klerk, N., Geelhoed, E., Elliott, E.J., & Bower, C. (2010). Prenatal alcohol exposure and risk of birth defects. *Pediatrics*, 126, e843-850.

<sup>11</sup> Stratton, K., Howe, C., & Battaglia, F. (Eds.) (1996). Fetal alcohol syndrome: Diagnosis, epidemiology, prevention, and treatment. *The Institute of Medicine Report*. Washington, DC: National Academy Press.

<sup>12</sup> Stratton, K., Howe, C., & Battaglia, F. (Eds.) (1996). Fetal alcohol syndrome: Diagnosis, epidemiology, prevention, and treatment. *The Institute of Medicine Report*. Washington, DC: National Academy Press.

and (d) alcohol related birth defects (ARBD).<sup>13</sup> Together, these four medical diagnoses involve a broad continuum of physical, mental, behavioral, and learning deficits that can result from prenatal alcohol exposure. Prior to the IOM publication in 1996, ARND had been referred to as ‘fetal alcohol effect’ (FAE). In 2004, a consensus of governmental, research, and advocacy organizations accepted “FASD” as a collective term that included the more specific medical diagnoses described in the 1996 IOM report on FAS.<sup>14</sup> Over the years, the term ‘FASD’ also has come to include diagnostic terms in the clinical setting, such as static encephalopathy-alcohol exposed (SE-AE), which is equivalent to ARND.<sup>15</sup> Since 2013, the term ‘FASD’ also includes the specific DSM-5 diagnosis for the CNS dysfunction due to prenatal alcohol exposure, *neurodevelopmental disorder associated with prenatal alcohol exposure (ND-PAE)*.

FAS involves three diagnostic criteria: characteristic facial abnormalities, growth deficiency, and CNS abnormality but does not require evidence of prenatal alcohol exposure because the full spectrum of facial abnormalities in FAS is pathognomonic for prenatal alcohol exposure. Partial FAS requires one or two facial abnormalities, CNS abnormality, and evidence of prenatal alcohol exposure. ARND and SE-AE simply require CNS abnormality and evidence of prenatal alcohol exposure. The CNS abnormality common to all of these medical conditions typically is measured *functionally* but also can be measured *neurologically* and *structurally*.

Importantly, research has found that regardless of diagnosis under the FASD umbrella, brain damage is the same.<sup>16</sup> That is, brain damage in ARND tends to be just as severe as in FAS.

Not every individual exposed to alcohol prenatally will have FASD. The primary determinants of clinically relevant fetal damage include quantity (amount of alcohol per occasion), frequency (how often a pregnant mother drinks), and timing (stage of pregnancy and whether there is drinking just as the fetus is developing a particular feature). Binge drinking and regular heavy drinking carry the greatest risk of severe problems,<sup>17, 18</sup> but even

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<sup>13</sup> Bertrand, J., Floyd, R.L., Weber, M.K., O’Connor, M., Riley, E.P., Johnson, K.A., Cohen, D.E., NTFFAS/E. (2004). Fetal alcohol syndrome: Guidelines for referral and diagnosis. Atlanta, GA: Centers for Disease Control and Prevention. [http://www.cdc.gov/ncbddd/fasd/documents/FAS\\_guidelines\\_accessible.pdf](http://www.cdc.gov/ncbddd/fasd/documents/FAS_guidelines_accessible.pdf), accessed 1/15/20

<sup>14</sup> Warren, K.R., & Hewitt, B.G. (2009). Fetal alcohol spectrum disorders: When science, medicine, public policy, and laws collide. *Developmental Disabilities Research Reviews*, 15, 170-175.

<sup>15</sup> Astley, S.J. (2004). *Diagnostic guide for Fetal Alcohol Spectrum Disorders: The 4-digit diagnostic code*, 3<sup>rd</sup> Ed. Seattle: FAS Diagnostic and Prevention Network.

<sup>16</sup> Vaurio, L., Riley, E.P., & Mattson, S.N. (2011). Neuropsychological comparison of children with heavy prenatal alcohol exposure and an IQ-matched comparison group. *Journal of the International Neuropsychological Society*, 17, 463-473.

<sup>17</sup> Maier S.E., & West, J.R. (2001). Drinking patterns and alcohol-related birth defects. *Alcohol Research and Health*, 25, 168-169.

<sup>18</sup> May, P.A., Blankenship, J., Marais, A-S., Gossage, J.P., Kalberg, W.O., Joubert, B., Cloete, M., Barnard, R., De Vries, M., Hasken, J., Robinson, L. K., Adnams, C. M., Buckley, D., Manning, M., Parry, C.D.H., Hoyme, H. E., Tabachnick, B., & Seedat, S. (2013). Maternal alcohol consumption producing fetal alcohol spectrum disorders (FASD): Quantity, frequency, and timing of drinking. *Drug and Alcohol Dependence*, 502-512.

lesser amounts can cause FASD.<sup>19, 20, 21, 22</sup> Maternal characteristics interact with and affect outcomes, such as the mother's age, genetic make-up, number of previous pregnancies (i.e., younger siblings tend to be more affected than older siblings), overall health, diet and nutritional status, lack of prenatal care, adverse living conditions, and things such as stress, co-occurring diseases, mental health conditions, and concomitant use of tobacco and illicit drugs.<sup>23, 24, 25, 26</sup> Also important is the genetic composition of the fetus, which convey varying degrees of vulnerability or resilience.

FASD tends to be a hidden condition that is seldom diagnosed in childhood because most people in this population have ARND rather than FAS and consequently, no obvious physical abnormalities.<sup>27</sup> Such children *look* normal to casual observers but have varying degrees of neurocognitive damage that significantly impairs cognitive and adaptive functioning.<sup>28</sup>

The toxic effects of prenatal alcohol exposure appear to be widespread throughout the entire brain,<sup>29</sup> causing subtle but potent irregularities in brain structure that compromise brain function and directly impact cognition and behavior.<sup>30, 31</sup> Deficits in cognitive functioning often become evident in elementary school and ultimately impair adaptive behavior across the lifespan.<sup>32</sup>

Of the many possible cognitive impairments in FASD, executive dysfunction – a cardinal deficit – is the most serious because the executive system in the prefrontal cortex controls

<sup>19</sup> Hamilton, D.A., Barto, D., Rodriguez, C.I., Magcalas, C.M., Fink, B.C., Rice, J.P., Bird, C.W., Davies, S., & Savage, D. D. (2014). Effects of moderate prenatal ethanol exposure and age on social behavior, spatial response perseveration errors and motor behavior. *Behavioral Brain Research*, 269, 44-54.

<sup>20</sup> Carmichael Olson, H., Streissguth, A.P., Sampson, P.D., Barr, H.M., Bookstein, F.L., & Thiede, K. (1997). Association of prenatal alcohol exposure with behavioral and learning problems in early adolescence. *Journal of the American Academy of Child Adolescent Psychiatry*, 36, 1187-1194.

<sup>21</sup> Jacobson, S.W., Carr, L.G., Croxford, J., Sokol, R.J., Li, T-K, & Jacobson, J.L. (2006). Protective effects of the alcohol dehydrogenase-ADH1B allele in African American children exposed to alcohol during pregnancy. *Journal of Pediatrics*, 148, 37.

<sup>22</sup> Larkby, C.A., Goldschmidt, L., Hanusa, B.H., & Day, N.L. (2011). Prenatal alcohol exposure is associated with conduct disorder in adolescence: Findings from a birth cohort. *Journal of the American Academy of Child and Adolescent Psychiatry*, 50, 262-271.

<sup>23</sup> Jacobson, S. W., Jacobson, J. L., Sokol, R. J., Chiodo, L. M., & Corobana, R. (2004). Maternal age, alcohol abuse history, and quality of parenting as moderators of the effects of prenatal alcohol exposure on 7.5-year intellectual function. *Alcoholism: Clinical and Experimental Research*, 28(11), 1732-1745.

<sup>24</sup> Astley, S. J. (2010). Profiles of the first 1,400 patients receiving diagnostic evaluation for fetal alcohol spectrum disorders at the Washington State Fetal Alcohol Syndrome Diagnostic & Prevention Network. *Canadian Journal of Clinical Pharmacology*, 17, e132-e164.

<sup>25</sup> May, P. A., & Gossage, J. P. (2011). Maternal risk factors for fetal alcohol spectrum disorders: Not as simple as it might seem. *Alcohol Research and Health*, 34, 15-26.

<sup>26</sup> Jonsson, E., Salmon, A., & Warren, K. R. (2014). The international charter on prevention of fetal alcohol spectrum disorder. *Lancet Global Health*, 2, e135-137.

<sup>27</sup> <https://www.nofas.org/recognizing-fasd/>, accessed 1/15/20

<sup>28</sup> Chasnoff, I.J., Wells, A.M., Telford, E., Schmidt, C., & Messer, G. (2010). Neurodevelopmental functioning in children with FAS, pFAS, and ARND. *Journal of Developmental and Behavioral Pediatrics*, 31, 192-201.

<sup>29</sup> [https://www.niaaa.nih.gov/sites/default/files/publications/ICCFASD/NCJFCJ\\_FASD\\_Guide\\_Final-12012016.pdf](https://www.niaaa.nih.gov/sites/default/files/publications/ICCFASD/NCJFCJ_FASD_Guide_Final-12012016.pdf), accessed 2/2/20

<sup>30</sup> Nunez, S.C., Roussotte, F., & Sowell, E.R. (2011). Focus on: Structural and functional brain abnormalities in fetal alcohol spectrum disorders. *Alcohol Research and Health*, 34, 121-132.

<sup>31</sup> Moore, E.M., Migliorini, R., Infante, M.A., & Riley, E.P. (2014). Fetal alcohol spectrum disorders: Recent neuroimaging findings. *Current Developmental Disorders Reports*, 1, 161-172.

<sup>32</sup> Riley, E.P., & Vorhees, C.V. (1986). *Handbook of behavioral teratology*. New York: Plenum.

self-regulation, conscious decision-making, and everyday adaptive behavior.<sup>33, 34, 35</sup> Like the term “FASD,” “executive functioning” also is an umbrella term that includes a range of higher-order cognitive skills that integrate and coordinate numerous underlying processes in the brain, including sensory input, memory retrieval, considering options, foreseeing consequences and linking cause and effect, overriding and suppressing socially unacceptable responses, modifying emotions and urges to fit socially acceptable norms, and forming intentions and selecting actions.<sup>36</sup> Executive functioning is largely controlled in the prefrontal cortex and neural circuitry linking the prefrontal cortex to the limbic system, both of which have been found in the research to be particularly sensitive to the damaging effects of prenatal alcohol exposure.<sup>37</sup> Compounding this problem, prenatal alcohol exposure also creates hypersensitivity to stress via faulty neurological “hard-wiring” of the hypothalamic-pituitary-adrenal system (HPA axis), which causes *chronic overreaction to stressful events*.<sup>38</sup> However, because of executive function deficits, this population lacks the “top-down” moderating influence of a fully functioning prefrontal cortex. As a result, those with FASD are prone to act out their emotions, particularly in high stress situations that trigger overreaction in the limbic system. Because of executive dysfunction, those with FASD have considerable difficulty handling everyday stressors.

Review of the FASD literature has identified a typical *cognitive profile* in FASD,<sup>39, 40, 41, 42</sup> which involves (a) variable neuropsychological profiles (i.e., a mixture of relative strengths and weaknesses), often with significant discrepancies between IQ index scores,<sup>43, 44, 45</sup> and (b) a *generalized deficit in the processing and integration of complex information*.<sup>46, 47</sup> That is, the more complex a task or situation, the more impaired the processing and integration of

<sup>33</sup> Hosenbocus, S., & Chahal, R. (2012). A review of executive function deficits and pharmacological management in children and adolescents. *Journal of the Canadian Academy of Child and Adolescent Psychiatry*, 21, 223-229.

<sup>34</sup> Schonfeld, A.M., Paley, B., Frankel, F., & O'Connor, M.J. (2006). Executive functioning predicts social skills following prenatal alcohol exposure. *Child Neuropsychology*, 12, 439-452.

<sup>35</sup> Ware, A.L., Crocker, N., O'Brien, J.W., Deweese, B.N., Roesch, S.C., Coles, C.D.,...Mattson, S.N. (2012). Executive function predicts adaptive behavior in children with histories of heavy prenatal alcohol exposure and attention deficit/hyperactivity disorder. *Alcoholism: Clinical and Experimental Research*, 36, 1431-1441.

<sup>36</sup> Diamond, A. (2013). Executive functions. *Annual Review of Psychology*, 64, 135-168.

<sup>37</sup> Fryer, S.L., McGee, C.L., Matt, G.E., Riley, E.P., & Mattson, S.N. (2007). Evaluation of psychopathological conditions in children with heavy prenatal alcohol exposure. *Pediatrics*, 199, e733-e741.

<sup>38</sup> Keiver, K., Bertram, C.P., Orr, A.P., & Clarren, S. (2015). Salivary cortisol levels are elevated in the afternoon and at bedtime in children with prenatal alcohol exposure. *Alcohol*, 49, 79-87.

<sup>39</sup> Kodituwakku, P.W. (2009). Neurocognitive profile in children with fetal alcohol spectrum disorders. *Developmental Disabilities Research Review*, 15, 218-224.

<sup>40</sup> Mattson, S.N., Riley, E.P., Gramling, L., Delis, D.C., & Jones, K.L. (1997). Heavy prenatal alcohol exposure with or without physical features of fetal alcohol syndrome leads to IQ deficits. *Journal of Pediatrics*, 131, 718-721.

<sup>41</sup> Kodituwakku, P.W., Kalberg, W., & May, P.A. (2001). The effects of prenatal alcohol exposure on executive functioning. *Alcohol Research and Health*, 25, 192-198.

<sup>42</sup> Sampson, P.D., Streissguth, A.P., Bookstein, F.L., Little, R.E., Clarren, S.K., Dehaene, P., et al. (1997). Incidence of fetal alcohol syndrome and prevalence of alcohol-related neurodevelopmental disorder. *Teratology*, 56, 317-326.

<sup>43</sup> O'Malley, K.D. (2007). *ADHD and fetal alcohol spectrum disorders (FASD)*. New York: Nova.

<sup>44</sup> Aduabato, S.A., & Cohen, D.E. (2011). *Prenatal alcohol use and fetal alcohol spectrum disorders: Diagnosis, assessment and new directions in research and multimodal treatment*. New Jersey: Bentham Science Publishers Ltd.

<sup>45</sup> Olson, H.C., Feldman, J.J., Streissguth, A.P., Sampson, P.D., & Bookstein, F.L. (1998). Neuropsychological deficits in adolescents with fetal alcohol syndrome: Clinical findings. *Alcoholism: Clinical and Experimental Research*, 22, 1998-2012.

<sup>46</sup> Kodituwakku, P.W., Handmaker, N.S., Cutler, S.K., Weathersby, E.K., & Handmaker, S.D. (1995). Specific impairments in self-regulation in children exposed to alcohol prenatally. *Alcohol: Clinical and Experimental Research*, 19, 1558-1564.

<sup>47</sup> Kodituwakku, 2009, op. cit.



neurological information will be, particularly if there is time pressure, which adds an additional element of complexity.<sup>48</sup> Consequently, in novel social situations where behavior is not guided or structured by some external means, behavior in this population typically reflects *marked* impairment. In contrast, in routine situations that are well-practiced, automatic “motor memory” precludes the need for executive functioning. Importantly, because procedural motor memory developed through repetition governs actions rather than executive functioning,<sup>49</sup> this population tends to do best with familiar tasks where behavior has become routinized due to practice or in structured contexts with predictable rules and consequences and external guidance, both of which reduce the need for independent thinking and decision-making. This is why people with FASD learn best with “hands-on” practice.

Since the everyday world is a very complex place full of surprises, which increases the need for executive functioning, it is not surprising that a deficient *adaptive profile* is a universal finding in the FASD literature, regardless of IQ or particular diagnosis under the FASD umbrella.<sup>50</sup> Rather than IQ, it is higher-level executive functioning that most determines how information is processed and integrated in the brain and ultimately manifests as adaptive behavior. In fact, executive functioning in FASD directly predicts adaptive behavior.<sup>51, 52</sup> DSM-5 defines adaptive functioning as everyday behavior that meets developmental and sociocultural standards for personal independence and social responsibility.<sup>53</sup> More simply put, adaptive behavior is everyday behavior.

## F. COLLATERAL INTERVIEWS

[First names are used in this section to facilitate identification.]

15. **Robert J. Hall (“Jay”)** was interviewed telephonically for 2.0 hours on October 29, 2020. Jay said he and Zane met in early adolescence and were best friends throughout their teens and into their early 20s. They also lived together for three months in 1999: “I was always at Zane’s house in my teens. I’m about a year younger than he is. I was really his only friend. He had a girlfriend at the end of high school. She was two years younger than me. Zane really didn’t have any friends his age; they were all younger. My first memories of Zane around the time we started hanging out together were that he was a class clown, always making self-deprecating jokes to get the class to laugh. He would blurt out things in class, look at me and laugh. I think I felt sorry for him at first because when we first met, he was

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<sup>48</sup> Ibid.

<sup>49</sup> Ibid.

<sup>50</sup> Thomas, S.E., Kelly, S.J., Mattson, S.N., & Riley, E.P. (1998). Comparison of social abilities of children with fetal alcohol syndrome to those of children with similar IQ scores and normal controls. *Alcoholism: Clinical and Experimental Research*, 22, 528–533.

<sup>51</sup> Schonfeld, A.M., Paley, B., Frankel, F., & O’Connor, M.J. Executive functioning predicts social skills following prenatal alcohol exposure. *Child Neuropsychology*, 12, 439–452.

<sup>52</sup> Ware, A.L., Crocker, N., O’Brien, J.W., Dewese, B.N., Roesch, S.C., Coles, C.D.,...Mattson, S.N. (2012). Executive function predicts adaptive behavior in children with histories of heavy prenatal alcohol exposure and attention deficit/hyperactivity disorder. *Alcoholism: Clinical and Experimental Research*, 36, 1431-1441.

<sup>53</sup> American Psychiatric Association (2013). *Diagnostic and statistical manual of mental disorders, Fifth Edition*. Arlington, VA: American Psychiatric Association.

being jumped in the parking lot at school, and I stepped in. From that point on, we were best friends.” Jay said one of the things he noticed about Zane was how he always seemed to function better in structured environments: “I was the same way, so I noticed that about him.” Jay said Zane didn’t play organized sports, although he tried out for the basketball team: “He would only get a few inches off the ground to do shots. He was so uncoordinated.” Jay reported that he frequently observed Zane’s parents drinking alcohol, noting that Valerie drank more often than Mike. Jay said he sometimes observed Mike assaulting Valerie and Zane and occasionally observed Valerie saying “cruel” and “hurtful” things to Zane.

16. **Mike Hall** was interviewed telephonically for 2.0 hours on November 12, 2020. Mike reported that he and his wife befriended Valerie and Mike Floyd when Zane became friends with his son Jay in early adolescence. Mike said his family and the Floyds remained close during both boys’ teen years, noting, “A few times over those years, my ex-wife and I would get a call from Valerie, asking for us to come get her and Zane because Mike was drinking and getting out of control. Valerie drank as well, occasionally too much. I remember seeing her intoxicated.” Mike recalled his impressions of Zane in adolescence: “He was annoyingly polite. I loved that kid. He seemed kind, gentle, sweet, sad...fragile. He was socially awkward and had a soft, timid voice. He was hard to understand sometimes when he was younger. He also was very uncoordinated and impulsive. These things gave me the impression he was developmentally slow. His sweetness continued into high school. He took my daughter to the prom.”
17. **Carolyn Smith** was interviewed telephonically for 2.0 hours on November 25, 2020. According to her report, Carolyn is a retired social worker who lived near the Floyd family and was a “godmother” to Zane Floyd during his childhood: “Zane grew up with alcoholic parents who were always fighting, so our house was like a refuge for him. My husband and I were like his parents.” Carolyn was a “very close friend” of Zane’s mother Valerie Floyd and first met Zane when he was around 11 years old: “I had a close relationship with Zane and saw him four or five times a week when our two families lived for a year in the same apartment complex. My daughter Brittany was two years old at the time, and Zane played with her almost every day. About a year after our two families met, the Floyds moved into a house around the same time we did, but I regularly saw Zane and his mother several times a month after we moved.” Noting the thing she remembered most about Zane in his teens was his hyperactivity, she added. “Zane’s mother Val drank a lot. Before her pregnancy with Zane, Val had another baby boy who died. I suspect the death was due to her drinking. Val and Mike liked to party, have people over, barbeque, and drink. They seemed to drink all the time when Zane was young. I often saw them both intoxicated. Val told me back then that she drank alcohol throughout her pregnancy with Zane. This didn’t surprise me because her drinking habits weren’t normal. My husband and I talked to Val and Mike about how out of control their drinking was, which was how Val and I became close friends. Val had problems with Mike when they drank and had to call the police on him when he hit her.” Carolyn noted that when Valerie first met Mike, she was a “mule” for her first husband, concealing drugs on her body as she traveled.

## G. STANDARDIZED BEHAVIOR ASSESSMENT

18. Three standardized behavior assessments were administered telephonically to the three collateral individuals interviewed above, each of whom interacted regularly with Mr. Floyd from the time he was an adolescent until his early adult years.

a. **Fetal Alcohol Behavior Scale (FABS)<sup>54</sup>:**

The FABS was developed by researchers at the University of Washington in Seattle to describe the “behavioral essence” of the adaptive behavior deficits associated with FASD. To reduce transparency of the FABS items, which constitute 36 behaviors that differentiate FAS from non-FAS persons, relevant items are imbedded within a lengthier measure (i.e., Personal Behaviors Checklist), which contains 71 items. The behaviors addressed by the FABS are organized into seven categories (Communication and Speech, Personal Manner, Emotions, Motor Skills and Activities, Academic/Work Performance, Social Skills/Interactions, and Bodily/Physiologic Functions). Using a reference sample of 472 patients aged 2 to 51 diagnosed with Fetal Alcohol Syndrome (FAS) or Fetal Alcohol Effects (FAE), the FABS demonstrated high item-to-scale reliability and good test-retest reliability over an average interval of five years, identifying subjects with known or presumed prenatal alcohol exposure in multiple detection studies. A score of 15 or higher on the FABS reliably distinguishes persons with FASD (sample mean/median = 20) from those without FASD (sample mean/median = 5).

The three individuals interviewed in this evaluation (*Carolyn Smith* (family friend and social worker), *Jay Hall* (friend), and *Mike Hall* (father of Jay Hall) rated Mr. Floyd’s behavior on the FABS, producing the following results:

Fetal Alcohol Behavior Scale (FABS)

Rater	Relationship	Target Age	Raw Score
Carolyn Smith	Family Friend/Social Worker	12	25
Mike Hall	Father of Jay Hall	16	22
Jay Hall	Childhood Friend	20	22

As shown above, all three collateral witnesses produced behavior ratings that fell significantly above the threshold level of 15 and somewhat above the mean/median score for FASD, indicating that *Mr. Floyd displayed the “signature” behavior profile unique to individuals with FASD, both in childhood and during his young adult years.*

<sup>54</sup> Streissguth, A.P., Bookstein, F.L., Barr, H.M., Press, S., & Sampson, P.D. (1998). A Fetal Alcohol Behavior Scale. *Alcoholism: Clinical and Experimental Research*, 22, 325 – 333.

**b. Vineland Adaptive Behavior Scales – Third Edition (Vineland-3):**

The Vineland-3 is a widely-used measure in mental health that assesses an evaluatee's adaptive behavior via ratings from individuals who know him/her well. Behavior items in Vineland-3 involve specific tasks typically performed at different stages of development, which are divided into three broad categories of adaptive behavior: Communication, Daily Living, and Socialization skills. Rather than asking whether the person is *capable* of performing a task, the Vineland-3 assesses whether the person *regularly performs* the task *without prompting or assistance*. The Vineland-3 manual recommends that family members or those who know the evaluatee very well function as respondents (i.e., 'raters'). For retrospective assessment, at least two raters are recommended in order to ensure reliability.

The Vineland-3 was administered to *Carolyn Smith* (family friend and social worker), *Jay Hall* (friend), and *Mike Hall* (father of Jay Hall), each of whom rated Mr. Floyd's behavior around the time he/she had regular contact with him: age 12 in the case of Carolyn Smith, age 16 in the case of Mike Hall, and age 20 in the case of Jay Hall.

Adaptive behavior ratings, scored by computer from an algorithm created by the test developer (Pearson), are shown in the table below. In the table, results are converted to standard scores for major domains (Mean = 100, Standard Deviation/SD = 15) and v-scale scores for subdomains (Mean = 15, Standard Deviation/SD = 3) and compared to age-norms.

Vineland-3

Domain / Subdomain	Carolyn Smith [Family Friend/Soc Worker]		Mike Hall [Jay Hall's Father]		Jay Hall [Childhood Friend]	
	Target Age: 12		Target Age: 16		Target Age: 20	
	v-Scale/ Std Score	Percentile	v-Scale/ Std Score	Percentile	v-Scale/ Std Score	Percentile
Receptive	1		1		1	
Expressive	1		1		1	
Written	9		7		7	
<b>COMMUNICATION</b>	<b>36</b>	<b>&lt;1</b>	<b>28</b>	<b>&lt;1</b>	<b>20</b>	<b>&lt;1</b>
Personal	8		8		5	
Domestic	9		9		5	
Community	7		6		4	
<b>DAILY LIVING</b>	<b>66</b>	<b>1</b>	<b>51</b>	<b>&lt;1</b>	<b>32</b>	<b>&lt;1</b>
Interpersonal Relationships	5		9		3	
Play/Leisure Time	2		6		4	
Coping Skills	4		8		5	
<b>SOCIALIZATION</b>	<b>38</b>	<b>&lt;1</b>	<b>60</b>	<b>&lt;1</b>	<b>20</b>	<b>&lt;1</b>
<b>ADAPTIVE COMPOSITE</b>	<b>48</b>	<b>&lt;1</b>	<b>48</b>	<b>&lt;1</b>	<b>25</b>	<b>&lt;1</b>

The Vineland results shown above provide reliable and convergent data that quantify the nature and severity of Mr. Floyd's adaptive behavior in childhood and adulthood. Results

show that compared to other 12- and 16-year-olds, Mr. Floyd's adaptive functioning was *severely impaired* (Adaptive Composite scores = 48, or approximately 3.5 standard deviations below the mean of 100). Such ratings are consistent with Dr. Maria Cardle's psychological evaluation in 1989 when Mr. Floyd was 13. According to Mr. Floyd's childhood friend Jay Hall, Mr. Floyd's functioning was *profoundly impaired* in his early adult years (Adaptive Composite score = 25, or 5.0 standard deviations below the mean).

Vineland-3 scores also show Mr. Floyd's adaptive functioning decreased significantly over time, showing that as adaptive responsibilities and expectations became more complex with advancing age, his adaptive capacity diminished considerably in relation to age peers.

The level of Mr. Floyd's adaptive deficiency reported by all three raters is consistent with the FASD research,<sup>55</sup> as is the pattern of decreasing age-related adaptive ability over the course of the developmental years.<sup>56, 57</sup>

**c. Behavior Rating Inventory of Executive Function (BRIEF):**

The BRIEF is a standardized respondent-based measure<sup>58</sup> that assesses an individual's executive functioning or self-regulation in his/her everyday environment. Items on the BRIEF are rated in the same manner as items on the Vineland-3 (see below), but unlike the Vineland-3 and other adaptive measures, the BRIEF contains validity scales that address response bias.

In order to assess the possibility of biased Vineland-3 behavior ratings in the current evaluation (see above), the BRIEF also was administered to *Carolyn Smith* (family friend and social worker), *Jay Hall* (friend), and *Mike Hall* (father of Jay Hall).

Assessment results on the BRIEF, scored via a computer algorithm supplied by the test developer (Pearson Assessments) are shown in the table below.

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<sup>55</sup> Streissguth, A. P., Barr, H. M., Kogan, J., & Bookstein, F. L. (1996). *Final report: Understanding the occurrence of secondary disabilities in clients with fetal alcohol syndrome (FAS) and fetal alcohol effects (FAE)*. Seattle, WA: University of Washington Publication Services.

<sup>56</sup> Jirikowic, T., Kartin, D., & Carmichael Olson, H. (2008). Children with fetal alcohol spectrum disorders: A descriptive profile of adaptive function. *Canadian Journal of Occupational Therapy*, 75, 238-248.

<sup>57</sup> Streissguth, A. P., Bookstein, F. L., Barr, H. M., Sampson, P. D., O'Malley, K., & Young, J. K. (2004). Risk factors for adverse life outcomes for fetal alcohol syndrome and fetal alcohol effects. *Journal of Developmental and Behavioral Pediatrics*, 25(4), 228-238.

<sup>58</sup> Internal consistency was high for the Informant Report normative sample (alpha range = .80-.93 for clinical scales; .95-.98 for indexes and GEC). Using a mixed sample of clinical or healthy adults who were seen for clinical evaluation or research study participation, internal consistency was high for the Informant Report Form (alpha range = .85-.95 for clinical scales; .96-.98 for indexes and GEC). Test-retest correlations across the clinical scales ranged from .91-.94 over an average interval of 4.21 weeks for the Informant Report Form (n = .44). In terms of convergent validity, the Informant Report Form of the BRIEF-A scales, indexes, and GEC demonstrated significant correlations in the expected direction with self- and informant reports on the Frontal Systems Behavior Scale (FrSBe), Dysexecutive Questionnaire (DEX), and Cognitive Failures Questionnaire (CFQ).

#### BRIEF Reliability Scales

Validity Scale	Clinical Threshold Score	Carolyn Smith [Target Age: 12]	Mike Hall [Target Age: 16]	Jay Hall [Target Age: 20]
Negativity	≥ 6	0	0	0
Inconsistency	≥8	5	2	0
Infrequency	≥3	0	0	0
RESULTS		<b>VALID</b>	<b>VALID</b>	<b>VALID</b>

Results on BRIEF validity scales show that *all three individuals approached the task of rating Mr. Floyd's behavior in a straightforward, unbiased manner:*

#### H. PRIMARY DISABILITIES

19. Organic brain damage in FASD directly impairs the cognitive skills needed to think adequately and self-regulate. In turn, the cognitive dysfunction in FASD directly impairs adaptive functioning (i.e., real-world behavior) in an empirically demonstrated predictive manner.<sup>59, 60</sup> Regardless of IQ, comprehensive neuropsychological testing in FASD typically finds variable “patchy” cognitive profiles characterized by relative strengths and weaknesses that on average fall below full-scale IQ (i.e., between-test variability), which reflects intermittent exposure to alcohol during gestation even when exposure is heavy and regular.

At my request, Dr. Paul Connor graphically portrayed Mr. Floyd's cognitive test results documented in previous evaluation reports (see Exhibit 1 below): Dr. Cardle's testing in 1989 when Mr. Floyd was 13; test results from Drs. Dougherty, Paul, and Schmidt in 2000; and Dr. Mack's testing in 2006. Current adaptive assessment results from the Vineland-3 also are included (see last column on the right side of Exhibit 1). In Exhibit 1, direction of deficit is made constant to facilitate ‘apples-to-apples’ comparison. The horizontal green line in Exhibit 1 depicts z-score mean or average score (i.e., “0”) for each test; the horizontal red line depicts the cut-point for a “deficit” finding according to measurement guidelines for FAS published by the Centers for Disease Control<sup>61</sup> (i.e., -1 SD except for IQ, which requires -2 SD).

<sup>59</sup> Shonfeld, A.A., Paley, B., Frankel, F., & O'Connor, M. J. (2006). Executive functioning predicts social skills following prenatal alcohol exposure. *Child Neuropsychology*, 12, 439-452.

<sup>60</sup> Ware, A.L., Crocker, N., O'Brien, J.W., Dewese, B.N., Roesch, S.C., Coles, C.D.,...Mattson, S.N. (2012). Executive function predicts adaptive behavior in children with histories of heavy prenatal alcohol exposure and attention deficit/hyperactivity disorder. *Alcoholism: Clinical and Experimental Research*, 36, 1431-1441.

<sup>61</sup> Bertrand, J., Floyd, L. L., Weber, M. K., O'Connor, M., Johnson, K. A., Riley, E., & Cohen, D. (2004). *Guidelines for identifying and referring persons with fetal alcohol syndrome*. Atlanta, GA: Centers for Disease Control and Prevention.

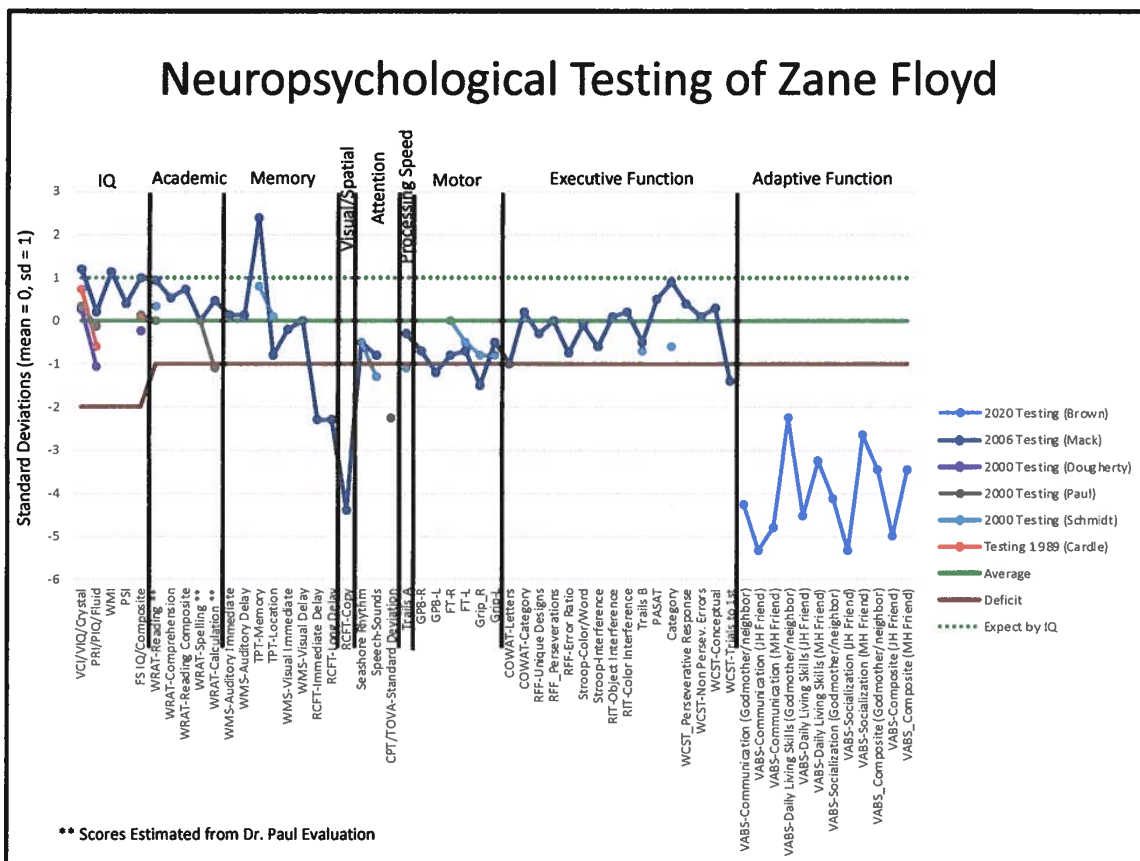


Exhibit 1. Zane Floyd's neuropsychological and adaptive assessment results from age 13 to the present

As can be seen in Exhibit 1, Mr. Floyd's cognitive test results (excluding adaptive functioning) reflect extreme variability, ranging from a high score of 2.4 SDs above the mean on a memory subtest (i.e., ability to remember rather simple geometric shapes he had held and examined with his hands while blindfolded) to a low score of 4.4 SDs below the mean on a visuospatial construction task (i.e., ability to copy a complex figure with significant details and interactions between components). Overall, testing and adaptive assessment found deficiency in the following 10 domains:

### *Cognitive Domains*

- IQ (significant discrepancies among quotient/index scores)
- Attention
- Academic Achievement (math calculation)
- Memory/Learning (increasingly deficient performance with increasing task complexity on visual tasks)
- Visuospatial Construction
- Motor Coordination

- Executive functioning (initial development of problem-solving strategies)

#### *Adaptive Domains*

- Communication (Vineland-3 – all 3 raters)
- Daily Living Skills (Vineland-3 – all 3 raters)
- Socialization (Vineland-3 – all 3 raters)

It is notable and consistent with FASD that Mr. Floyd's full-scale IQ varied widely (i.e., 101 when tested by Dr. Cardle, 94 when tested by Dr. Dougherty, 102 when tested by Dr. Paul, and 115 when tested by Dr. Mack). The latter score, which reflects significant improvement in verbal skills, likely was due in part to long-term abstinence from alcohol and drugs while incarcerated. Because of the significant discrepancies in sub-test scores, Mr. Floyd's full-scale IQ scores are not reliable representations of his intellectual functioning. As noted in Paragraph 13, IQ scores in FASD range widely in FASD from the profoundly deficient range to the superior range<sup>62</sup> (e.g., IQs in this population have been recorded as high as 142<sup>63</sup>). When IQs fall in the average range, which generally was the case for Mr. Floyd, significant discrepancies within IQ subtests are diagnostically meaningful.<sup>64</sup>

20. The cognitive deficits in FASD directly impair adaptive functioning. Adaptive functioning reflects everyday real-world capacity to deal with tasks and challenges in contexts that range from semi-structured school environments to completely unstructured community settings. When children exhibit chronic learning, social, and self-regulation problems in the relatively-structured school years, such a pattern essentially predicts that later in life, they will have even greater difficulties in the unstructured real world. While it may be possible for a person to compensate for one or two mild impairments in a single cognitive domain, when there are multiple mild impairments in several areas of the brain, compensation is virtually impossible without external structure and supports.<sup>65</sup> That is, the impact on behavior from a pervasive pattern of mild cognitive impairment is devastating. Deficient adaptive functioning appears to be universal in FASD, regardless of stage of development, instrument used to measure behavior, *or IQ*.<sup>66, 67, 68, 69, 70</sup>

<sup>62</sup> Streissguth, Barr, Kogan, & Bookstein, op. cit.

<sup>63</sup> Ibid.

<sup>64</sup> Ibid.

<sup>65</sup> Livingston, L. A., & Happe, F. (2017). Conceptualizing compensation in neurodevelopmental disorders: Reflections from autism spectrum disorder. *Neuroscience and Biobehavioral Reviews*, 80, 729-742.

<sup>66</sup> Carmichael Olson, H., Feldman, J. J., Streissguth, A. P., Sampson, P. D., & Bookstein, F. L. (1998). Neuropsychological deficits in adolescents with fetal alcohol syndrome: clinical findings. *Alcoholism: Clinical and Experimental Research*, 22, 1998-2012.

<sup>67</sup> Carr, J. L., Agnihotri, S., & Keightley, M. (2010). Sensory processing and adaptive behavior deficits of children across the fetal alcohol spectrum disorder continuum. *Alcoholism: Clinical and Experimental Research*, 34, 1022-1032.

<sup>68</sup> Crocker, N., Vaurio, L., Riley, E.P., & Mattson, S.N. (2009). Comparison of adaptive behavior in children with heavy prenatal alcohol exposure or attention-deficit/hyperactivity disorder. *Alcoholism: Clinical and Experimental Research*, 33, 2015-2023.

<sup>69</sup> Fagerlund, A., Autti-Ramo, I., Kalland, M., Santtila, P., Hoyme, H. E., Mattson, S. N., & Korkman, M. (2012). Adaptive behavior in children and adolescents with foetal alcohol spectrum disorders: A comparison with specific learning disability and typical development. *European Child and Adolescent Psychiatry*, 21, 221-231.

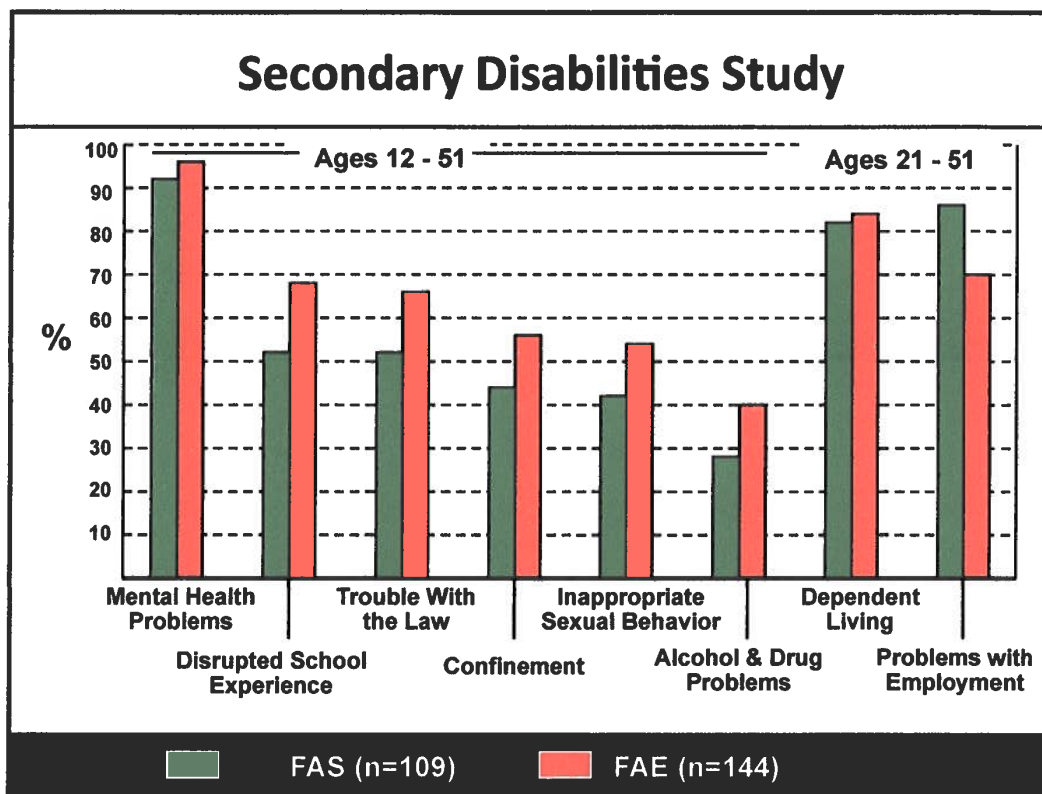
<sup>70</sup> Jirikowic, T., Kartin, D., & Carmichael Olson, H. (2008). Children with fetal alcohol spectrum disorders: a descriptive profile of adaptive function. *Canadian Journal of Occupational Therapy*, 75, 238-248.



21. In Mr. Floyd's case, not only does he have many mild deficits in cognitive functioning, some of his cognitive skills are moderately or severely impaired. As can be seen visually in the Vineland-3 scores depicted in Exhibit 1, the widespread deficits seen in Mr. Floyd's cognitive profile have a *profound* effect on his adaptive behavior. According to Dr. Connor, Mr. Floyd's Vineland-3 results average -4.8 SDs for Communication, -3.4 SDs for Daily Living Skills, -4.0 SDs for Socialization, and -4.0 for overall adaptive functioning.

## I. SECONDARY DISABILITIES

22. Nearly 25 years ago, a massive research study sponsored by the CDC<sup>71</sup> identified an adverse developmental trajectory in FASD, characterized by multiple negative life course outcomes or "secondary disabilities." The figure below, taken from this secondary disabilities study and reprinted with permission from the University of Washington's Fetal Alcohol and Drug Unit, shows study results for children, adolescents, and adults with FAS and those with FAE (the outdated diagnostic term for ARND).



Negative developmental outcomes in FASD ("Secondary Disabilities")

<sup>71</sup> Streissguth, Barr, Kogan, & Bookstein, op. cit.

As can be seen above, compared to normally-developing children, those with FASD (i.e., both FAS and FAE/ARND) are at very high risk of several negative developmental outcomes, particularly if they are exposed in childhood to risk factors such as abuse, domestic violence, or neglect.<sup>72</sup> In Mr. Floyd's case, records indicate he was exposed to all three risk factors.

The table below, which assesses Mr. Floyd's life history in the context of the secondary disabilities research, reflects many of the secondary disabilities typically seen in FASD:

#### Secondary Disabilities Analysis

Secondary Disability	Zane Floyd's History
Disrupted Education	<ul style="list-style-type: none"> <li>• Special education was recommended by school professionals around first grade but not permitted by the birth mother (Dougherty, 2000)</li> <li>• Repeated 2<sup>nd</sup> grade (Dougherty, 2000)</li> <li>• Expelled in elementary school for being "out of control" and placed on home instruction (Dougherty, 2000)</li> <li>• Left high school before graduating and did not receive diploma until completing courses at Clark County Adult High School (Dougherty, 2000)</li> </ul>
Mental Health Problems	<ul style="list-style-type: none"> <li>• Medicated with Ritalin for ADHD from first through third grade and again from age 13 to 14 (Dougherty, 2000)</li> </ul> <p><i>Documented Diagnoses:</i></p> <ul style="list-style-type: none"> <li>• Adjustment reaction with mixed emotional and behavioral symptoms (Cardle, 1989)</li> <li>• ADHD (Cardle, 1989; Paul, 2000; Schmidt, 2000; Mack, 2006)</li> <li>• Developmental Coordination Disorder (Cardle, 1989; Mack, 2006)</li> <li>• Learning Disorder NOS, Dysgraphia/Constructional Dyspraxis (Mack, 2006)</li> <li>• Organizational Deficits (i.e., executive dysfunction) in visual-motor functioning and integrating/organizing information (Cardle, 1989)</li> <li>• Dysthymic Disorder, Primary, early onset (Paul, 2000)</li> <li>• Major Depression, recurrent, without psychotic features (Paul, 2000)</li> <li>• Obsessive Compulsive Disorder (Mack, 2006)</li> <li>• PTSD, chronic (Mack, 2006)</li> <li>• Dissociative Disorder NOS (Mack, 2006)</li> <li>• Pathological Gambling (Paul, 2000)</li> <li>• Sleepwalking Disorder by history (Mack, 2006)</li> <li>• Sexual Disorder NOS (Paul, 2000)</li> <li>• Personality Disorder NOS with avoidant, passive-aggressive, and dependent personality characteristics, severe (Paul, 2000)</li> <li>• Personality Disorder NOS with paranoid, schizoid, and antisocial features (Schmidt, 2000)</li> </ul>

<sup>72</sup> Streissguth, Barr, Kogan, & Bookstein, op. cit.

	<ul style="list-style-type: none"> <li>• Personality Change due to Neurodevelopmental Brain Damage (Mack, 2006)</li> <li>• Avoidant Personality Disorder with antisocial personality features (Mack, 2006)</li> </ul> <p><i>Relevant Axis III Diagnoses:</i></p> <ul style="list-style-type: none"> <li>• Premature birth and birth weight (4 lbs, 1.5 ozs)</li> <li>• Prenatal alcohol and drug exposure</li> <li>• Prenatal intoxicia</li> <li>• History of mental tremors, recurrent ear infections</li> </ul>
Substance Abuse	<ul style="list-style-type: none"> <li>• Used marijuana daily at age 15, began drinking alcohol at age 14/15 and drinking steadily at age 16 (Dougherty, 2000)</li> <li>• Daily use of alcohol, marijuana, and methamphetamine for several months in late teens (Dougherty, 2000)</li> <li>• After passing the physical in the Marine Corps, returned to drug use; arrested for DUI and discharged from the military, asked not to re-enlist because of his drinking problem (Dougherty, 2000)</li> </ul> <p><i>Relevant Diagnoses:</i></p> <ul style="list-style-type: none"> <li>• Alcohol Dependence (Paul, 2000); Alcohol Abuse (Schmidt, 2000; Mack, 2006)</li> <li>• Polysubstance Abuse – marijuana, methamphetamine (Schmidt, 2000)</li> <li>• Cannabis Dependence (Paul, 2000; Mack, 2006)</li> <li>• Amphetamine Dependence (Paul, 2000; Mack, 2006)</li> <li>• Cocaine Abuse (Paul, 2000)</li> </ul>
Trouble with the Law	<ul style="list-style-type: none"> <li>• DUI in California</li> <li>• INSTANT OFFENSE (1999)</li> </ul>
Confinement	<ul style="list-style-type: none"> <li>• Incarceration from 1999 to present</li> </ul>
Inappropriate Sexual Behavior	<ul style="list-style-type: none"> <li>• Diagnosed with Sexual Disorder NOS by Dr. Paul (Paul, 2000)</li> <li>• In guilt phase testimony, Tracie Rose Carter testified that Mr. Floyd used a gun to spread her legs apart during sexual activity (Mack, 2006)</li> <li>• Found guilty during trial of 4 counts of sexual assault with the use of a deadly weapon (Mack, 2006)</li> </ul>
Employment Problems	<ul style="list-style-type: none"> <li>• Enlisted in Marine Corps at age 18, promoted to Lance Corporal after boot camp, but was soon discharged and asked not to re-enlist after a DUI (Dougherty, 2000; Mack, 2006)</li> </ul>
Dependent Living	<ul style="list-style-type: none"> <li>• Lived with childhood friend Jay Hall after discharge from Marines, then moved back to parents' home</li> </ul>

*As can be seen above, Mr. Floyd's history reflects all 8 of the secondary disabilities identified in the FASD research.*

## J. DIAGNOSTIC IMPRESSIONS

23. CNS dysfunction in FASD was diagnosed generally in DSM-IV-TR (2000) as *cognitive disorder not otherwise specified* (i.e., Cognitive Disorder NOS) and now is specifically diagnosed in DSM-5 (2013) as *neurodevelopmental disorder associated with prenatal alcohol exposure* (i.e., ND-PAE). Both DSM diagnoses constitute a “mental defect” in the forensic setting. ND-PAE is the diagnostic category used by DSM-5 to describe the sequelae of developmental, behavioral, intellectual, and functional problems seen in people exposed prenatally to alcohol.
24. DSM-5 diagnostic criteria for ND-PAE generally require evidence of prenatal alcohol exposure, at least one impairment in neurocognitive functioning (i.e., standard score of 70/75 or below on an individually administered IQ test or impairments in executive functioning, learning, memory, or visual-spatial reasoning/organization), at least one impairment in self-regulation (i.e., mood or behavioral regulation, attention, or impulse control), and at least two domains of adaptive impairment (i.e., communication, social communication and interaction, daily living skills, or motor skills), with onset in the developmental period.

Records reviewed in my previous evaluation (10/17/06) reflect consistency between Mr. Floyd’s documented cognitive and adaptive functioning, developmental trajectory, and ND-PAE, as summarized in the analysis below (prepared in consultation with Neuropsychologist Paul Connor).

DSM-5 Criteria for ND-PAE

Criterion	Documented Impairments in Zane Floyd	Source [Testimony or Reports]
Prenatal alcohol exposure	Birth mother Valerie Floyd testified she drank alcohol heavily throughout her pregnancy with Mr. Floyd.	Trial testimony
	Social worker Jorge Abreu, who had conducted a psychosocial evaluation of Mr. Floyd, testified that Valerie Floyd told him her substance use began as a teenager and “continued through both pregnancies” and that she drank alcohol and used drugs, including LSD and cocaine, “throughout the pregnancy” with Mr. Floyd	Trial testimony
Neurocognitive impairments (at least 1)	Intellectual (sub-test discrepancies)	Cardle (1989), Dougherty (2000), Mack (2013)
	Memory (complex visuospatial)	Mack (2013)
	Academic Learning (math calculation)	Paul (2000)
	Visuospatial Construction	Mack (2006)

Self-Regulation impairments (at least 1)	Attention	Paul (2000), Schmidt (2000)
	Impulse Control (initial)	Mack (2006)
	Problem Solving (developing)	Mack (2006)
Adaptive impairments (at least 2)	Communication	Vineland-3 (2020)
	Daily Living Skills	Vineland-3 (2020)
	Socialization	Vineland-3 (2020)
	Motor Coordination	Mack (2006)
Childhood onset	Documented evidence of impairments in childhood	Record review
Disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.	8/8 secondary disabilities	Current analysis
Disorder is not better explained by the direct physiological effects of postnatal use of a substance, a general medical condition other than FASD, a genetic condition, or environmental neglect.	Impairments precede substance use in the teen years No evidence of traumatic brain injury in childhood No evidence of a general medical condition other than prenatal alcohol exposure Environmental neglect may have had an additive and cumulative effect on underlying brain damage but does not explain life history	Current analysis

As can be seen above, *Mr. Floyd's functioning and life history well exceed DSM-5 diagnostic criteria for ND-PAE*, the current diagnosis under DSM-5 for the CNS impairment (or “mental defect”) in FASD.

25. **In summary, Zane Floyd’s adaptive/functional history is consistent with the mental defect associated with FASD, which in DSM-5 is diagnosed generally as Other Specified Neurodevelopmental Disorder (Code 315.8) and specifically as *Neurodevelopmental Disorder Associated with Prenatal Alcohol Exposure (ND-PAE)*.**

## K. COMPARING FASD TO ADHD AND ID

26. FASD, ADHD, and ID are all classified by DSM-5 as neurodevelopmental disorders, meaning all three disorders typically (a) manifest early in development, often before a child enters grade school; (b) are “characterized by developmental deficits that produce impairments of personal, social, academic, or occupational functioning”; and (c) involve a range of developmental deficits that vary “from very specific limitations of learning or

control of executive functions to global impairments of social skills or intelligence” (DSM-5, p. 31).

27. **Attention-Deficit/Hyperactivity Disorder (ADHD):** In DSM-5, ADHD is described (p. 59) as “a persistent pattern of inattention and/or hyperactivity-impulsivity that interferes with functioning or development...” Three sub-types are identified as: (a) inattention, (b) hyperactivity – impulsivity, and (c) mixed. Most individuals fall in the third, mixed, sub-category. For the first two sub-types, six or more symptoms from a list of behaviors must have persisted “for at least six months (five months for older adolescents and adults) to a degree that is inconsistent with developmental level and that negatively impacts directly on social and academic/ occupational activities” and that are “not solely a manifestation of oppositional behavior, defiance, hostility, or failure to understand tasks or instructions” (for type 1) and “do not occur exclusively during the course of schizophrenia or another psychotic disorder” (for type 2). These symptoms must be evident before age 12. Although ADHD can be diagnosed in adults, most individuals diagnosed with the disorder in childhood cease to manifest the disorder as they enter adulthood.<sup>73</sup> Although people with ADHD often do poorly in school because of inattention and interpersonal insensitivity due to impulsivity, there is no cognitive or adaptive functioning criterion for the diagnosis.
28. **Intellectual Disability (ID):** ID has three definitional criteria: significant deficits in intellectual functioning, impaired adaptive functioning, and onset within the developmental period (typically interpreted to mean before age 18). Prong One (intellectual impairment) is measured by a full-scale IQ score of 70-75 or below, although other measures such as Executive Functions can be cited. Adaptive functioning, typically measured through a rating instrument such as the Adaptive Behavior Assessment System (ABAS) or Vineland, has three components: Conceptual, Practical, and Social, summarized into a Composite Adaptive Index. Qualitative evidence such as gullibility and poor risk awareness also are important. Significant deficiency (< 2 standard deviations) has to be shown on standardized instruments for only one of these four indices. As a rule, ID is a lifelong status, although with practice individuals can improve adaptive skills during adulthood.
29. **Fetal Alcohol Spectrum Disorders (FASD):** CNS abnormality in ND-PAE typically is established by multiple cognitive impairments (executive dysfunction and other cognitive impairments) and impairments in adaptive functioning. For the latter, impairments are required in at least two of the three domains usually included in standardized instruments (communication, daily living or practical skills, and socialization), which actually is a more stringent requirement than in ID (where only one impaired adaptive domain is required). In Mr. Floyd’s case, Vineland-3 scores fall well below the -2 SD level in communication, daily living skills, and socialization.

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<sup>73</sup> Newton-Howes, G. (20014). What happens when children with attention deficit/hyperactivity disorder grow up? *Journal of the Royal Society of Medicine*, 97, 531-535.

Mr. Floyd was diagnosed in 2006 with partial FAS,<sup>74</sup> a diagnosis that falls under the FASD umbrella. According to IOM criteria,<sup>75</sup> the core diagnostic element in partial FAS (which requires only some of the physical indicia in (a) and (b) is CNS dysfunction. CNS dysfunction stems directly from structural brain damage that directly impairs thinking and behavior throughout the lifespan.<sup>76</sup>

As noted previously, ND-PAE currently represents the CNS dysfunction for *all* of the medical disorders under the FASD umbrella under DSM-5 (i.e., FAS, partial FAS, and ARND) and is “intended to encompass the full range of developmental disabilities associated with exposure to alcohol in utero” (DSM-5, p. 799).

DSM-5 also notes that evidence of CNS dysfunction in ND-PAE varies by developmental stage. Although about half of young children prenatally exposed to alcohol show marked developmental delay in the first three years of life, others may not exhibit signs of CNS dysfunction until they are preschool- or school-age. When children with ND-PAE reach school age, learning difficulties, impairments in executive function, and problems with integrative language functions usually emerge more clearly, and both social skills deficits and challenging behavior may become more evident. As school and other requirements become more complex over the course of development, greater deficits are noted. The CNS dysfunction seen in those with ND-PAE “often leads to decrements in adaptive behavior and to maladaptive behavior with lifelong consequences,” as this population has “a higher prevalence of disrupted school experiences, poor employment records, trouble with the law, confinement (legal or psychiatric), and dependent living conditions” (DSM-5, p. 800). As shown in the secondary disabilities table above (Paragraph 22), Mr. Floyd’s functional history reflects this developmental course.

30. **FASD ≠ ADHD:** FASD is a medical disorder that occasionally is misunderstood as the functional equivalent of ADHD. This view may reflect the fact that FASD often is not diagnosed in childhood because very high rates of co-occurring attention and/or hyperactivity problems distract providers and tend to get diagnosed as ADHD, thereby masking the underlying medical condition.<sup>77</sup> It is understandable that because both disorders often share attention and self-regulation problems like hyperactivity, FASD would come to be seen incorrectly as the functional equivalent of ADHD. However, the problem with this assumption is that disability severity varies substantially in individuals with neurodevelopmental disorders.

Researchers in the FASD field<sup>78</sup> have noted the following significant differences between FASD and ADHD, differences that refute the concept of FASD’s equivalency with ADHD: (a) etiology and course of the two conditions are very different, in that FASD has a single

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<sup>74</sup> Evaluation report of Zane Floyd by Novick Brown, dated 10/17/06

<sup>75</sup> Stratton, Howe, & Battaglia, op. cit.

<sup>76</sup> Mattson, S. N., Schoenfeld, A., M., & Riley, E. P. (2001). Teratogenic effects of alcohol on brain behavior. *Alcohol Research and Health*, 25, 185-191.

<sup>77</sup> Chambers, C.D., Kalberg, W.O., Zellner, J., Feldman, H., Buckley, D., Kopald, D., Hasken, J.M., et al. (2018). Prevalence of Fetal Alcohol Spectrum Disorders in 4 US Communities. *Journal of the American Medical Association*, 319, 474-482.

<sup>78</sup> e.g., Peadon, E., & Elliott, E. J. (2010). Distinguishing between attention-deficit hyperactivity and fetal alcohol spectrum disorders in children: Clinical guidelines. *Neuropsychiatric Diseases and Treatment*, 6, 509-515.

etiology that is known while ADHD is etiologically multifactorial and typically unknown; (b) FASD has greatly increased mortality risk when compared to ADHD; (c) FASD is far more complex and severe and requires much higher levels of care than ADHD; (d) annual cost of care is over 10 times higher for FASD compared to ADHD; (e) expression of the two conditions is dissimilar in that FASD has a similar male to female ratio while ADHD is three times more prevalent in males; (f) while FASD is a causal factor for ADHD, there is no evidence ADHD is a causal factor for FASD; (g) ADHD gradually decreases in severity across childhood and adolescence while FASD becomes more complex, resulting in more severe adaptive deficiency and greater adversity across the lifespan; and (h) FASD is equivalent to ID in terms of everyday adaptive behavior, which is not the case for ADHD.

Whether measured in terms of depth of impairment for a single defining ability or breadth of impaired abilities and their effects on overall adaptive functioning, FASD is a very severe disorder comparable to ID, and ADHD is a much less severe disorder, as the analysis that follows makes clear.

- a. Definitional Complexity:** One way to measure disability severity is by definitional complexity (i.e., number of domains that must be impaired in DSM-5 to meet diagnostic criteria). Table 1 below compares the three disorders in terms of DSM-5 definitional complexity:

Disorder	Neurocognitive Deficits		Self-Regulatory Deficiency <sup>79</sup>	Adaptive Function Deficits	Significantly Interferes with Functioning	Lifelong	Number of Elements
	Deficient IQ	Executive Function					
FASD	NO	YES	YES	YES	YES	YES	5
ADHD	NO	NO	YES	NO	YES	NO	2
ID	YES	YES	NO	YES	YES	YES	5

Table 1. Extent of definitional complexity in the three disorders

With respect to definitional complexity, FASD and ID are similar in that both require 5 diagnostic elements. In contrast, ADHD is the outlier with only 2 required diagnostic criteria. The only diagnostic element in ID that is not required in FASD is deficient IQ although in FASD, 27% of people with FAS and 9% of those with FAE/ARND have an IQ of 70 or below. Generally in FASD, adaptive functioning tends to fall approximately 2 standard deviations below IQ, regardless of specific diagnosis.<sup>80</sup> Both ID and FASD require adaptive dysfunction: FASD requires at least 2 deficient adaptive domains; ID requires at least 1. As noted previously, no adaptive dysfunction is required in ADHD. FASD (as defined in ND-PAE) and ADHD both require self-regulatory dysfunction. In fact, at its core, ADHD is defined solely by two aspects of deficient self-regulation: attention and impulse control. In contrast to ADHD with respect to the self-regulatory

<sup>79</sup> Impaired mood/behavior regulation

<sup>80</sup> Streissguth, Barr, Kogan, & Bookstein, op. cit.



criterion, FASD is defined by a broader range of self-regulation deficiency: attention, impulse control, and/or mood or behavioral regulation. Overall, considering the range of definitional elements in DSM-5, FASD and ID are tied with respect to diagnostic complexity, and both are substantially more complex and severe than ADHD.

- b. Functional Capacity:** Disability severity also can be compared in terms of how extensively a disorder typically impairs functional capacity (i.e., both cognitive and adaptive functioning). Ratings below in Table 2, arrived at in consultation with Dr. Stephen Greenspan (a national expert on ID), are based on the following scale: 0 = Mild (equal to or less than 10% of the disability's population), 1 = Moderate (11-49% of the disability's population), and 2 = Severe (50% or more of the disability's population).

IMPAIRMENT		FASD	ADHD	ID
Cognitive	IQ	1	0	2
	Academics	2	2	2
	Attention	2	2	2
	Memory	2	1	2
	Visuospatial	2	0	2
	Processing Speed	1	1	2
	Executive Function	2	2	2
Adaptive	Communication	2	0	2
	Daily Living Skills	2	0	2
	Socialization	2	1	2
	Motor	1	0	1
TOTAL DOMAINS OF IMPAIRMENT		19	9	21

Table 2. Extent of functional impairments in the three disorders

Based on the analysis in Table 2 above, FASD and ID are quite similar in terms of widespread functional deficiency in both cognition and adaptive functioning. In contrast, ADHD is mildly affected.

- c. Risk of Negative Outcomes:** Another way of looking at disability severity is risk of adverse developmental outcomes, including secondary disabilities. Table 3 below ranks the three disorders in terms of secondary disabilities and other outcome risks on a 3-point ordinal scale that compares outcome risk: 3 = highest risk, 2 = next highest risk, and 0 = lowest risk.

Adverse Outcome	FASD		ADHD		Mild ID	
	Rate	Rank	Rate	Rank	Rate	Rank
Poverty <sup>81</sup>	50 % <sup>82</sup>	2	1.2% <sup>83</sup>	0	31.3% <sup>84</sup>	1
Homelessness	60 % <sup>85</sup>	1	≤24 % <sup>86</sup>	0	≤63 % <sup>87</sup>	2
ACEs <sup>88</sup>	5.3 <sup>89</sup>	2	2.1 <sup>90</sup>	0	2.5 <sup>91</sup>	1
Mental health problems	94 % <sup>92</sup>	2	66 % <sup>93</sup>	1	≤57 % <sup>94</sup>	0
Disrupted schooling	60 % <sup>95</sup>	2	28 <sup>96</sup>	1	20 <sup>97</sup>	0
Dependent living	83 % <sup>98</sup>	1	44 % <sup>99</sup>	0	89 % <sup>100</sup>	2

<sup>81</sup> In 1919, poverty in the United States was 11.8% of the general population. See: <https://fas.org/sgp/crs/misc/R46000.pdf>

<sup>82</sup> Streissguth, Barr, Kogan, & Bookstein, op. cit.

<sup>83</sup> Danielson, M. L., Bitsko, R. H., Ghandour, R. M., Holbrook, J. R., Kogan, M. D., & Blumberg, S. J. (2016). Prevalence of parent-reported ADHD diagnosis and associated treatment among U.S. children and adolescents, 2016. *Journal of Clinical Child and Adolescent Psychology*, 47, 199-212.

<sup>84</sup> Ibid.

<sup>85</sup> Streissguth, Barr, Kogan, & Bookstein, op. cit.

<sup>86</sup> Stone, B., Dowling, S., & Cameron, A. (2018). Cognitive impairment and homelessness: A scoping review. *Health and Social Care Community*, 27, e125-e142.

<sup>87</sup> Mercier, C., & Picard, S. (2011). Intellectual disability and homelessness. *Journal of Intellectual Disability Research*, 55, 441-449.

<sup>88</sup> Number of ACEs in the general population is 1.7 on average. See: Kambeitz, C., Klug, M. G., Greenmyer, J., Popova, S., & Burd, L. (2019). Association of adverse childhood experiences and neurodevelopmental disorders in people with fetal alcohol spectrum disorders (FASD) and non-FASD controls. *BMC Pediatrics*, 19, 498 <https://doi.org/10.1186/s12887-019-1878-8>

<sup>89</sup> Ibid.

<sup>90</sup> Semiz, U. B., Oner, O., Cengiz, F. F., & Bilici, M. (2017). Childhood abuse and neglect in adult attention-deficit/hyperactivity disorder. *Psychiatry and Clinical Psychopharmacology*, 27, 344-348.

<sup>91</sup> Santoro, A. F., Shear, S. M., & Haber, A. (2018). Childhood adversity, health and quality of life in adults with intellectual and developmental disabilities. *Journal of Intellectual Disability Research*, 62, 854-863.

<sup>92</sup> Streissguth, Barr, Kogan, & Bookstein, op. cit.

<sup>93</sup> Reale, L., Bartoli, B., Cartabia, M., Zanetti, M. Costantino, M. A., Canevini, Termine, & Bonati, M. (2017). Comorbidity prevalence and treatment outcome in children and adolescents with ADHD. *European Child and Adolescent Psychiatry*, 26, 1443-1457.

<sup>94</sup> Munir, K. M. (2016). The co-occurrence of mental disorders in children and adolescents with intellectual disability/intellectual developmental disorder. *Current Opinions in Psychiatry*, 29, 95-102.

<sup>95</sup> Streissguth, Barr, Kogan, & Bookstein, op. cit.

<sup>96</sup> Fried, R., Petty, C., Faraone, S.V., Hyder, L.L., Day, H., Biederman, J. (2016). Is ADHD a risk factor for high school dropout? A controlled study. *Journal of Attention Disorders*, 20(5), 383-9.

<sup>97</sup> Snyder, T. D., & Dillow, S. A. (2012). *Digest of education statistics 2011* (NCES 2012-001). Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Retrieved from <http://nces.ed.gov/pubs2012/2012001.pdf>

<sup>98</sup> Streissguth, Barr, Kogan, & Bookstein, op. cit.

<sup>99</sup> Altszuler, A. R., Page, T. F., Gnagy, E. M., Cox, S., Arrieta, A., Molina, R. S. G., & Pelham, Jr., W. E. (2016). Financial dependence of young adults with childhood ADHD. *Journal of Abnormal Child Psychology*, 44, 1217-1229.

<sup>100</sup> Ross, J., Marcell, J., Williams P., & Carson, D. (2013). Postsecondary education employment and independent living outcomes of persons with autism and intellectual disability. *Journal of Postsecondary Education and Disability*, 26, 337-351.

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Employment problems	79 % <sup>101</sup>	2	16 % <sup>102</sup>	0	21 % <sup>103</sup>	1
Substance abuse	35 <sup>104</sup>	1	52 % <sup>105</sup>	2	5 % <sup>106</sup>	0
Trouble with the law	61 % <sup>107</sup>	2	12 % <sup>108</sup>	1	≤8.6 % <sup>109</sup>	0
Social isolation	57 % <sup>110</sup>	2	31-36 % <sup>111</sup>	0	~50 % <sup>112</sup>	1
Victimization	72 % <sup>113</sup>	2	7.3 % <sup>114</sup>	0	17.5 % <sup>115</sup>	1
TOTALSCORE	19		5		9	

Table 3. Adverse outcome risk in the three disorders

Based on ratings of adverse outcome risk in Table 3, it is clear people with FASD are at much greater risk of a negative developmental trajectory than those with ADHD or ID. Much of this risk stems from lack of early diagnosis and appropriate interventions.<sup>116</sup> In contrast, ID and ADHD tend to get diagnosed early in life, which significantly improves the odds of intervention (and protection in the case of ID). Overall, both ADHD and ID are mild severity disabilities compared to FASD in terms of negative life course outcomes. Notably, most people with FASD as well as ID cannot live independently in society as adults.<sup>117</sup>

<sup>101</sup> Streissguth, Barr, Kogan, & Bookstein, op. cit.

<sup>102</sup> Kuriyan, A. B., Pelham Jr., W. E., Molina, B. S. G., Waschbusch, D. A., Gnagy, E. M., Sibley, M. H., Babinski, D. E., Walther, C., Cheong, J. W., Yu, J., & Kent, K. M. (2012). Young adult educational and vocational outcomes of children diagnosed with ADHD. *Journal of Abnormal Child Psychology*, 31, 27-41.

<sup>103</sup> Siperstein, G. N., Parker, R. C., & Drascher, M. (2013). National snapshot of adults with intellectual disabilities in the labor force. *Journal of Vocational Rehabilitation*, 39, 157-165.

<sup>104</sup> Streissguth, Barr, Kogan, & Bookstein, op. cit.

<sup>105</sup> Carpentier, P. J. (2012). ADHD and addiction. In J. C> Verster, K. Brady, M. Galanter, & P. Contrad (Eds.), *Drug abuse and addiction in medical illness*. New York: Springer.

<sup>106</sup> Allen, J. R. (2019). Addressing substance use in patients with intellectual disability: 5 steps. *Current Psychiatry*, 18, 49-50.

<sup>107</sup> Streissguth, Barr, Kogan, & Bookstein, op. cit.

<sup>108</sup> Fletcher, J., & Wolfe, B. (2009). Long-term consequences of childhood ADHD on criminal activities. *Journal of Mental Health Policy Economics*, 12, 119-138.

<sup>109</sup> Fogden, B. C., Thomas, S. D. M., Daffern, M., & Ogloff, J. R. P. (2016). Crime and victimization in people with intellectual disability: A case linkage study. *BMC Psychiatry*, 16, <https://bmcpsy psychiatry.biomedcentral.com/articles/10.1186/s12888-016-0869-7#Tab1>

<sup>110</sup> Streissguth, Barr, Kogan, & Bookstein, op. cit.

<sup>111</sup> Sasser, T. R., Kalvin, C. B., & Bierman, K. L. (2016). Developmental trajectories of clinically significant attention-deficit/hyperactivity disorder (ADHD) symptoms from Grade 3 through 12 in a high-risk sample: Predictors and outcomes. *Journal of Abnormal Psychology*, 125, 207-219.

<sup>112</sup> Ibid.

<sup>113</sup> Streissguth, Barr, Kogan, & Bookstein, op. cit.

<sup>114</sup> Hellstrom, L. (2019). A systematic review of polyvictimization among children with attention deficit hyperactivity or autism spectrum disorder. *International Journal of Environmental Research and Public Health*, 16, 2280; doi:10.3390/ijerph16132280

<sup>115</sup> Fogden, B. C., Thomas, S. D. M., Daffern, M., & Ogloff, J. R. P. (2016). Crime and victimization in people with intellectual disability: A case linkage study. *BMC Psychiatry*, 16, <https://bmcpsy psychiatry.biomedcentral.com/articles/10.1186/s12888-016-0869-7#Tab1>

<sup>116</sup> Streissguth, Barr, Kogan, & Bookstein, op. cit.

<sup>117</sup> Burd, L., & Kerbeshian, J. (2013). Fetal alcohol spectrum disorders: Commentary. *International Journal of Alcohol and Drug Research*, 2, 3-6.

31. **ID Equivalence:** Whether measured by definitional complexity, functional capacity, outcome risk, or any other logical metric, FASD is a much more severe disorder than ADHD and, in some cases, ID and therefore is well-deserving of being viewed under the rubric of “ID Equivalence.” The bases for FASD-ID similarity and FASD/ADHD dissimilarity are multifaceted and compelling, as described below:

- a. **Etiology:** Both ID and FASD stem from permanent structural brain damage. ADHD is etiologically multifactorial (and typically unknown). While FASD is a causal factor for both ID and ADHD, there is no evidence ADHD or ID are causal factors for FASD.
- b. **Diagnostic Protocol:** Typically, ID and ADHD are diagnosed by a single provider (e.g., mental health professional or pediatrician) in the context of relatively minimal testing (in DSM-5, ID requires IQ testing and adaptive assessment; ADHD does not require any testing). In contrast, FASD is diagnosed by a multidisciplinary team comprised of a neuropsychologist to conduct comprehensive cognitive testing to address the multiple domains that must be deficient per diagnostic criteria, an adaptive functioning specialist (usually a psychologist) to conduct standardized adaptive behavior assessment and assess documented life history for consistency with FASD, and a medical doctor to assess physical indicia of FASD (e.g., facial and growth abnormalities, brain damage). Thus, of the three conditions, FASD requires more resources to diagnose.
- c. **Cognitive Dysfunction:** While IQ distinguishes between ID and FASD in the majority of individuals with FASD, executive and everyday adaptive functioning in both conditions tends to be identical.<sup>118</sup> As noted previously, significant discrepancies in IQ domains are seen frequently in persons with FASD,<sup>119</sup> which makes full-scale IQ an inaccurate way to classify functional deficiency in FASD.<sup>120</sup> Full-scale IQ also has become less important in ID according to DSM-5 as “intellectual” deficiency now is defined as a broad array of mixed impairments that mostly involve executive dysfunction (i.e., reasoning, problem solving, planning, abstract thinking, judgment, learning from instruction and experience, practical understanding). Meta-analyses have found that persons with ADHD have full-scale IQs (FSIQs) that are only 9 points lower than neurotypical controls<sup>121, 122</sup>; in contrast to ADHD, average IQ in FAS is 79 (21 points lower than neurotypical controls).<sup>123</sup> A meta-analysis that directly compared IQ in FASD and ADHD found full-scale IQ was 16 points lower in FASD compared to ADHD.<sup>124</sup> Executive functioning also

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<sup>118</sup> Greenspan, S., Novick Brown, N., & Edwards, W. (2016). FASD and the concept of “intellectual disability equivalence.” In M. Nelson & M. Trussler (Eds.), *Fetal alcohol spectrum disorders in adults: Ethical and legal perspectives*. Switzerland: Springer.

<sup>119</sup> Bertrand et al., op. cit.

<sup>120</sup> Greenspan, Novick Brown, & Edwards, op. cit.

<sup>121</sup> Barkley, R. A., DuPaul, G. J., & McMurray, M. B. (1990). Comprehensive evaluation of attention deficit disorder with and without hyperactivity as defined by research criteria. *Journal of Consulting Clinical Psychology*, 58, 775-789.

<sup>122</sup> Frazier, T. W., Demaree, H. A., & Youngstrom, E. A. (2004). Meta-Analysis of Intellectual and Neuropsychological Test Performance in Attention-Deficit/Hyperactivity Disorder. *Neuropsychology*, 18(3), 543-555.

<sup>123</sup> Streissguth, Barr, Kogan, & Bookstein, op. cit.

<sup>124</sup> Kingdon, D., Cardoso, C., & McGrath, J. J. (2016). Research review: Executive function deficits in fetal alcohol spectrum disorders and attention-deficit/hyperactivity disorder – A meta-analysis. *Journal of Child Psychology and Psychiatry*, 57, 116-131.

is similar in FASD and ID but different from both in ADHD. Executive functioning tends to be universally impaired in FASD as well as ID,<sup>125</sup> but not all children with ADHD have executive functioning impairments.<sup>126, 127</sup> In fact, a 15-study meta-analysis that compared executive functioning in FASD and ADHD found persons with FASD performed significantly worse on cognitive measures of executive functioning than those with ADHD.<sup>128</sup> In addition, a 51-study meta-analysis found more extensive executive dysfunction in FASD compared to ADHD, particularly in executive skills requiring complex mental effort.<sup>129</sup>

There also is a fundamental difference in the qualitative nature of the attention deficit seen in FASD versus ADHD. Children with FASD have greater difficulty with *encoding* (i.e., capacity to hold information temporarily in working memory while performing mental operations on it) and *set-shifting* (i.e., ability to flexibly shift attention from one stimulus facet to another when appropriate), while children with ADHD have greater difficulty with *focusing* (i.e., concentrating attention on a particular task) and *sustaining attention* (i.e., staying on task).<sup>130, 131</sup>

- d. **Adaptive Dysfunction:** Both ID and FASD require adaptive impairment in DSM-5 (at least one deficient adaptive domain in ID, and at least two deficient adaptive domains in FASD), typically making people with ID and FASD indistinguishable from each other in terms of everyday behavior.<sup>132</sup> Moreover, adaptive deficits in FASD tend to worsen with age, with adolescents showing arrested development that persists well into the adult years.<sup>133, 134, 135</sup> In stark contrast to both FASD and ID, ADHD involves a very narrow band of dysfunction, affecting only one (attention) and sometimes two (attention plus executive functioning) cognitive domains, with no adaptive behavior deficiency. Most people with ADHD are able to support themselves and live independently in their adults years, while only a very small percentage of adults with ND-PAE can do both.<sup>136</sup>

<sup>125</sup> Kodituwakku, P. W. (2009). Neurocognitive profile in children with fetal alcohol spectrum disorders. *Developmental Disabilities Research Reviews*, 15, 218-224.

<sup>126</sup> Nigg, J. T., Willcutt, E. G., Doyle, A. E., & Sonuga-Barke, E. J. S. (2005). Causal heterogeneity in attention-deficit/hyperactivity disorder: Do we need neuropsychologically impaired subtypes? *Biology and Psychiatry*, 57, 1224-1230.

<sup>127</sup> Willcutt, E. G., Doyle, A. E., Nigg, J. T., Vasaone, S. V., & Pennington, B. F. (2005). Validity of the executive function theory of attention-deficit/hyperactivity disorder: A meta-analytic review. *Biology and Psychiatry*, 57, 1336-1346.

<sup>128</sup> Khoury, J. E., & Milligan, K. (2019). Comparing executive functioning in children and adolescents with fetal alcohol spectrum disorders and ADHD: A meta-analysis. *Journal of Attention Disorders*, 13, 1801-1815.

<sup>129</sup> Kingdon, Cardoso, & McGrath, op. cit.

<sup>130</sup> Coles, C. D. (2001). Fetal alcohol exposure and attention: Moving beyond ADHD. *Alcohol Research and Health*, 25, 199-203.

<sup>131</sup> Peadon, E., & Elliott, E. J. (2010). Distinguishing between attention-deficit hyperactivity and fetal alcohol spectrum disorders in children: Clinical guidelines. *Neuropsychiatric Disease and Treatment*, 6, 509-515.

<sup>132</sup> Greenspan, Novick Brown, & Edwards, op. cit.

<sup>133</sup> Crocker, N., Vaurio, L., Riley, E. P., & Mattson, S. N. (2009). Comparison of adaptive behavior in children with heavy prenatal alcohol exposure or attention-deficit/hyperactivity disorder. *Alcoholism: Clinical and Experimental Research*, 33, 2015-2023.

<sup>134</sup> Fagerlund, A., Autti-Ramo, I., Hoyme, H. E., Mattson, S. N., & Korkman, M. (2011). Risk factors for behavioral problems in foetal alcohol spectrum disorders. *Acta Paediatrica*, 100, 1481-1488.

<sup>135</sup> Mattson, S. N., Bernes, G. A., & Doyle, L. R. (2019). Fetal alcohol spectrum disorders: A review of the neurobehavioral deficits associated with prenatal alcohol exposure. *Alcoholism: Clinical and Experimental Research*, 43, 1046-1062.

<sup>136</sup> Burd, L., & Popova, S. (2019). Fetal alcohol spectrum disorders: Fixing our aim to aim for the fix. *International Journal of Environmental Research and Public Health*, 16, 1-6.

- e. **Comorbidity:** Unlike ADHD, FASD has extremely high rates of comorbidity. For example, a systematic review of prevalence studies that compared rates of comorbid mental disorders and neurodevelopmental disorders in FASD versus normally-constituted age-peers found that those with FASD were 45 times more likely to be diagnosed with ADHD, 22 times more likely to be diagnosed with ID, 13 times more likely to be diagnosed with oppositional defiant disorder, nearly 12 times more likely to be diagnosed with a psychotic disorder, 10.6 times more likely to be diagnosed with depression, and 10 times more likely to be diagnosed with a learning disorder.<sup>137</sup>
- f. **Likelihood of Misdiagnosis:** In the United States, 99.9% of people with FASD are undiagnosed or misdiagnosed.<sup>138</sup> In cases where attention and/or hyperactivity symptoms are prominent, such symptoms tend to get diagnosed as ADHD; in cases involving deficient IQ, ID typically is diagnosed, concealing underlying FASD. Notably, FASD is the leading cause of both ID and ADHD.<sup>139</sup> In children with FASD, average or low-average IQs in the context of learning disabilities, self-regulation problems, social deficits, and interpersonal difficulties often lead teachers and providers to attribute the difficulties to parenting deficiency. Moreover, when such symptoms occur in the context of attention problems and hyperactivity, providers misdiagnose ADHD, which is far more familiar than FASD to medical and mental health professionals. Under DSM-IV-TR, nearly all mental health professionals were inexperienced in FASD because there was no diagnosis specific to the condition until DSM-5 was published in 2013. As recently as 2015, a study found that 80% of pediatricians could not accurately diagnose FAS in children presenting with developmental and behavioral problems.<sup>140</sup> Consequently, prior to 2013, if a child had attention and/or hyperactivity problems, such symptoms were diagnosed as ADHD, with cognitive symptoms beyond attention and hyperactivity (e.g., learning disabilities, self-regulation problems, social deficits and interpersonal difficulties) attributed to a “severe” type of ADHD. Thus, unlike ADHD and ID, FASD is very much a hidden disability. Unfortunately, once children with FASD are misdiagnosed with ADHD, treatment tends to be limited to stimulant medication, with *no* developmental disabilities interventions during childhood for the pervasive brain-based cognitive dysfunction in FASD.
- g. **Course:** Symptom manifestation in ID and FASD is lifelong and quite different from ADHD. Symptoms of ADHD often are eliminated or significantly reduced with medication; symptoms are permanent in FASD and ID.<sup>141, 142</sup> Symptom manifestation in ADHD gradually decreases in severity across childhood and adolescence (i.e., research

<sup>137</sup> Weyrauch, D., Schwartz, M., Hart, B., Klug, M. G., & Burd, L. (2017). Comorbid mental disorders in fetal alcohol spectrum disorders: A systematic review. *Journal of Developmental and Behavioral Pediatrics*, 38, 283-291.

<sup>138</sup> Popova, S., Dozet, D., & Burd, L. (2020). Fetal alcohol spectrum disorder: Can we change the future? *Alcoholism: Clinical and Experimental Research*, 44, 815-819.

<sup>139</sup> Burd, L. (2016). FASD and ADHD: Are they related and how? *BMC Psychiatry*, 16, 325.  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5032242/>

<sup>140</sup> Stein, M. T. (2015). Misdiagnosis of fetal alcohol spectrum disorders in children presenting with developmental and behavioral problems. *Journal of Developmental and Behavioral Pediatrics*, <http://dx.doi.org/10.1097/DBP.0000000000000146>

<sup>141</sup> Oosterheld et al., 1998

<sup>142</sup> Peadon & Elliott, 2010



finds ADHD prevalence in adolescence is about half the childhood rate, and prevalence estimates continue to decrease by 50 percent more in adulthood<sup>143</sup>). In contrast, symptom course in ID remains relatively stable over the developmental years into adulthood, but FASD becomes more complex and debilitating,<sup>144</sup> leading to greater adaptive severity in adulthood.<sup>145</sup>

- h. **Cost of Care:** Estimated annual cost of care is high in both ID (\$32,000<sup>146</sup>) and FASD (\$23,000<sup>147</sup>). In contrast, estimated annual cost of care in ADHD is \$5,000.<sup>148</sup> Beyond the personal costs of medical and mental health needs, FASD also is an important public health and social problem that imparts a large financial burden on such sectors as the healthcare system, mental health and substance abuse treatment services, foster care, criminal justice system, and long-term care.<sup>149</sup> In research directly comparing the cost of care in FASD versus ADHD, the annual cost of care in FASD was found to be over 10 times higher than in ADHD.<sup>150</sup>
- i. **Mortality:** Life expectancy for males in the general population is 76 years.<sup>151</sup> In contrast, life expectancy is 74 years in ID,<sup>152</sup> 61 years in ADHD,<sup>153</sup> and only 34 years in FASD.<sup>154</sup> Thus, FASD has a greatly increased risk of mortality compared to ADHD and ID.

**32. In summary, Zane Floyd's ND-PAE/FASD is a brain-based, congenital, lifelong, impactful disorder deserving of the rubric "ID Equivalence." Regardless of how severity is measured (e.g., definitional complexity, diagnostic protocol, functional capacity, risk of negative outcomes, cognitive dysfunction adaptive dysfunction, comorbidity, likelihood of misdiagnosis, course, annual cost of care, mortality), Mr. Floyd's FASD is similar in severity to ID but substantially more severe than ADHD, with broad ramifications that have affected all important functional domains in his life. Unlike ADHD, Mr. Floyd's ND-PAE/FASD is a cause-and-effect condition with clear**

<sup>143</sup> Caye, A., Swanson, J., Thapar, A., Sibley, M., Arseneault, L., Hechtman, L., Arnold, L. E., Niclasen, J., Moffitt, T., & Rohde, L. A. (2016). Life span studies of ADHD: Conceptual challenges and predictors of persistence and outcome. *Current Psychiatry Reports*, 18, e1-e11.

<sup>144</sup> Streissguth, A. P. (1994). A long-term perspective of FAS. *Alcohol Health and Research World*, 18, 74-81.

<sup>145</sup> Kambeitz, C., Klug, M. G., Greenmyer, J., Popova, S., & Burd, L. (2019). Association of adverse childhood experiences and neurodevelopmental disorders in people with fetal alcohol spectrum disorders (FASD) and non-FASD controls. *BMC Pediatrics*, 19, 498 <https://doi.org/10.1186/s12887-019-1878-8>

<sup>146</sup> Friedman, C. (2017). A national analysis of Medicaid home and community based services waivers for people with intellectual and developmental disabilities: FY 2015. *Intellectual and Developmental Disabilities*, 55, 281-302.

<sup>147</sup> <https://www.webmd.com/baby/news/20181204/fetal-alcohol-costs-23000-a-year-per-case>

<sup>148</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4123753/>

<sup>149</sup> Popova, S., Lange, S., Burd, L., & Rehm, J. (2016). Economic burden of Fetal Alcohol Spectrum Disorder in Canada in 2013. *Alcohol and Alcoholism*, 51, 367-375.

<sup>150</sup> <https://www.nofas.org/faulty-opinion-could-harm-individuals-with-fasd/>

<sup>151</sup> Life expectancy for males in the U.S. has hovered around age 76 for the past two decades. See:

<https://www.cdc.gov/nchs/data/hestat/life-expectancy/life-expectancy-2018.htm#Table1>

<sup>152</sup> Bittles, A. H., Petterson, B. A., Sullivan, S. G., Hussain, R., Glasson, E. J., & Montgomery, P. D. (2002). The influence of intellectual disability on life expectancy. *Journals of Gerontology*, 57, m470-m472.

<sup>153</sup> Barkley, R. A., & Fischer, M. (2019). Hyperactive child syndrome and estimated life expectancy at young adult follow-up: The role of ADHD persistence and other potential predictors. *Journal of Attention Disorders*, 23, 907-923.

<sup>154</sup> Thanh, N. X., & Jonsson, E. (2016). Life expectancy of people with fetal alcohol syndrome. *Journal of Population Therapeutics and Clinical Pharmacology*, 23, e53-e59.

**etiology informed by five decades of science: prenatal alcohol exposure causes brain damage, which causes cognitive and adaptive dysfunction that leads to catastrophic consequences in some situations. Unlike ADHD, which only explains attention deficits, impulsivity, and hyperactive behavior during childhood, ND-PAE/FASD explains *all* of Mr. Floyd's behavior – across his entire lifespan.**

## L. BRAIN MATURITY

### Normal Brain Development

33. The mature brain is composed of more than 100 billion neurons,<sup>155</sup> the information processing cells in the brain. Neurons make connections with other neurons to form information processing networks that are responsible for our thoughts, sensations, feelings, and actions. The adult brain is estimated to have more than 60 trillion neuronal connections.<sup>156</sup> The largest and most important brain information processing networks are the *neocortex* (e.g., frontal, occipital, parietal, and temporal lobes) and *subcortical nuclei* that relay information to and from the neocortex. The subcortical nuclei are clusters of neurons located deep in the brain that serve as signal relay centers for communication within the neocortex and with the rest of the body. Because both the neocortex and subcortical nuclei contain the cell bodies of neurons, they are gray in appearance and thus are called “gray matter.” Populations of neurons connect to one another via fibers that extend to and from the cell bodies of individual neurons. There are two kinds of connecting fibers: axons that send electrochemical signals from neurons and dendrites that receive such input. Because axons are wrapped in a white fatty substance called myelin that, like insulation on a telephone wire, makes transmission of electrochemical signals more efficient, these fiber pathways of brain are referred to as “white matter.”
34. Brain development continues for an extended period postnatally. Generally, phylogenetically older cortical areas (e.g., brain regions associated with more basic functions) mature earlier than newer cortical regions (i.e., brain regions involved in executive functioning, attention, and motor coordination).<sup>157</sup> Frontal lobe maturation progresses in a back-to-front direction, beginning in the primary motor and sensory cortices and ending with the prefrontal cortex developing last.
35. Imaging studies show increases in gray matter density in childhood followed by losses in density during adolescence and early adulthood, which correlates with synaptic pruning.<sup>158</sup> Myelination, which speeds neuronal transmission, occurs throughout childhood and increases

<sup>155</sup> Pakkenberg, B., & Gundersen H. J. (1997). Neocortical neuron number in humans: effect of sex and age. *The Journal of Comparative Neurology*, 384(2), 312–320.

<sup>156</sup> Stiles, J., & Jernigan, T. L. (2010). The basics of brain development. *Neuropsychological Reviews*, 20(4), 327–348.

<sup>157</sup> Gogtay, N., Giedd, J. N., Lusk, L., Hayashi, K. M., Greenstein, D., Vaituzis, A. C., Nugent, III, T. F., Herman, D. H., Clasen, L. S., Toga, A. W., Rapoport, J. L., & Thompson, P. M. (2004). Dynamic mapping of human cortical development during childhood through early adulthood. *Proceedings of the National Academy of Sciences*, 101(21), 8174–8179.

<sup>158</sup> Rakic, P. (1996) in *Child and Adolescent Psychiatry*, ed. Lewis, M. (Williams and Wilkins, Baltimore), pp. 9–30.



in mid-to-late adolescence,<sup>159, 160</sup> with pronounced increases in the density of myelinated axons in the neocortex well into the 20s,<sup>161, 162</sup> providing evidence of prolonged neocortical maturation.<sup>163, 164, 165, 166</sup> MRI studies also indicate that growth in cortical white matter volume persists into early adulthood,<sup>167, 168, 169, 170</sup> with the greatest maturational delay in areas of the brain that govern self-regulation (prefrontal cortex, inferior parietal lobe, and anterior cingulate cortex).<sup>171, 172, 173, 174, 175, 176, 177, 178, 179</sup> In fact, synaptic pruning in the prefrontal cortex has been shown to continue until age 30 years.<sup>180</sup>

<sup>159</sup> Yakovlev, P. I., & Lecours, A. (1967). The myelogenetic cycles of regional maturation of the brain. In: A. Minkowski (Ed.), *Regional development of the brain in early life*. Oxford: Blackwell Science.

<sup>160</sup> Huttenlocher, P. R. (1990). Morphometric study of human cerebral cortex development. *Neuropsychologia*, 28(6), 517-527.

<sup>161</sup> Yakovlev, P. I., & Lecours, A. (1967). The myelogenetic cycles of regional maturation of the brain. In: A. Minkowski (Ed.), *Regional development of the brain in early life*. Oxford: Blackwell Science.

<sup>162</sup> Benes, F. M. (1989). Myelination of cortical-hippocampal relays during late adolescence. *Schizophrenia Bulletin*, 15, 585-593.

<sup>163</sup> Miller, D. J., Duka, T., Stimpson, C. D., Schapiro, S. J., Base, W. B., McArthur, M. J., Fobbs, A. J., Sousa, A. M. M., Sestan, N., Wildman, D. E., Lipovich, L., Kuzawa, C. W., Hof, P. R., & Sherwood, C. C. (2012). Prolonged myelination in human neocortical evolution. *Proceedings of the National Academy of Sciences*, 109(41), 16480-16485.

<sup>164</sup> Steinberg, L., Albert, D., Cauffman, E., Banich, M., Graham, S., & Woolard, J. (2008). Age differences in sensation seeking and impulsivity as indexed by behavior and self-report: Evidence for a dual systems model. *Developmental Psychology*, 44(6), 1764-1778.

<sup>165</sup> Cope, L. M., Hardee, J. E., Martz, M. E., Zudker, R. A., Nichols, T. E., & Heitzeg, M. M. (2020). Developmental maturation of inhibitory control circuitry in a high-risk sample: A longitudinal fMRI study. *Developmental Cognitive Neuroscience*, 43, <https://doi.org/10.1016/j.dcn.2020.100781>

<sup>166</sup> Steinberg, L. (2009). Should the science of adolescent brain development inform public policy? *American Psychologist*, 64, 739-750.

<sup>167</sup> Groeschel, S., Vollmer, B., King, M.D., & Connelly, A. (2010). Developmental changes in cerebral grey and white matter volume from infancy to adulthood. *International Journal of Developmental Neuroscience*, 28, 481-489.

<sup>168</sup> Gogtay, N., Giedd, J.N., Lusk, L., Hayashi, K.M., Greenstein, D., Vaituzis, A.C., et al. (2004). Dynamic mapping of human cortical development during childhood through early adulthood. *Proceedings of the National Academy of Sciences*, 101, 8174-8179.

<sup>169</sup> Shaw, P., Kabani, N. J., Lerch, J. P., Eckstrand, K., Lenroot, R., Gogtay, N., Greenstein, D., Clasen, L., Evans, A., Rapoport, J. L., Giedd, J. N., & Wise, S. P. (2008). Neurodevelopmental trajectories of the human cerebral cortex. *Journal of Neuroscience*, 28, 3586-3594.

<sup>170</sup> Sowell, E.R., Thompson, P.M., Holmes, C.J., Jernigan, T.L., & Toga, A.W. (1999). In vivo evidence for post-adolescent brain maturation in frontal and striatal regions. *Nature Neuroscience*, 2, 859-861.

<sup>171</sup> Elston, G.N., Oga, T., & Fujita, I. (2009). Spinogenesis and pruning scales across functional hierarchies. *Journal of Neuroscience*, 29, 3271-3275.

<sup>172</sup> Huttenlocher, P. R. (1979). Synaptic density in human frontal cortex: Developmental changes and effects of aging. *Brain Research*, 163, 195-205.

<sup>173</sup> Jacobs, B., Schall, M., Prather, M., Kapler, E., Driscoll, L., Baca, S., Jacobs, J., Ford, K., Wainwrights, M., & Trembl, M. (2001). Regional dendritic and spine variation in human cerebral cortex: A quantitative Golgi study. *Cerebral Cortex*, 11, 558-571.

<sup>174</sup> Travis, K., Ford, K., & Jacobs, B. (2005). Regional dendritic variation in neonatal human cortex: A quantitative Golgi study. *Developmental Neuroscience*, 27, 277-287.

<sup>175</sup> Cope et al., 2020, op. cit.

<sup>176</sup> Casey, B. J. (2015). Beyond simple models of self-control to circuit-based accounts of adolescent behavior. *Annual Review of Psychology*, 66, 295-319.

<sup>177</sup> Casey, B. J., Getz, S., & Galvan, A. (2008). The adolescent brain. *Developmental Review*, 28(1), 62-77.

<sup>178</sup> Eshel, N., Nelson, E.E., Blair, R.J., Pine, D.S., & Ernst, M. (2007). Neural substrates of choice selection in adults and adolescents: Development of the ventrolateral prefrontal and anterior cingulate cortices. *Neuropsychologia*, 45(6), 1270-1279.

<sup>179</sup> Luna, B., Padmanabhan, A., & O'Hearn, K. (2010). What has fMRI told us about the development of cognitive control through adolescence? *Brain and Cognition*, 72(1), 101-113.

<sup>180</sup> Petanjek, Z., Judas, M., Simic, G., Rasin, M. R., Uylings, H. B. M., Rakic, P., & Koslovic, I. (2011). Extraordinary neoteny of synaptic spines in the human prefrontal cortex. *Proceedings of the National Academy of Sciences*, 108, 13281-13286.

36. Functionally, self-regulation – a central diagnostic criterion in ND-PAE – is the byproduct of interactions between neural processes that support controlled, reasoned, and deliberative thought (“executive processing”) and those that drive reactive, emotional, and reward-sensitive responding (“affective processing”).<sup>181</sup> The affective processing system is the first to mature in normally developing adolescent brains. In fact, one of the most important structural and functional brain changes during adolescence is maturation of limbic and paralimbic areas associated with reward processing (e.g., amygdala, ventral striatum, orbitofrontal cortex, ventromedial prefrontal cortex, and superior temporal sulcus).<sup>182, 183, 184, 185</sup> The affective system also includes neural circuits that mediate reward-sensitivity,<sup>186</sup> which is thought to influence “sensation-seeking”<sup>187</sup> as well as valuation and prediction of reward and punishment.<sup>188, 189, 190</sup> The executive processing system is the last brain area to fully develop. During the course of normal brain development, connections between the prefrontal cortex and other self-regulatory brain regions become stronger and more efficient through pruning of unused neuronal connections, which decreases gray matter, and myelination (sheathing/insulating) of neurons, which increases white matter. In healthy brains, both processes support improved executive control and multitasking (i.e., planning, motivation, evaluating future consequences, weighing risk and reward, judgment, and decision making while simultaneously moderating strong unconscious neural impulses from the amygdala).<sup>191, 192, 193, 194</sup> Development of these neural connections in late adolescence and early adulthood is thought to result in relatively late maturation of “top-down” control systems that gradually strengthen their influence over early emerging and largely subcortical “bottom-up” systems that are highly responsive to rewarding and emotional stimuli.<sup>195</sup>

<sup>181</sup> Smith, A. R., Chain, J., & Steinberg, L. (2013). Impact of socio-emotional context, brain development, and pubertal maturation on adolescent risk-taking. *Hormones and Behavior*, 64, 323-332.

<sup>182</sup> Adolphs, R. (2003). Is the human amygdala specialized for processing social information? *Annals New York Academy of Sciences*, 985, 326-340.

<sup>183</sup> Knutson, B., & Cooper, J. C. (2005). Functional magnetic resonance imaging of reward prediction. *Current Opinion in Neurology*, 18(4), 411-417.

<sup>184</sup> Robbins, T. W., & Everitt, J. (1996). Neurobehavioural mechanisms of reward and motivation. *Current Opinion in Neurobiology*, 6, 228-236.

<sup>185</sup> Spear, L. P. (2009). *The behavioral neuroscience of adolescence*. New York: W.W. Norton & Co.

<sup>186</sup> Spear, op. cit.

<sup>187</sup> Smith, Chain, & Steinberg, op. cit.

<sup>188</sup> Hare, T. A., Tottenham, N., Galvan, A., Voss, H. U., Glover, G. H., & Casey, B. J. (2008). Biological substrates of emotional reactivity and regulation in adolescence during an emotional go-no go task. *Biological Psychiatry*, 63, 927-934.

<sup>189</sup> Galván, A., Hare, T. A., Parra, C. E., Penn, J., Voss, H., Glover, G., & Casey, B. J. (2006). Earlier development of the accumbens relative to orbitofrontal cortex might underlie risk-taking behavior in adolescents. *Journal of Neuroscience*, 26, 6885-6892.

<sup>190</sup> Luciana, M., & Collins, P. F. (2012). Incentive motivation, cognitive control, and the adolescent brain: Is it time for a paradigm shift? *Child Development Perspectives*, 6, 392-399.

<sup>191</sup> Olesen, P. J., Nagy, Z., Westerberg, H., & Klingberg, T. (2003). Combined analysis of DTI and fMRI data reveals a joint maturation of white and grey matter in a fronto-parietal network. *Cognitive Brain Research*, 18, 48-57.

<sup>192</sup> Schmithorst, V. J., & Yuan, W. (2010). White matter development during adolescence as shown by diffusion MRI. *Brain and Cognition*, 72, 16-25.

<sup>193</sup> Liston, C., Watts, R., Tottenham, N., Davidson, M., Niogi, S., Ulug, A., & Casey, B. J. (2006). Frontostriatal microstructure modulates efficient recruitment of cognitive control. *Cerebral Cortex*, 16, 553-560.

<sup>194</sup> Stevens, M. C., Kiehl, K. A., Pearlson, G. D., & Calhoun, V. D. (2007). Functional neural networks underlying response inhibition in adolescents and adults. *Behavioural Brain Research*, 181, 12-22.

<sup>195</sup> Casey, B. J., Getz, S., & Galvan, A. (2008). The adolescent brain. *Developmental Review*, 28(1), 62-77.

Behavioral evidence for delayed maturation in self-regulatory frontal regions is especially evident on tasks requiring inhibitory self-control.<sup>196, 197</sup>

37. Although the still-maturing self-regulatory system in adolescents and young adults generally is adequate to support reasoned decision making in minimally arousing situations,<sup>198, 199, 200</sup> in situations involving stress or other strong impulses from the amygdala, asynchronous maturation leaves the brain's affective processing system in a state of hypersensitivity during a period of time when the deliberative processing system is not yet mature enough to compensate for such heightened arousal, thereby increasing vulnerability to risky and reckless behavior.<sup>201, 202, 203, 204</sup>

### Brain Development in FASD

38. Born with widespread brain damage, people with FASD also exhibit *abnormal and delayed brain maturation across the developmental years*. Using magnetic resonance imaging (MRI) and diffusion tensor imaging (DTI) to study structural integrity and functional connectivity, studies consistently find significant maturational alterations and delays in the prefrontal cortex<sup>205, 206</sup> and its microstructure<sup>207, 208, 209</sup> in children, adolescents, and adults with prenatal alcohol exposure (PAE) compared to normally-developing age-peers. In stark contrast to normal changes in brain architecture during adolescence that improve speed and efficiency of neurochemical communication, convergent longitudinal research finds that individuals with PAE show: (a) blunted volume changes in grey matter in adolescence, indicating

<sup>196</sup> Durston, S., Davidson, M.C., Tottenham, N., Galvan, A., Spicer, J., Fossella, J. A., et al. (2008). A shift from diffuse to focal cortical activity with development. *Developmental Science*, 9(1), 1–20.

<sup>197</sup> Casey, B. J., Trainor, R. J., Orendi, J. L., Schubert, A.B., Nystrom, L.E., Giedd, J.N., et al. (1997). A developmental functional MRI study of prefrontal activation during performance of a go-no-go task. *Journal of Cognitive Neuroscience*, 9(6), 835–847.

<sup>198</sup> Chein, J., Albert, D., O'Brien, L., Uckert, K., & Steinberg, L. (2011). Peers increase adolescent risk taking by enhancing activity in the brain's reward circuitry. *Developmental Science*, 14(2), F1–F10.

<sup>199</sup> Gardner, M., & Steinberg, L. (2005). Peer influence on risk taking, risk preference, and risky decision making in adolescence and adulthood: An experimental study. *Developmental Psychology*, 41(4), 625–635.

<sup>200</sup> Smith, A. R., Chain, J., & Steinberg, L. (2013). Impact of socio-emotional context, brain development, and pubertal maturation on adolescent risk-taking. *Hormones and Behavior*, 64, 323–332.

<sup>201</sup> Liston, C., McEwen, B.S., & Casey, B.J. (2009). Psychosocial stress reversibly disrupts prefrontal processing and attentional control. *Proceedings of the National Academy of Sciences*, 106(3), 912–917.

<sup>202</sup> Ibid.

<sup>203</sup> Casey, B. J., Jones, R. M., Levita, L., Libby, V., Pattwell, S. S., Ruberry, E.J.,... Somerville, L. H. (2010). The storm and stress of adolescence: Insights from human imaging and mouse genetics. *Developmental Psychobiology*, 52, 225–235.

<sup>204</sup> Shulman, E. P., Smith, A. R., Silva, K., Icenogle, G., Duell, N., Chein, J., & Steinberg, L. (2016). The dual systems model: Review, reappraisal, and reaffirmation. *Developmental Cognitive Neuroscience*, 17, 103–117.

<sup>205</sup> Treit, S., Lebel, C., Baugh, L., Rasmussen, C., Andrew, G., & Beaulieu, C. (2013). Longitudinal MRI reveals altered trajectory of brain development during childhood and adolescence in fetal alcohol spectrum disorders. *Journal of Neuroscience*, 33, 10098–100109.

<sup>206</sup> Sowell, E.R., Thompson, P.M., Mattson, S.N., Tessner, K.D., Jernigan, T.L., Riley, E.P., et al. (2002). Regional brain shape abnormalities persist into adolescence after heavy prenatal alcohol exposure. *Cerebral Cortex*, 12, 856–65.

<sup>207</sup> Lebel, C., Mattson, S.N., Riley, E.P., Jones, K.L., Adnams C.M., May, P.A., et al. (2012). A longitudinal study of the long-term consequences of drinking during pregnancy: heavy in utero alcohol exposure disrupts the normal processes of brain development. *Journal of Neuroscience*, 32, 15243–15251.

<sup>208</sup> Treit et al., op. cit.

<sup>209</sup> De Guio, F., Mangin, J.F., Rivière, D., Perrot, M., Moltano, C.D., Jacobson, S.W., et al. (2014). A study of cortical morphology in children with fetal alcohol spectrum disorders. *Human Brain Mapping*, 35, 2285–2296.

compromised pruning and diminished plasticity in the cerebral cortex, as well as (b) delayed white matter myelination. Together, these brain development anomalies in PAE significantly impair global network efficiency, speed of information processing, and executive self-regulation.

39. Longitudinal MRI studies focused on brain development in PAE versus brain development in unexposed individuals consistently find structural abnormalities in the former. For example, in a longitudinal study<sup>210</sup> using MRI to measure cortical volume changes over time, normal processes of brain maturation were significantly delayed or disrupted in children and adolescents with PAE. While unexposed controls showed a plastic cortex with a prolonged pattern of cortical volume increases in childhood followed by equally vigorous volume decreases in adolescence (i.e., an inverted “U” shaped pattern), individuals with PAE showed only volume loss in most cortical areas across the developing years. Another longitudinal MRI study<sup>211, 212</sup> similarly found significantly less cortical thinning over time in self-regulatory brain regions (i.e., frontal, parietal, and limbic) in adolescents with PAE. In another longitudinal study that used a large sample size to follow brain development from age 7-18, researchers<sup>213</sup> found subjects with PAE consistently had smaller volumes than control subjects in structures throughout the brain, with significantly different trajectories of brain activation in visuospatial attention and working memory tasks compared to controls (i.e., in contrast to unexposed subjects who exhibited *increasing* brain activation during development, those with PAE exhibited *decreasing* brain activation). In a review of 64 MRI studies that compared PAE groups to unexposed control groups,<sup>214</sup> results indicated smaller total brain volume as well as smaller volume of both white and grey matter in specific cortical regions. The most consistently reported structural MRI findings were alterations in the shape and volume of the corpus callosum, as well as smaller volume in the basal ganglia and hippocampi. Resting-state functional MRI studies reported reduced functional connectivity between cortical and deep grey matter structures.
40. DTI, a process that measures water diffusion in brain tissue, provides exquisitely sensitive measures of white matter microstructure in vivo. A review of 23 DTI studies conducted on children, adolescents, and adults with PAE<sup>215</sup> found nearly universal diffusion abnormalities,

<sup>210</sup> Lebel, C., Mattson, S.N., Riley, E.P., Jones, K.L., Adnams, C.M., May, P.A., et al. (2012). A longitudinal study of the long-term consequences of drinking during pregnancy: heavy in utero alcohol exposure disrupts the normal processes of brain development. *Journal of Neuroscience*, 32(44), 15243–51.

<sup>211</sup> Treit, S., Zhou, D., Lebel, C., Rasmussen, C., Andrew, G., & Beaulieu, C. (2014). Longitudinal MRI reveals impaired cortical thinning in children and adolescents prenatally exposed to alcohol. *Human Brain Mapping*, 35(9), 4892-4903.

<sup>212</sup> Treit, S., Lebel, C., Baugh, L., Rasmussen, C., Andrew, G., & Beaulieu, C. (2013). Longitudinal MRI reveals altered trajectory of brain development during childhood and adolescence in fetal alcohol spectrum disorders. *Journal of Neuroscience*, 33(24), 10098–10109.

<sup>213</sup> Gautam, P., Lebel, C., Narr, K. L., Mattson, S. N., May, P. A., Adnams, C. M., Riley, E. P., Jones, K. L., Kan, E. C., & Sowell, E. R. (2015). Volume changes and brain-behavior relationships in white matter and subcortical gray matter in children with prenatal alcohol exposure. *Human Brain Mapping*, 36, 2318-2329.

<sup>214</sup> Donald, K. A., Eastman, E., Howells, F. M., Adnams, C., Riley, E. P., Woods, R. P., Narr, K. L., & Stein, D. J. (2015). Neuroimaging effects of prenatal alcohol exposure on the developing human brain: A magnetic resonance imaging review. *Acta Neuropsychiatrica*, 27(5), 251-269.

<sup>215</sup> Sherbaf, F. G., Aarabi, M. H., Yazdi, M. H., & Haghsomar, M. (2018). White matter microstructure in fetal alcohol spectrum disorders: A systematic review of diffusion tensor imaging studies. *Human Brain Mapping*, 40(3), 1017-1036.

with no brain regions spared. Such findings indicate delayed maturation of axonal tracts over the course of brain development, mostly through disruptions in the myelination process. Specifically, there was convergent evidence of impaired integrity in communication networks throughout the brain: (a) *association fibers* (axons connecting cortical areas within the same cerebral hemisphere), (b) *projection fibers* (white matter tracts connecting the cortex with deeper brain regions), and (c) *callosal tracts* (fibers connecting the right and left cerebral hemispheres). In other words, there was impaired white matter integrity in communication tracts throughout the brain throughout development. Moreover, in studies that also investigated brain-behavior links, abnormalities in white matter pathways important in self-regulation (e.g., corpus callosum, cerebellar peduncles, cingulum, and longitudinal fasciculi connecting frontal and temporoparietal regions) were consistently associated with extent of alcohol exposure and severity of cognitive/behavioral symptoms.

41. **In summary, given that the normally-developing “adolescent brain” does not have mature executive control capacity until at least age 25 and brain development in young adults with FASD lags many years behind rates seen in neurotypical age peers, it is likely Mr. Floyd’s brain was not fully developed at the time of the offense due to his ND-PAE/FASD, which would have had an additive and cumulative effect on the brain damage he was born with.**

I declare under penalty of perjury that the foregoing is true and correct.

Dated: February 24, 2021



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Natalie Novick Brown, PhD  
Clinical and Forensic Psychologist

## **Appendix A Resume**

**Natalie Novick Brown, PhD, SOTP**  
**Northwest Forensic Associates, LLC**  
**Mailing Address: 31811 Pacific Hwy South, B-341**  
**Federal Way, WA 98003**  
Phone: (425) 275-1238  
[drnataliebrown@gmail.com](mailto:drnataliebrown@gmail.com)

## **Curriculum Vitae**

### **Licensed Psychologist** (Washington State: #PY1965)

Certified Psychologist (CPQ #3258), Association of State & Provincial Psychology Boards

Certified Sex Offense Treatment Provider (Washington State SOTP #FC112)

National Register of Health Service Providers in Psychology, #49892

Certified Psychologist/Evaluator for Department of Corrections, Division of Developmental Disabilities, Department of Social & Health Services (Washington State)

Certified Parenting Evaluator, University of Washington Department of Psychiatry and Behavioral Sciences

## **EDUCATION**

1995 - 1996    **Post-Doctoral Internship in Sex Offender Evaluation/Treatment**  
Supervisor: Stuart Brown, EdD, SOTP

1994 - 1995    **Post-Doctoral Fellowship in FASD**  
Fetal Alcohol and Drug Unit, Department of Psychiatry and Behavioral Sciences,  
School of Medicine, University of Washington  
Supervisor: Ann Streissguth, PhD

1993 - 1994    **Forensic Internship in Parenting Evaluation**  
Parenting Evaluation Training Program, Department of Psychology, University of  
Washington

1989 - 1994    **Ph.D. in Clinical Psychology**  
University of Washington, Seattle, WA  
Dissertation: Relation Between Psychological Correlates of Alcoholism Risk and  
Stress-Response Dampening Across the Blood Alcohol Curve

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- 1978 - 1979    **M.H.A. in Health Care Administration**  
University of Washington, Seattle, WA
- 1974 - 1975    **M.L.S. in Library and Information Sciences**  
University of Washington, Seattle, WA
- 1964 - 1968    **B.A. in Sociology/Psychology**  
University of California at Los Angeles (UCLA), Los Angeles, CA

## ACADEMIC APPOINTMENTS

- 2005 – present    **Clinical Assistant Professor** (courtesy faculty), Department of Psychiatry and Behavioral Medicine, School of Medicine, University of Washington, Seattle
- 1995 – 2005    **Clinical Instructor** (courtesy faculty), Department of Psychiatry and Behavioral Medicine, School of Medicine, University of Washington, Seattle
- 1993 – 1995    **Teaching Assistant**, Department of Psychology, University of Washington, Seattle

## CLINICAL EXPERIENCE

- 1996 – present    **Clinical and Forensic Psychologist**
- Professional consultation/evaluation and related testimony in criminal and civil matters, including adult/juvenile sex offense/risk assessment evaluation (e.g., civil commitment under Sexually Violent Predator laws); adult, adolescent, and child psychological evaluation (general psychological assessment, competency, dependency, FASD, neurodevelopmental disabilities (e.g., autism spectrum disorder, ADHD, learning disabilities), child abuse/neglect); post-conviction/commitment treatment planning; parenting evaluation; and independent medical examination (IME)
- Psychological assessment of recidivists referred by King County Mental Health and Drug Courts
- Seattle Police Department: victim assessment and consultation regarding neurodevelopmental impairment



Special Commitment Center (WA): community-based therapy for released Sexually Violent Predators

Group therapy (1996-2000)/individual therapy (1996-present)

Supervision of doctoral students and psychologists obtaining SOTP certification

1994 - 1995      **Postdoctoral Fellowship / Faculty Appointment** (1994-2000), Fetal Alcohol and Drug Unit (Dr. Ann Streissguth), University of Washington

Training and research in FASD and other neurodevelopmental disorders, maternal alcohol use assessment, and lifelong adaptive assessment/secondary disabilities. Courtesy appointment as Clinical Instructor.

1992 - 1994      **Pre-doctoral Internships** (University of Washington)

(1) Psychotherapy

(3) Pain Management - assessment/treatment

(4) Traumatic Brain Injury Rehabilitation – assessment

## **PRE-DOCTORAL WORK EXPERIENCE**

1987-89      **CEO/Board of Directors**  
Columbia Hospital / Omni Substance Abuse Treatment Clinic

1981-87      **CEO**  
Toppenish Hospital, Washington

1979-81      **Assistant CEO / CEO**  
Virginia Mason Medical Center / McLeary Hospital  
Seattle, Washington

1977-79      **Medical Librarian**  
Providence Medical Center, Seattle, Washington

## RESEARCH

- 2005 – present      **Forensic Consultant** (courtesy staff)  
Fetal Alcohol and Drug Abuse Unit, Department of Psychiatry and Behavioral Medicine, University of Washington, Seattle, Washington  
Research on suggestibility and FASD prevention/treatment under Parent Child Assistance Program (PCAP)
- 1994 - 1995      **Postdoctoral Fellow**  
Fetal Alcohol Unit, University of Washington  
Research on FASD in Washington State prisons
- 1991 - 1994      **Research Coordinator**  
Department of Psychology, University of Washington, Seattle, Washington  
Subject: Prediction of High-Risk Drinking in Young Adults
- 1990 – 1992      **Research Coordinator**  
Department of Psychology, University of Washington, Seattle, Washington  
Subject: Effects of Alcohol on Social Influence
- 1989 - 1991      **Research Coordinator**  
Department of Psychology, University of Washington, Seattle, Washington  
Subject: Factors Affecting Self-Esteem in Young Adults

## PEER REVIEW

*Journal of Mental Health and Clinical Psychology*  
Sciaccess Publishers

*Epigenetics*  
Taylor & Francis

*Criminal Behaviour and Mental Health*  
Wiley Online

*International Journal of Law and Psychiatry*  
International Academy of Law and Mental Health, Harvard University

## **Addiction**

Society for the Study of Addiction

### **PUBLICATIONS**

Novick Brown, N. (in process). *Fetal alcohol spectrum disorders (FASD): A guide for forensic mental health assessment*. New York: Springer.

Novick Brown, N. (in press). Fetal alcohol spectrum disorders (FASD) and risk of violence. In J.M. Fabian (Ed.), *Violence risk in criminal offender populations*. Oxford, UK: Wiley.

Novick Brown, N. (2019). Fetal alcohol spectrum disorders (FASD): Intellectual disability equivalence. In G. Becker, K. Hennicke, & M. Klein (Eds.), *Adults with fetal alcohol spectrum disorders: Diagnosis, screening, intervention, and addiction prevention*. Vol. 2. Berlin, Germany: De Gruyter Publisher.

Novick Brown, N. (2019). *Effective sustainable treatment approaches for individuals with fetal alcohol spectrum disorders: What is the evidence?* Seattle: Alcohol & Drug Abuse Institute, University of Washington, 8p.

Grant, T.M., Graham, J.C., Carlini, B.H., Ernst, C.C., & Novick Brown, N. (2018). Use of marijuana and other substances among pregnant and parenting women with substance use disorders: Changes in Washington State after marijuana legalization. *Journal of Studies on Alcohol and Drugs*, 79, 79-87.

Brown, J.M., Haun, J., Zapf, P.A., & Novick Brown, N. (2017). Fetal alcohol spectrum disorder (FASD) and competency to stand trial (CST): Suggestions for a ‘best practices’ approach to forensic evaluation. *International Journal of Law and Psychiatry*, 52, 19-27.

Brown, J., Haun, J., Novick Brown, N., & Zapf, P.A. (2016). The deleterious effects of fetal alcohol spectrum disorder on competency to stand trial. *The Journal of Special Populations*, 1, 1-7.

Greenspan, S., Novick Brown, N., & Edwards, W. (2016). FASD and the concept of “intellectual disability equivalence.” In M. Nelson & M. Trussler (Eds.), *Law and ethics in fetal alcohol spectrum disorder*. Amsterdam: Springer.

Grant, T.M., Novick Brown, N., & Dubovsky, D. (2015). Screening for Fetal Alcohol Spectrum Disorders: A critical step toward improving treatment success. In: G. Becker, K. Hennicke, & M. Klein (Eds.), *Addicted adults with fetal alcohol spectrum disorders: Diagnosis, screening, and intervention*. Berlin, Germany: De Gruyter Publisher.

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Novick Brown, N., Burd, L., Grant, T. M., Edwards, W., Adler, R., & Streissguth, A. (2015). Prenatal alcohol exposure: An assessment strategy for the legal context. *International Journal of Law and Mental Health*, 42-43, 144-148.

Novick Brown, N., & Connor, P.D. (2014). Executive dysfunction and learning in children with fetal alcohol spectrum disorders (FASD). *Cognitive Sciences*, 8, 47-105.

Novick Brown, N., & Connor, P.D. (2014). Impact of executive functioning on learning in fetal alcohol spectrum disorders (FASD). In: Bennett, K.P. (Ed.), *Executive functioning: Role in early learning processes, impairments in neurological disorders and impact of cognitive behavior therapy (CBT)*. Hauppauge, NY: Nova.

Grant, T., Graham, J.C., Ernst, C.C., Peavy, K.M., & Novick Brown, N. (2014). Improving pregnancy outcomes among high-risk mothers who abuse alcohol and drugs: Factors associated with subsequent exposed births. *Children and Youth Services Review*, 46, 11-18.

Novick Brown, N., Clarren, S., & Grant, T. (Winter 2014). Fetal alcohol spectrum disorders: What judges and other legal professionals need to know. *Judges' Page, Court Appointed Special Advocates*.

Rich, S.D., & Novick Brown, N. (2014). A case for a diagnostic code for neurodevelopmental disorder associated with prenatal alcohol exposure: A child/adolescent psychiatrist and forensic psychologist speak out. *Psychiatric News*,  
<http://psychnews.psychiatryonline.org/newsarticle.aspx?articleid=1792237>.

Grant, T.M., Novick Brown, N., Graham, J.C., & Ernst, C.C. (2013). The value of the neuropsychological assessment for adults with fetal alcohol spectrum disorders: A case study. *International Journal of Alcohol and Drug Research*, 2, 79-86.

Novick Brown, N., & Rich, S.D. (Winter 2013). A neurodevelopmental paradigm for fetal alcohol spectrum disorder. *Judges' Page, Court Appointed Special Advocates*.

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Novick Brown, N., Wartnik, A., & Rich, S.D. (2013). Diagnosing FASD in the era of DSM-5: Good news for the forensic context. *Fetal Alcohol Forum*, 10, 34-37.

Grant, T.M., Novick Brown, N., Dubovsky, D., Sparrow, J., & Ries, R. (i2013). The impact of prenatal alcohol exposure on addiction treatment. *Journal of Addiction Medicine*, 7, 87-95.

- Grant, T.M., Novick Brown, N., Graham, J.C., Whitney, N., Dubovsky, D., & Nelson, L.A. (2013). Screening in treatment programs for Fetal Alcohol Spectrum Disorders that could affect therapeutic progress. *International Journal of Alcohol and Drug Research*, 2, 37-49.
- Novick Brown, N., Connor, P.D., & Adler, R. (2012). Conduct-disordered adolescents with fetal alcohol spectrum disorder: Intervention in secure treatment settings. *Criminal Justice and Behavior*, 39, 789-812.
- Novick Brown, N., O'Malley, K., & Streissguth, A.P. (2012). FASD: Diagnostic dilemmas and challenges for a modern transgenerational management approach. In S. Adubato & D. Cohen (Eds.), *Prenatal Alcohol Use and Fetal Alcohol Spectrum Disorders: Diagnosis, Assessment, and New Directions in Research and Multimodal Treatment*. Bentham Online Publishing.
- Novick Brown, N., Gudjonsson, G., & Connor, P. (2011). Suggestibility and Fetal Alcohol Spectrum Disorders (FASD): I'll tell you anything you want to hear. *Journal of Psychiatry and Law*, 39, 39-71.
- Novick Brown, N. (Spring 2011). Evidence-based interventions in children with Fetal Alcohol Spectrum Disorders. *Paradigm*, 16, 12-17.
- Novick Brown, N., Wartnik, A.P., Connor, P.D., & Adler, R.S. (2010). A proposed model standard for forensic assessment of FASD. *Journal of Psychiatry and Law*, 38, 383-418.
- Novick Brown, N. (June 2008). FASD Experts: Multidisciplinary forensic assessment for a multidimensional condition. *Iceberg*, 18.
- Novick Brown, N. (2007). ADHD and FASD: Comorbidity and its effect on sexual behavior problems. In K O'Malley (Ed.), *ADHD and FASD: Diagnosis, natural history, and therapeutic issues across the lifespan*. Hauppauge, NY: Nova Pub.
- Novick (Brown), N. (1998). FAS: Preventing and treating sexual deviancy. In A.P. Streissguth & J. Kanter (Eds.), *The challenge of fetal alcohol syndrome: Overcoming secondary disabilities*. Seattle: University of Washington Press.
- Novick (Brown), N.J. (1996). *Sexual victimization and inappropriate sexual behavior in children: Recommendations for evaluation and treatment*. Proceedings of 1996 International Conference on Fetal Alcohol Syndrome, Seattle, Washington.
- Novick (Brown), N.J., & Streissguth, A.P. (1995). Identifying clients with possible fetal alcohol syndrome: Fetal alcohol effects in the treatment setting. *Treatment Today*, 7(3), 14-15.
- Novick (Brown), NJ, & Streissguth, AP (1995). Some thoughts on the treatment of adults and adolescents impaired by fetal alcohol exposure. *Treatment Today*, 7(4), 20-21.

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Novick (Brown), N.J., Cauce, A.M., & Grove, K. (1994). Competence self-concept. In B.A. Bracken (Ed.), *Handbook of self-concept*. New York: Wiley.

Novick (Brown), N.J., & Brown, J.D. (1992). *The influence of self-esteem on response to mood*. Paper presented, 100th Annual Convention of the American Psychological Association, Washington, D.C., August, 1992.

Brown, J.D., Novick (Brown), N.J., Lord, K.A., & Richards, J.M. (1992). When Gulliver travels: Social context, psychological relatedness, and self-appraisals. *Journal of Personality and Social Psychology*, *62*, 717-727.

Norris, J, Novick (Brown), N.J., & Kerr, K.L. (1992). *Alcohol and violent pornography: Impact of social influence on sexual arousal*. Poster presented at the Research Society on Alcoholism Meeting, San Diego, California, June, 1992.

Brown, J.D., & Novick (Brown), N. (1991). *Social context, psychological relatedness, and self-appraisals*. Paper presented at the 99th Annual Convention of the American Psychological Association, San Francisco.

## **INVITED PRESENTATIONS, WORKSHOPS, TRAININGS**

- |          |  |
|----------|--|
| 10/19/19 | Identifying Adaptive Function Deficits in Transitional-Age Youth with ND-PAE – American Academy of Child and Adolescent Psychiatry (AACAP), Chicago, ILL                 |
| 09/12/19 | FASD in the Juvenile and Criminal Justice Systems – Washington State House of Representatives Public Safety Committee, Olympia, WA                                       |
| 09/06/19 | FASD Practicalities: Screening & Treatment – ABA FASD Resolution Summit, Lewis & Clark Law School, Portland, OR  |
| 07/24/19 | Developmental Disability and Sexual Offending: Brain Maturation – International Congress on Law and Mental Health (IALMH). Rome, Italy                                   |
| 07/23/19 | Investigating ID-Equivalence in People with FASD: Tips from a Forensic Psychologist – International Congress on Law and Mental Health (IALMH). Rome, Italy               |
| 03/13/19 | Plenary: FASD - Screening and Assessment. Sixteenth Annual National Seminar on the Development and Integration of Mitigation Evidence in Capital Cases. Philadelphia, PA |
| 09/20/18 | FASD: Screening and Assessment. Law Office of the Public Defender. Albuquerque,  |

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- 05/11/17 FASD in the Capital Context. Capital Habeas Seminar, Chattanooga, TN
- 06/03/16 Fetal Alcohol Spectrum Disorders in the Parenting Context. 53<sup>rd</sup> Annual Conference, Association of Family and Conciliatory Courts. Seattle, WA
- 05/18/16 FASD and Sexual Offending in Indian Country. Webinar, Health and Human Services
- 04/29/16 Confabulation, Malingering, Memory, and Suggestibility: Clinical and Forensic Considerations. American Institute for the Advancement of Forensic Studies, St. Paul, MN
- 09/11/15 FASD: Identification, Assessment, and Treatment. Co-presented with Therese Grant and Paul Connor. Western State Hospital, Tacoma, WA.
- 08/20/15 FASD and Sexually Inappropriate Behavior. FASD Train-the-Trainer Workshop for Casey Family Programs, Indian Child Welfare, University of Washington, Seattle, WA.
- 07/13/15 (1) One Size Does Not Fit All: Forensic Assessment of Sex Offenders with FASD. XXXIV International Conference on Law and Mental Health, Vienna, Austria (2) FASD in the Courtroom: FASDExperts Approaches Its Eighth Year (3) Panel: The Central Role of Neuropsychology in Forensic FASD Assessment (4) Panel: Forensic Assessment of FASD: The Impact of Suggestibility. XXXIV International Conference on Law and Mental Health, International Academy of Law and Mental Health, Vienna, Austria.
- 06/25/15 (1) Plenary: Identifying Fetal Alcohol Syndrome (2) Panel: Fetal Alcohol Syndrome: Experts and Presentation at Evidentiary Hearing. Capital Habeas Unit (CHU) National Conference, Denver, CO.
- 05/29/15 FASD: What You Should Know. Court Improvement Training Academy (CITA), University of Washington Law School, Suquamish Nation, Poulsbo, WA.
- 10/23/14 Insights from Poverty to Death Row: ND-PAE Diagnosis and DSM-5. American Academy of Child and Adolescent Psychiatry Annual Meeting, San Diego, CA.
- 05/23/14 Plenary: Forensic Assessment of FASD - Update on Diagnosis and Latest Research. FASD and the Law Conference, Woodbury, MN

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- 05/14/14 FASD: Diagnosis and Intervention. Washington State Developmental Disabilities Administration, Seattle, WA
- 04/29/14 Sex Is *Not* a Four-Letter Word: FASD and Sexuality. Living With FASD: 2014 Summit Conference (international webinar)
- 02/05/14 FASD: Dawn of a New Era in Diagnosis. Minnesota Organization on FAS (MOFAS), MN (webinar)
- 11/26/13 Fetal Alcohol Spectrum Disorder. Washington State Developmental Disabilities Administration, Kent, WA
- 10/16/13 Neurodevelopmental Disorders in the DSM-5. Skype workshop for Pathways Counseling Center, St. Paul, MN
- 09/27/13 FASD: Back (and to) the Future: 1973 – 2013. 40<sup>th</sup> Anniversary Professional Summit, New Jersey Task Force on FASD, Atlantic City, NJ
- 09/25/13 FASD: Practical Supports for the Legal Context. 2013 FASD Summit, The Arc of Arkansas, Little Rock, AR
- 08/28/13 Developmentally Delayed Offenders in the Criminal Justice System. Frontier Regional FASD Training Center, Missoula, MT
- 08/22/13 Developmentally Delayed Offenders in the Criminal Justice System. Frontier Regional FASD Training Center, Fargo, ND
- 08/04/13 FASD: Moving Beyond Prevention to Practical Supports. The Arc: 2013 National Convention. Bellevue, WA
- 07/26/13 Developmentally Delayed Offenders in the Criminal Justice System. Frontier Regional FASD Training Center, Boise, ID
- 07/15/13 FASD and Criminal Justice: Cognitive and Social Deficits Associated With FASD. 33<sup>rd</sup> International Congress on Law and Mental Health, Amsterdam, Netherlands.
- 06/25/13 Developmentally Delayed Offenders in the Criminal Justice System. Frontier Regional FASD Training Center. Cheyenne, WY
- 06/25/13 Developmentally Delayed Offenders in the Criminal Justice System. Frontier Regional FASD Training Center, Cheyenne, WY

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05/03/13 Understanding and Treating Developmentally Delayed Sex Offenders. American Institute for the Advancement of Forensic Studies; St. Paul, MN

04/06/13 Seeking the Standard of Care in Custody Assessments in WA State. AFCC-WA Spring Conference; Seattle, WA

09/06/12 Understanding the Link Between FASD and Sexual Offending. Indian Health Service; Seattle, WA

07/20/12 Forensic Assessment of Developmental Disabilities. American Institute for the Advancement of Forensic Studies; St. Paul, MN

07/13/12 FASD and Competency. WI Association of Criminal Defense Lawyers; Stevens Point, WI

04/19/12 Changing Public Policy in the Juvenile Courts: What Works? Fifth National Biennial Conference on Adolescents and Adults with FASD: It's a Matter of Justice, Vancouver, BC, Canada

03/29/12 Fetal Alcohol Spectrum Disorders. Death Penalty Institute, Lexington, KY

02/03/12 Alcohol Related Birth Disorders and the Law. Mid-year ABA Conference, Interagency Coordinating Committee on FASD in Collaboration with U.S. Dept. of Justice and Minnesota Organization on FAS, New Orleans, LA

02/02/12 FASD and Neurobehavioral Issues in the Criminal Justice System. Capital Defense Project of SE Louisiana, New Orleans, LA

11/18/11 Assessing and Understanding Fetal Alcohol Spectrum Disorders in Capital Clients. Virginia Bar Assoc., 19<sup>th</sup> Annual Capital Defense Workshop, Richmond, VA

10/07/11 FASD and the Criminal Justice System. Seattle City Attorney's Office and University of Washington, Seattle, WA

09/21/11 FASD: Preventing and Treating Sexual Deviancy. Indian Health Service FASD Training, Seattle, WA

07/09/11 FASD and Competency. Capital Mitigation – Beyond Atkins, Center for American and International Law; Houston, TX

06/23/11 FASD in the Courtroom. Ninth Annual Statewide Conference, Arizona Public Defenders Association; Tempe, AZ

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- 05/20/11 FASD and Intellectual Disability/Mental Retardation. Metropolitan Public Defender, Oregon Capital Resource Center, Oregon Criminal Defense Lawyers Association; Portland, OR
- 03/11/11 Forensic Aspects of Fetal Alcohol Spectrum Disorders. Sponsored by Pathways Counseling Center, MOFAS, Minnesota DOC, MN Community Corrections Association, & American Institute for the Advancement of Forensic Studies; St. Paul, MN
- 10/27/10 FASD: Its Relevance Throughout the Legal Process from Competency to Stand Trial to Clemency. 2010 Appellate Judicial Attorneys Institute, Burlingame, CA
- 10/02/10 Forensic Assessment of FASD in the Habeas Context. Federal Defenders Annual Death Penalty Conference, Boise, ID
- 07/16/10 Team Approach to Litigating FASD (plenary). Center for American and International Law, Plano, TX
- 07/10/10 Fetal Alcohol Spectrum Disorder in the Courtroom: The 20<sup>th</sup> Anniversary of Dr. Ann Streissguth (plenary + break-out). NAACP LDF, Airlie, VA
- 04/22/10 Forensic Assessment of FASD with State-of-the-Art Facial Analysis, Diffusion Tensor Imaging and MRIs. 7<sup>th</sup> National Seminar on the Development and Integration of Mitigation Evidence (plenary). American Bar Association, Seattle, WA
- 04/17/10 Suggestibility in FASD: Forensic Assessment and Implications. 4<sup>th</sup> International Conference on Fetal Alcohol Spectrum Disorder, Vancouver, BC, Canada
- 03/31/10 Fetal Alcohol Spectrum Disorder and Justice. Alcohol Healthwatch, Parnell, New Zealand. (Abbreviated presentations also provided on 4-1-10 to New Zealand Ministry of Health and Ministry of Justice.)
- 02/25/10 Fetal Alcohol Spectrum Disorder (FASD). Texas Criminal Defense Lawyers Association, Austin, TX
- 02/12/10 FASD and Justice: A Multidisciplinary Assessment Model for Adults and Adolescents. CACJ/CPDA Capital Defense Seminar, Monterey, CA.
- 02/06/10 Fetal Alcohol Syndrome: Practical Tools. 3<sup>rd</sup> Interdisciplinary Program: UW School of Law & Washington Death Penalty Assistance Center, Seattle, WA.

- 03/11/09 FASD in the Legal System: A Multidisciplinary Assessment Model for Adults and Adolescents. 3<sup>rd</sup> International Conference on Fetal Alcohol Spectrum Disorder, Victoria, BC.
- 11/18/08 Screening for FASD in Family Practice. Family Practitioners, University of Washington/Swedish Hospital, Family Practice Medical Residents In-service.
- 10/25/08 Cross-Examination of Adverse Expert Witnesses in SVP Commitment Trials. Sex Offender Commitment Defense Association (SOCDA), Atlanta, GA
- 05/30/08 Fetal Alcohol Syndrome and Fetal Alcohol Effect: Identifying Clients and Understanding Consequences. Fifth National Seminar on the Development and Integration of Mitigation Evidence, Habeas Assistance & Training Counsel Project, Baltimore, MD
- 11/03/07 Direct and Cross Examination of Experts in SVP Cases. Sex Offender Commitment Defense Association (SOCDA), San Diego, CA
- 08/18/07 Fetal Alcohol Syndrome / Fetal Alcohol Effects. 12<sup>th</sup> Annual Federal Habeas Corpus Seminar, Nashville, TN
- 05/23/07 Fetal Alcohol Spectrum Disorders: History, Diagnosis, and Mitigation Issues. Capital Federal Public Defender Unit (capital habeas and trial attorneys, Federal District of Nevada)
- 04/14/07 What Attorneys and Policy Makers Need to Know About FAS and FASD. American Bar Association/Harvard Law School National Conference on Children and the Law, Cambridge, MA
- 02/18/07 Fetal Alcohol Spectrum Disorders (FASD). California Attorneys for Criminal Justice/California Public Defender Association (CACJ/CPDA) Annual Death Penalty Conference, Monterey, CA
- 06/30/06 Sexually Violent Predator Evaluation, Risk Assessment, and Testimony, Florida Public Defenders Sexually Violent Predator Conference, Orlando, FL
- 04/19/06 Screening Protocol for Fetal Alcohol Spectrum Disorders (FASD). King County Mental Health / Drug Courts, Seattle, WA
- 02/26/05 FASD: Problems of Witness Suggestibility and False Confessions. International FASD Conference, Victoria, British Columbia, Canada

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## **PROFESSIONAL ORGANIZATIONS**

1990 – present	American Psychological Association (APA)
2008 – present	American Society-Law Society (APA)
2015 – present	International Association of Law and Mental Health (IALMH)
2005 – present	Association for the Treatment of Sex Abusers (ATSA)
2004 – 2017	Association of Family & Conciliatory Courts (AFCC – National) (WA-AFCC - Washington State; Board of Directors, Treasurer; Chair: Quality Assurance and Ethics Committee)
2011 – 2017	Midwest Alliance on Shaken Baby Syndrome, Board of Directors
2001 – 2003	Jacksonville Youth Authority Advisory Board
1996 – 2000	Chairman, Social Issues Committee, Washington State Psychological Association
1994 – 2000	Washington State Psychological Association, Board of Directors

### **Declaration of Col. Robert Salasko**

I, Col. Robert Salasko, hereby declare as follows:

1. My name is Robert Salasko. I am 52 years old and live in Monument, Colorado. I am a retired United States Marine Corps (USMC) Colonel.
2. I served at Guantanamo Bay, Cuba (Gitmo) from 1994 to 1996. At the time, my rank was Captain. Zane Floyd was stationed at Gitmo from February 1995 to February 1996 and under my command.
3. I recognize Floyd from photographs shown to me, although I do not have a personal recollection of him now. In August 1995, I issued an outstanding service certificate to Private First-Class Floyd for completing water survival training.
4. There was a decided lack of popular knowledge, even in the USMC, regarding the difficulty of the Guantanamo Bay (Gitmo) environment between 1994 and 1996. I have served in the USMC for over 30 years and worldwide to include a combat tour in Iraq, and I would describe Gitmo as intense and stressful, not an easy tour, and something you lived 24 hours a day while there.
5. The level of conditioning and readiness at Gitmo was like those hostile combat assignments in places like Iraq and Afghanistan. For example, the Cubans and the American troops fired at one another; there were perimeter breaches, and there were riots in the refugee camps. Anything could happen at any moment, so we were not allowed to let down our guard.
6. Marines there had multiple missions including patrolling the fence line separating the Cuban zone from the American zone and serving as a contingency force in the event of refugee riots. Essentially, Marines worked a two-week cycle: a week of patrolling, keeping on eye on the Cuban Frontier Brigade (our opposing force), and then one week of barracks time where you would train, clean weapons, and serve as a contingency force. Marines went on roving patrols as well as worked the guard towers using night vision goggles and thermal sites to surveil. Marines routinely went on patrols with live ammunition in their M-16s. Hence, Gitmo was an operational environment as opposed to a training environment.
7. When the Marine were not patrolling, they lived in hardstand four story buildings, like those on a Marine Corps base. When they were on patrol, they lived in tents close to the fence line.
8. There were up to 40,000 refugees at Gitmo, made up of Cubans and Haitians. This compared to the 500 Marines who were based on both sides of the island and 400 to 500 Navy troops stationed at Gitmo. We were very much outnumbered.

9. I did not differentiate between the Haitian and Cuban refugees other than to say that the Cuban refugees tended to be more aggressive.
10. Our primary interaction with refugees was in riot suppression. When refugees would riot and head toward the "critical infrastructure areas" of the Navy base, my Marines, if called, would take up a blocking position: weapons on safe but fixed bayonets so as to project a show of strength to deter the refugees from going towards the American base. In one instance, a Marine bayoneted a refugee. There were a few times when refugees attempted to grab Marine weapons.
11. Occasionally Cubans would attempt to swim across Gitmo Bay to the American side. In one instance, a swimming Cuban family was literally harpooned and brought into a Cuban patrol boat where they were beaten.
12. The American minefield at Gitmo was well-marked. The American minefield consisted of anti-tank mines designed to stop Russian made tanks. Thus, if a person stepped on a mine, they would meet a certain death.
13. The Cuban minefield was not well-marked, and I estimate that initially 300,000 mines were placed in the aftermath of the Bay of Pigs Invasion. The Cuban mines were anti-personnel such that they would commonly maim as opposed to kill. Once the first victim had detonated a mine, his colleagues who came to rescue him would also encounter mines possibly inflicting further casualties. Despite warnings not to do so, several of my more bravado Marines entered the Cuban minefield resulting in a detonation causing the loss of a Marine's leg from the knee down.
14. It was not uncommon to hear detonations as Cuban asylum seekers detonated anti-personnel mines on the Cuban side. I recall one incident where a Cuban, who had lost his leg because of a detonation, was crawling towards the American fence line. The Americans felt powerless to assist him in the Cuban area. Eventually the Americans cut a hole in the fence and went out and got the Cuban and brought him to the American side. Marines witnessed events like this and the aforementioned harpooning. Similarly, Marines were aware that asylum seekers would frequently be shot by Cubans attempting to get to the base.
15. There were PTSD issues among the troops at GITMO. This led to alcoholism, suicides, and depression.
16. There was no extra screening for mental health issues before troops were assigned to Gitmo. At the time, the military was in desperate need of bodies, so there was a bit of a rush to get troops on the ground.
17. There were no substantial mental health resources in Gitmo other than a base Chaplain,

and some counselors flown in on occasion following suicides.

18. Marines with emotional or psychological struggles were not provided with reentry-to-civilian-life resources when they returned home from Gitmo. And those who reenlisted were often sent off to their next assignment without providing them a chance to decompress or process the traumatic experiences they endured at Gitmo. The military is much more aware and proactive now about addressing those matters than they were back then.
19. When a Marine's one-year tour of duty at Gitmo was complete, I would compose a "Letter to Gaining Command." This letter would introduce the Marine to their new commander. For those who served at Gitmo, like Floyd, I would write that the Marine had served in a real-world screening and recognizant operations against the First Cuban Frontier Brigade. I would also state that the Marine demonstrated astute proficiency and meticulous attention to detail in the rules of engagement application and the employment of deadly force. I would alert the new commander that the Marine personally conducted over 120 live patrols against an adversarial force armed with small arms and anti-personnel mines, and that he personally led over forty real world patrols with fifty percent of his squad under one year of service. I also alerted the new commander that the Marine was responsible for patrol preparation, patrol execution, and the recommendation of future operations. I also wrote that added to that, my Marines were in a pressured compound filled with 40,000 Haitian and Cuban refugees who were seeking US asylum and had expertise in riot control.

I declare under penalty of perjury that the foregoing is true and correct and that this declaration was executed on February 16, 2021 in Monument, Colorado.



Robert Salasko Col., USMC (Ret.)

### **Declaration of Scott Rollenhagen**

I, Scott Rollenhagen, hereby declare as follows:

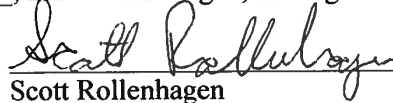
1. My name is Scott Rollenhagen. I am 46 years old and live in Montague, Michigan. I am currently a stay-at-home dad.
2. I served as a Marine Infantryman at Naval Station Guantanamo Bay, Cuba (Gitmo) from approximately February 1995 to February 1996. When I arrived at Gitmo my rank was a Private First Class. I was later promoted to Lance Corporal.
3. I have been shown photographs of Zane Floyd when he was in the Marines and recognize serving with him either at the School of Infantry ("SOI") at Camp Pendleton, California or at Gitmo. The images that I found on Google of Floyd from the time of his arrest looked completely like someone else and were unrecognizable. Floyd and I were roughly the same age and the same rank.
4. While at Gitmo our commanding officer was Captain Robert Salasko, USMC.
5. The Gitmo base was divided into the Leeward and Windward sides. I was stationed on the Windward side.
6. During my time at Gitmo, most dependent families of Marine and Naval personnel had been cleared out due to a riot that had occurred some months before my arrival.
7. At Gitmo, refugees made up of Cubans and Haitians were kept on a golf course and later on the coastline. The refugees lived in tents. The refugee population ebbed and flowed but I recall a population around 30,000. There were a lot more of the refugees than there were of us Marines.
8. For an enlisted Marine like myself, a typical Gitmo tour was one year. It was a difficult assignment. We did not receive riot training at SOI as riot control is not part of the regular Marine infantry mission. Once we arrived at Gitmo, we were trained on how to respond and handle riots on the island, and we kept our riot gear in our rooms. An ever-present danger was the possibility that refugees could riot and overrun the base. Another hardship of the assignment was the separation from family members. An enlisted Marine was not permitted leave to see his family for his first six months at Gitmo.
9. I was assigned to the security detail as part of the Rifle Security Company ("RSC") Windward during my first four months at Gitmo. My understanding is that this is the same unit to which Zane was assigned. Our rotation was one week on border foot patrol and one week on the base. We worked twelve-hour shifts at the fence line, and at night would use night vision goggles to keep our eyes on the armed Cuban soldiers who were



about 1000 yards away. At times you could hear the Cubans. While on patrol we carried our M-16 rifles. When not patrolling, we would train in weapon and mortar firing. This was a tough assignment. I witnessed and heard of many troubling events.

10. There was a Cuban mine field between our side and the Cuban side. The Cubans had planted anti-personnel mines. There were weekly detonations on the Cuban side while I was there.
11. I am aware that a Cuban family somehow made it past the Cuban mine field to the American side, which was miraculous since the mine field was not marked.
12. I remember a situation where the Cuban forces used spotlights and detected a Cuban asylum seeker swimmer in the Bay. The Cuban soldiers pulled the swimmer from the water, took him to the shore, kicked and beat him, and then threw him in the back of a truck and drove him away. During my tenure, the average Gitmo Marine would see something like this at least once, but we were powerless to help these people who were just seeking freedom.
13. There was a lot of drinking during our downtime at Gitmo mainly because there was not a lot to do when one was not on patrol. Drinking took the edge off of the stress that we experienced, and it was not uncommon for us to drink the entire weekend until Monday rolled around. Looking back, it was not the healthiest pastime but there was not much else to do to relieve the tension.
14. After four months at Gitmo, I was transferred from security and trained as a Fast Boat operator and ferried Marines around the base. Driving boats during my last eight months of my time there was fun, and it took me away from the stress and trauma of patrolling the fence. This was by far my best experience at Gitmo. I had an opportunity to meet and transport top military officials around the base and it was a much safer detail. I felt sorry for my fellow Marines, like Floyd, who had no other options.

I declare under penalty of perjury that the foregoing is true and correct and that this declaration was executed on January 29, 2021 in Montague, Michigan.

  
Scott Rollenhagen

## **DECLARATION OF NATALIE NOVICK BROWN, Ph.D.**

I, Natalie Novick Brown, know and believe:

1. I practice as a psychologist and am licensed in Washington State and Florida. I also am a certified Evaluator for the Department of Corrections and Division of Developmental Disabilities in Washington State.

2. I specialize in the evaluation and treatment of individuals with fetal alcohol impairment. My training in this field began in 1994 when I accepted a postdoctoral fellowship with Dr. Ann Streissguth at the University of Washington. Dr. Streissguth is a pioneer researcher in Fetal Alcohol Syndrome (FAS) and Fetal Alcohol Effects (FAE), which are now referred to as "Fetal Alcohol Spectrum Disorders," or FASD. Up until her retirement earlier this year, Dr. Streissguth was the director of the University's Fetal Alcohol and Drug Unit as well as a prolific research scientist and highly respected international expert in the FASD field. After completing a year of training and research in 1995, I began evaluating and treating youth and adults with FASD or suspected FASD. I estimate that since 1995, I have evaluated and treated approximately 300 children and adults affected by prenatal alcohol exposure. In addition, I currently hold a faculty position at the University of Washington as Clinical Assistant Professor in the Fetal Alcohol and Drug Unit, Department of Psychiatry and Behavioral Medicine. In this position, I consult with staff at the Fetal Alcohol and Drug Unit and screen for fetal alcohol impairment in adults and juveniles referred by the Drug and Mental Health Courts in King County (Seattle), Washington. I also evaluate and diagnose individuals referred by the Division of Developmental Disabilities who may have fetal alcohol impairment. I currently provide individual therapy to a caseload of fetal alcohol impaired youth in an effort to prevent adverse life outcomes and to a caseload of adults with FASD, many of whom are sex offenders in Washington State's Community Protection Program. Over the last 12 years, I have published articles and lectured on the behavioral and developmental effects of prenatal alcohol exposure. In the course of this work, I have attended diagnostic trainings and reviewed many medical evaluations involving FASD diagnoses and am quite familiar with the diagnostic criteria and process of evaluation. Thus, I have developed expertise in FASD through a combination of study, practice, and research.

3. I was retained by the Las Vegas Federal Public Defender, Capital Habeas Unit, to examine records related to Zane Floyd's case. I was asked specifically to determine if he met criteria for an FASD diagnosis, address how the condition might impact a child's functioning in general, and explain how this disorder likely affected Zane Floyd's functioning both as a child and as an adult.

4. I reviewed trial testimony from Tracie Carter, Robert Jay Hall, Zach Emenegger, Dr. Mortillaro, Dr. Dougherty, Dr. Roitman, Jorge L. Abreu, and Minoru Aoki. I also reviewed Voluntary Statements from Zane Floyd and Paulina Atomah and the trial allocution of Zane Floyd.

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5. I reviewed summaries of medical interventions involving Valerie Floyd's consumption of alcohol and her drug-related activities. I reviewed Zane Floyd's school records from Princess Ann Elementary, Virginia Beach, Virginia; Boulder Bluff Elementary School, Goose Creek, South Carolina; Marrington Elementary, Charleston, South Carolina; Ellicott Elementary, Ellicott School District, Calhan, Colorado; McClelland Center for Child Study, Pueblo, Colorado; Haaff School, Pueblo, Colorado; various schools in the Clark County School District, Las Vegas, Nevada; Faith Lutheran High School, Las Vegas, Nevada; and records from the Community College of Southern Nevada. I reviewed military records from Zane Floyd's time in the Marines.

6. I reviewed evaluations conducted in 2000 along with the raw data from Frank E. Paul, Ph.D.; David L. Schmidt, Ph.D.; and Edward J. Dougherty, Ed.D. I reviewed an evaluation and raw data from tests conducted in 1989 by Maria J.P. Cardle, Ph.D. I reviewed reports published in 1999 and 2000 by Dr. Jacob O. Camp, M.D. I reviewed the 2000 report by Dr. Thomas F. Kinsora, Ph.D., who critiqued Dr. Schmidt's and Dr. Cardle's reports. I reviewed Dr. Jonathan Mack's 2006 findings of organic brain damage during his examination of Zane Floyd. I also reviewed schoolwork and over 50 photographs of Zane Floyd as an infant and young child.

7. FASD is a permanent birth defect caused by maternal consumption of alcohol during pregnancy. Alcohol is a teratogen that inhibits and disrupts fetal development by causing structural and functional damage to developing organs and systems, including the brain and central nervous system. The damage starts at the cellular level, where ethanol may induce excessive cell death and disrupt cell responses to molecules that regulate neuron proliferation, migration, and differentiation. Because alcohol causes widespread damage throughout the fetus, there is a broad array of physical anomalies and neurobehavioral defects. Hence, the condition is often referred to as a "syndrome." The most serious and pervasive damage occurs in the central nervous system (CNS). Brain imaging studies over the last decade have shown that prenatal alcohol exposure causes significant malformation in structures within the brain (e.g., corpus collosum, basal ganglia, cerebellum) that are necessary for normal development and functioning (e.g., Bookstein et al., 2001, 2002a, 2002b).

8. Fetal Alcohol Syndrome was first recognized and discussed in a public paper by researchers at the University of Washington in 1973 (Jones & Smith, 1973). In addition to a determination of maternal alcohol consumption, these researchers identified three diagnostic features associated with the syndrome: 1) pre- and/or postnatal growth deficiency, 2) a characteristic set of facial anomalies (referred to as "facial dysmorphology"), and 3) CNS damage/dysfunction. Several years later, a study of alcohol related damage in the central nervous system suggested that structural brain damage might be the basis for many of the neurodevelopmental abnormalities classified under the broader heading of "CNS dysfunction" (Clarren & Smith, 1978).

9. By 1978, after more than 250 published case reports, it was clear that FAS was only one of several identifiable disorders associated with maternal alcohol abuse. Hence, the term Fetal Alcohol Effects, or FAE, was developed to classify additional manifestations (Clarren & Smith, 1978). While individuals with FAE did not display all three of the primary facial abnormalities associated

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with FAS (i.e., short palpebral fissures, flat philtrum, and thin upper lip), research consistently showed that compared to individuals diagnosed with FAS, those with FAE could suffer from as many or more of the neurodevelopmental deficits (Streissguth & O'Malley, 2000). Thus, even without facial evidence of FAS, the brain damage and resulting cognitive-behavioral problems can be as severe in individuals with FAE as in those with FAS.

10. Diagnostic labels applied to fetal alcohol impairment have changed over time to reflect increasing diagnostic precision. For example, in 1996, there was refinement in the diagnosis by the Institute of Medicine (IOM) to include five categories of diagnosis: Type 1: FAS With Confirmed Maternal Alcohol Exposure; Type 2: FAS Without Confirmed Maternal Alcohol Exposure; Type 3: Partial FAS With Confirmed Maternal Alcohol Exposure; Type 4: Alcohol-related Birth Defects; and Type 5: Alcohol-Related Neurodevelopmental Disorder. FAS Type 1 is the "classic" FAS diagnosis and includes all four of the features typically associated with the syndrome: a) confirmed maternal alcohol exposure, b) characteristic facial abnormalities or dysmorphology, c) pre- and/or postnatal growth retardation, and d) evidence of central nervous system neurodevelopmental abnormalities. FAS Type 2 has all of these features except confirmed maternal alcohol exposure. FAS Type 3 is differentiated from FAS Type 1 by virtue of the fact that only some of the facial abnormalities are present, and in addition to confirmed prenatal alcohol exposure, the individual manifests growth retardation, evidence of CNS neurodevelopmental abnormalities, and a complex pattern of behavioral or cognitive abnormalities that are inconsistent with developmental level and cannot be explained by familial background or environment alone (e.g., learning difficulties, deficits in school performance, poor impulse control, problems in social perception, language deficits, poor capacity for abstraction, specific deficits in mathematical skills, and problems in memory, attention, or judgment). FAS Type 4 (Alcohol-Related Birth Defects, or ARBD) requires confirmed maternal alcohol exposure and one or more congenital defects including malformations and dysplasias of the heart, bone, kidney, vision, or hearing systems. FAS Type 5 requires confirmed maternal alcohol exposure, CNS neurodevelopmental abnormalities, and/or a complex pattern of behavioral or cognitive deficits.

11. The facial dysmorphology associated with FASD is seen in only a minority of cases and, typically, only in young children before they enter puberty. Malformation of the face reflects alcohol consumption during the first trimester of pregnancy when facial features are being formed. However, the brain and central nervous system are being formed throughout the full nine months of pregnancy. Thus, alcohol consumption at any point during gestation can cause brain damage.

12. FASD is diagnosed on Axis 3 by dysmorphologists, pediatricians, other medical doctors, and psychologists – sometimes individually and sometimes as part of a multidisciplinary team. While there is now increased specificity by researchers and governmental agencies regarding the various manifestations of FASD, the same cannot be said for diagnosticians. Consequently, FASD diagnoses may be referred to as Fetal Alcohol Syndrome, Fetal Alcohol Effects, Partial FAS (PFAS), Alcohol-Related Neurodevelopmental Disorder (ARND), Alcohol-Related Birth Defects (ARBD), Static Encephalopathy, or by the umbrella term, Fetal Alcohol Spectrum Disorder (FASD). Although

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Streissguth and O'Malley (2000) recently proposed psychiatric nomenclature to broadly categorize all manifestations of fetal alcohol impairment under the nomenclature "fetal alcohol spectrum disorders," or FASD, and include the diagnosis as a mental health disorder in the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)*, this change has not yet been made.

13. While the labels have become more precise and perhaps more confusing, the original diagnostic criteria for FASD established in 1973 have changed very little over time, even after being reconsidered by other groups such as the Fetal Alcohol Study Group of the Research Society on Alcoholism (1980s), the Institute of Medicine (1990s), and the Center for Disease Control (2000). Thus, by the time of Zane Floyd's trial in 2000, which was five years after I completed my FASD postdoctoral fellowship, the syndrome was definitely not a new or novel concept to medicine or psychology.

14. Research has shown that prenatal alcohol exposure causes structural brain damage that affects functioning in the frontal lobe of the brain, particularly the prefrontal cortex, an area that is especially sensitive to the teratogenic effects of ethanol (e.g., Bookstein et al., 2002). Brain imaging research has found that prenatal alcohol exposure seems to target the corpus collosum in particular and is associated with a pattern of deficits in executive functioning in individuals diagnosed with FAS/FAE (Bookstein et al., 2001). Executive functions, which control impulses and channel them into pro-social rather than antisocial behavior, involve cognitive skills such as perception, social awareness, organization, planning, internal ordering, working memory, self-monitoring, inhibition, motor control, regulation of emotion, and motivation. Appropriate socialization depends on intact basic cognitive functioning (Connor et al., 2000). When executive functions are compromised by prenatal alcohol exposure or other sources of brain damage, an individual will:

- have difficulty perceiving, prioritizing, and storing information,
- have difficulty processing and retrieving that information,
- be unable to generalize and apply consequences from past actions to potential future actions,
- lack motivation and initiative,
- need external motivators such as frequent cues or guidance from others,
- be unable to perceive the effect of his/her actions on others or the social inappropriateness of those actions,
- display exaggerated emotions,
- be unable to control behaviors that stem from emotion-evoked urges, and, consequently,
- engage in a wide range of socially (and often legally) inappropriate behaviors.

15. Based upon my knowledge of FASD and its cognitive-behavioral manifestations and review of the case documents listed above, it is my opinion that Zane Floyd meets criteria for a specific FASD diagnosis of *FAS Type 3*. According to IOM diagnostic criteria, Type 3 (or Partial FAS With Confirmed Maternal Alcohol Exposure) requires some components of the FAS facial pattern, growth

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retardation, CNS neurodevelopmental abnormalities (e.g., neurological hard or soft signs such as impaired fine motor skills, poor tandem gait, and/or poor eye-hand coordination), and a pattern of behavioral and/or cognitive abnormalities inconsistent with developmental level and unexplained by genetic background or environmental conditions. These abnormalities include learning difficulties, deficits in school performance, poor impulse control, problems in social perception, language deficits, poor capacity for abstraction, specific deficits in mathematical skills, and problems in memory, attention, or judgment. The diagnosis of FAS Type 3 primarily relies upon data prior to Zane Floyd's adolescence and is fully consistent with diagnoses provided by Dr. Mack, whose neuropsychological testing of Zane Floyd this year revealed the type of organic brain damage that is generally seen in individuals diagnosed with confirmed FASD. (Mack 10/13/06) It should be noted that a diagnosis of FAS Type 3 does not rule out additional mental health disorders, such as Attention-Deficit/Hyperactivity Disorder (which has been diagnosed by multiple providers over the course of Mr. Floyd's life), or diagnoses that were beyond the scope of the current analysis (e.g., Posttraumatic Stress Disorder, Dissociative Disorder, substance abuse disorders, personality disorders).

16. Prenatal alcohol exposure is confirmed by the testimony of Mr. Floyd's birth mother at his trial about her drinking pattern during her pregnancy. Growth deficiency is confirmed by birth records. Facial dysmorphology is confirmed through examination of early childhood photographs. A pattern of neurodevelopmental disorders is confirmed by a variety of sources including medical records, school records, childhood evaluations, and family reports. FAS Type 3 is a diagnosis that accounts for *all* of Mr. Floyd's neurodevelopmental and cognitive-behavioral problems and his behavioral history, not only during his childhood but also up to the present time.

17. Neurodevelopmental disorders are the overt behavioral manifestation of underlying brain damage, particularly (but not exclusively) in the frontal and prefrontal cortex of the brain where executive functioning is controlled. "Executive functions" is an umbrella term for the primary abilities that enable a person to develop new patterns of behavior and cognition and to introspect upon them. Executive functions are critically important in unfamiliar situations where one doesn't know from experience or training what to do or in situations where established ways of behaving are no longer useful or appropriate. Thus, the term refers to a whole range of adaptive abilities such as creative and abstract thought, introspection, planning, multi-tasking, impulse control, socialization, and many processes related to the control of memory. In other words, executive functions involve all of the skills that enable individuals to analyze what it is they want, determine how they might get it, decide whether their plan is appropriate, and then carry out their intentions, sometimes changing their approach if they realize it is unproductive or yielding unwanted results. It is also widely accepted that executive functions play a critical part in complex social behaviors such as understanding how our actions impact others. Because it is generally thought that the frontal lobes of the brain play a critical role in all of these functions, it is not uncommon to hear people refer (imprecisely) to executive functions as "frontal lobe functions." Intact executive functioning is a prerequisite for appropriate pro-social behavior. While those with intact executive functioning can make choices about their behavior and consider consequences before acting, those with deficient

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executive skills have no choice. They are able to function only to the level that their impairments permit (Connor et al., 2000).

18. Executive function deficits are observed clinically as neurodevelopmental disorders. In infancy, neurodevelopmental deficits are often first noticed in infants who show early evidence of self-regulation problems (e.g., difficulties in self-soothing or excessive non-reactivity to stimuli), over-sensitivity to environmental stimuli, and difficulty in reciprocal social interaction. An example of the latter is an infant who resists the nurturing touches of a caregiver. Examples of neurodevelopmental disorders in early childhood (i.e., toddlers) include delayed development in motor skills (e.g., delays in sitting, standing, crawling, walking, learning to drink from a cup), in verbal skills, in social skills (i.e., learning how to respond reciprocal in interpersonal interactions within the family), in emotional skills (i.e., emotional self-modulation), and in self-regulation of behavioral pace (e.g., hyperactivity versus apathetic passivity). In the elementary school years, neurodevelopmental disorders may manifest in communication disorders, attention deficits, learning disorders, poor impulse control (i.e., behavioral problems), problems in social perception, interpersonal communication deficits, and problems in working memory. In later childhood, or the middle school years, neurodevelopmental disorders may manifest in abstraction deficits (particularly in mathematics as coursework becomes more complex and less dependent upon rote memorization), impulse control and judgment (e.g., pro-social versus antisocial behavior), and socialization deficits. It is often in the adolescent years that that social skills deficits become obvious to professionals outside the school environment. For example, youth who have not developed the ability to make and keep friends begin gravitating to antisocial youth who accept them into their circle on the basis of willingness to engage in antisocial conduct similar to their own. As in Mr. Floyd's case, this is typically the time when alcohol consumption and drug use begin, and rule-breaking behavior escalates to law-breaking behavior. Once an impaired individual enters puberty, which may be delayed a few years compared to age-peers, neurodevelopmental deficits significantly impact the way FASD-affected youth handle their developing sexuality. Maintaining appropriate sexual boundaries is a complex behavior requiring multiple executive skills, including awareness (e.g., perception and understanding of environmental cues), memory (e.g., retention of knowledge about proper social behavior), self-perception (e.g., ability to perceive whether one's behavior is consistent with social boundaries), other-perception (e.g., ability to detect and appreciate how one's behavior is affecting others), and self-regulation (e.g., ability to stop one's behavior if it goes beyond social boundaries). Most unimpaired children learn social and sexual boundaries by assimilating information gradually from parents, television, movies, social interaction with peers, and other environmental sources. However, if the ability to distinguish between appropriate and inappropriate environmental cues and integrate them into one's behavioral repertoire is compromised by neurodevelopmental deficits in multiple areas, the process can go awry. Consequently, sexual boundary violations – both minor and major -- are frequently seen in individuals with executive function deficits. Zane Floyd's history indicates he is no exception.

19. *Prenatal Alcohol Exposure:* Birth mother Valerie Floyd confirms prenatal alcohol exposure. During Zane Floyd's trial, Valerie Floyd testified that at the time she became pregnant with her son,

she was a "hippie" who abused alcohol and used illegal street drugs. (Trial 7/18/00pm, p. 154) She testified that her first son died of SIDS, or Sudden Infant Death Syndrome, after she and her husband placed him in the back of their van while they watched a baseball game. The infant's death was reportedly devastating for her, and she began drinking alcohol heavily to cope. She further testified that she became pregnant with her son Zane during this period of heavy drinking. (Trial 7/18/00pm, p. 152-5) She testified that she drank throughout her pregnancy with Mr. Floyd. (Trial 7/18/00pm, p. 152, 157) Social worker Jorge Abreu, who conducted a psychosocial evaluation of Mr. Floyd, testified at trial that Valerie Floyd told him her substance abuse began as a teenager and "continued through both pregnancies" (Trial 7/17/00pm, p. 40) and that she was drinking alcohol and using drugs including LSD and cocaine "throughout the pregnancy in both cases" (i.e., in her first pregnancy as well as her pregnancy with Zane Floyd). (Trial 7/17/00pm, p. 41) Mr. Abreu further testified that Valerie Floyd told him her first child died of Sudden Infant Death Syndrome. (Trial 7/17/00pm, p. 45) It should be noted that death from SIDS is associated with prenatal alcohol exposure.

20. *Growth Deficiency:* Birth records confirm growth deficiency for Zane Floyd. Growth deficiency is defined as confirmed height or weight below the 10<sup>th</sup> percentile. A birth certificate issued by Elizabeth Knutson Memorial Hospital in Estes Park, Colorado (Birth Certificate, 9/20/75), indicates that Zane Floyd was born September 20, 1975. He was considered six weeks premature (Alfonso 7/12/00, p. 10; DS9419), which placed his birth at the 34<sup>th</sup> week of gestation. The 40<sup>th</sup> week of gestation is typically regarded as the "due date." Zane Floyd weighed 4.875 pounds at birth (4 pounds, 14 ounces or 2.2 kg) and was 16.75 inches long (42.5 cm). (Birth Certificate, 9/20/75) His weight was just below the 50<sup>th</sup> percentile and below the 10<sup>th</sup> percentile for height (Fenton, 2003). The length measurement meets criteria for FASD growth deficiency.

21. *Facial Dysmorphology:* Facial dysmorphology is partially confirmed with photographic evidence. Photographs of Zane Floyd when he was an infant and small child display some of the typical facial anomalies associated with FASD. Characteristic features evident in these photos are: small palpebral fissures, ptosis, slight epicanthal folds, elongated upper lip, thin vermilion on upper lip, sunken nasal bridge, short upturned nose, and clown eyebrows.

22. *Neurodevelopmental Disorders:* Multiple neurodevelopmental disorders are confirmed in Zane Floyd's history by multiple sources of evidence. The data in this assessment not only indicate neurodevelopmental disorders consistent with the type of primary disabilities typically seen in individuals diagnosed with FASD but also pervasive adverse life outcomes because his primary disabilities were not diagnosed and treated. According to research in the 1990s, disabilities stemming from FASD are categorized as either "primary" or "secondary" depending upon whether they are a direct manifestation of central nervous system malfunction (i.e., primary disabilities) or whether they are mediated by environmental influences (i.e., secondary disabilities). "Primary disabilities" are defined as functional deficits that stem directly from the structural brain damage and CNS dysfunction caused by prenatal ethanol exposure (e.g., Streissguth et al., 1996). Individuals with FASD are typically born with some or many of these primary disabilities, which may include deficits

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in general intelligence (in approximately one-third of affected individuals), learning, attention and activity level (e.g., hyperactivity), communication, socialization, planning and problem solving, and difficulties with adaptive functioning. "Secondary disabilities" are functional deficits that an individual acquires over time that presumably could have been ameliorated if there had been early diagnosis and intervention. Environmental factors exert positive or negative influence on the expression of secondary disabilities but have nothing to do with primary disabilities. However, with effective treatment of primary disabilities, secondary disabilities can be prevented or at least reduced (Streissguth, 1997). Without accurate diagnosis and treatment, secondary disabilities manifest in adolescence and adulthood as extreme problems in psychosocial functioning that lead to adverse life outcomes. Secondary disabilities include mental health problems, disrupted school experience, trouble with the law, confinement, inappropriate sexual behavior, alcohol and drug problems, dependent living, and problems with employment. It was surprising to researchers in the 1990s that a large number of individuals with fetal alcohol impairment displayed secondary disabilities (Streissguth et al., 1996; Streissguth & O'Malley, 2000). For example, 60% had been arrested, charged, and/or convicted of a crime; 50% had been in a confinement setting (i.e., psychiatric hospital, jail, prison, residential substance abuse treatment); and 30% had alcohol or drug abuse problems.

23. Early childhood evidence of neurodevelopmental disorders in Zane Floyd was described by his mother during her testimony at trial. For example, she testified that her son Zane developed slowly as an infant and could not draw circles in school (i.e., motor skill deficits). (Trial 7/18/00pm, p. 159-60) When Mr. Floyd was 13, a psychological evaluation dated April 30, 1989, reported neurological disturbance (i.e., "a slight motor tremor") and noted that he was significantly delayed in achieving all of his early childhood developmental milestones. (Cardle 4/30/89, p. 1) The evaluation also noted a report by both parents of multiple problems: short attention span, easily frustrated, immature, defensive, noncompliant, overly sensitive, physical aggression with other children, and lying. (Cardle 4/30/89, p. 1) Social worker Abreu testified that Mr. Floyd did not begin talking until he was three or four years old (i.e., speech delay), that he shook a lot and his body trembled (i.e., neurological problems), and that he had difficulties with fine motor movement. (Trial 7/17/00pm, p. 50) Mr. Abreu testified that Mr. Floyd was clumsy and would fall often (i.e., gross motor skill deficits). Birth father Michael Floyd testified that his son had problems with hand dominance after beginning school. (Trial 7/18/00am, p. 114) Michael Floyd also testified that his son had difficulties with coordination and motor skills as his hands would shake. (Trial 7/18/00pm, p. 114) Mr. Floyd's Kindergarten teacher from Princess Anne Elementary School noted he had problems with motor skill coordination in her class. (Princess Ann records) While in kindergarten in Boulder Bluff, his teachers were concerned about his physical coordination and development and noted that he needed to work on fine muscle control in his hands. (Boulder Bluff records)

24. Evidence of neurodevelopmental disorders observed when Mr. Floyd was in elementary school came from several sources as well. His mother reported that he had difficulty focusing and completing tasks. (Alfonso 7/12/00, p. 6; DS9967) Kindergarten reports from Boulder Bluff Elementary School indicated multiple deficits in fine motor skills. (Boulder Bluff records) Mr.

Floyd's teacher noted: "We have been very concerned about Zane's physical coordination and development. It is not what it should be by this time." (Boulder Bluff records) A Kindergarten progress report from the Virginia Beach Public School District noted: "Zane is capable of much more self-control than he demonstrates in class." (Virginia Beach records) A 1<sup>st</sup> grade progress report from Marrington Elementary School in Charleston, South Carolina, noted: "Zane needs to pay attention and follow directions. He can do much better." (Marrington records) The attached report card noted that he had problems controlling his talking, listening attentively, and following directions. (Marrington records) A 2<sup>nd</sup> grade progress report from Ellicott Elementary School in Calhan, Colorado, noted a deficiency in expressing ideas clearly. (Ellicott records) School reports from 2<sup>nd</sup> grade confirm a "very poor" attention span, "poor" fine motor skills, and social/emotional delays ("immaturity, very easily upset and frustrated"). (Ellicott records) In 3<sup>rd</sup> grade, achievement testing found he was below average in language mechanics. (California Achievement Tests, McClelland Center for Child Study) An Academic Progress review for grades 1-5 indicated self-control problems with respect to classroom behavior. (McClelland Center for Child Study records) A note within this progress report pertaining to 4<sup>th</sup> grade indicated he had a "short attention span" and needed "regular reminding" about his behavior. (McClelland Center for Child Study records) Throughout his school experience, Mr. Floyd was criticized by his teachers for having poor self-control and being inattentive in class despite being diagnosed with Attention-Deficit/Hyperactivity Disorder (ADHD) on several occasions during his school experience. (Paul 5/7/00, p. 8) Mr. Floyd was medicated with Ritalin in the 2<sup>nd</sup> grade in an attempt to address his ADHD, but the medication was discontinued in 5<sup>th</sup> grade and then started again in 7<sup>th</sup> grade "due to exacerbation in problem behaviors." (Cardle 4/30/89, p. 1)

25. Dr. Roitman, a child psychiatrist who saw Mr. Floyd when he was 13, testified that neurologist Dr. Kehne was treating him for ADHD at the time. (Trial 7/18/00am, p. 6) Dr. Roitman noted that besides ADHD, there were additional issues that required more extensive analysis (Trial 7/18/00am, p. 7), such as an "information processing learning disability" and the potential for a "permanent emotional problem." (Trial 7/18/00am, p. 11)

26. Recent test results of Mr. Floyd as an adult are consistent with neurodevelopmental problems observed during childhood by parents, teachers, and Drs. Roitman and Cardle. For example, Dr. Dougherty testified that his psychological testing of Mr. Floyd at age 24 "confirmed the prior diagnosis of Attention-Deficit/Hyperactivity Disorder." (Trial 7/18/00pm, p. 13) It should be noted that attention and hyperactivity disorders as well as learning disorders are frequently encountered comorbid diagnoses in individuals diagnosed with FASD (e.g., Streissguth & Kanter, 1997; DSM-IV-TR). Dr. Mack recently observed behaviors during his neuropsychological testing that were consistent with neurodevelopmental dysfunction, such as a mild resting tremor, poor emotional regulation, poor pencil grasp (which he described as a "soft sign" of neurodevelopmental dysfunction), and a tendency to cover test pages with his hand to reduce stimulus complexity (likely a coping behavior for attention deficits). Particularly relevant with respect to Mr. Floyd's uncontrolled aggression during his crimes, Dr. Mack observed "flashes of severe anger" and extreme impulsivity that Mr. Floyd had difficulty controlling even in the highly structured testing

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environment. (Mack 10/13/06, Behavioral Observation section).

27. Cognitive deficits and learning problems are other primary disabilities associated with FASD. While FASD is a leading cause of mental retardation in the United States, only 25 percent of individuals affected by prenatal alcohol exposure are mentally retarded. In fact, some individuals diagnosed with FASD have IQs in the above average range. Moreover, individuals with FASD may perform in the average range on IQ tests but show significant discrepancies between Verbal and Performance skills, reflecting learning disorders and underlying brain damage. They also may achieve good school performance in the lower grades but show increasing problems or inconsistent performance as subjects become more complex in higher grades. Mathematics seems to be a particular problem because it requires good working memory skills (i.e., the ability to hold complex information in mind and manipulate it) and increasing abstraction skills as math subjects become more complex. Zane Floyd repeated the second grade (Dougherty 7/13/00, p. 9; DS1086) and began failing subjects in 3<sup>rd</sup> grade, receiving "Fs" in Arithmetic, Reading, Language, and Social Studies. (Goose Creek records) In 4<sup>th</sup> grade, his teacher noted that he did not use his time wisely or practice self-control. (Pueblo School District records; ZFloyd006-MISC0310) Adoptive father Michael Floyd testified that he recalled trying to help his son with a math formula during the 3<sup>rd</sup> or 4<sup>th</sup> grades that his son simply could not learn. (Trial 7/18/00am, p. 114) There also were occasions when Zane Floyd would see and read instructional material but could not make sense out of them. (Alfonso 7/12/00, p. 16; DS9427) He was expelled during the 5<sup>th</sup> grade for being "out of control" and had to receive home schooling. (Dougherty 7/13/00, p. 9) He was placed back on Ritalin and within a year, he turned himself around in school and was Captain of the Academic Team. (Dougherty 7/13/00, p. 9) When he was 12, he was diagnosed by child psychiatrist Dr. Roitman with ADHD and prescribed Ritalin, which he took until age 15. (Dougherty 7/13/00, p. 10)

28. A comprehensive psychological evaluation when Mr. Floyd was 13 determined he met criteria for Attention Deficit Disorder, or ADD, along with an adjustment reaction with mixed emotional and behavioral symptoms, developmental coordination disorder, and organization deficits. (Cardle 4/30/89, p. 4) The report indicated that although he had an average IQ as measured on the WISC-R (Full Scale IQ = 101), there was a significant discrepancy between his high average verbal skills and low average performance skills. (Cardle 4/30/89, p. 2) I should note that Dr. Dougherty found convergent evidence for this discrepancy in his evaluation in 2000 when he determined by means of a different IQ test (i.e., Kaufman Adolescent/Adult Intelligence Test) that there was a significant difference between Mr. Floyd's crystallized IQ of 104 and fluid IQ of 84. (Trial 7/18/00pm, p. 17) Dr. Mack recently found additional convergent evidence of this discrepancy in his recent IQ testing with the WAIS-III. (Mack 10/13/06, Intellectual Functions section) Discrepancies of this nature are associated with learning disorders and brain damage. Dr. Cardle's report noted that visual-motor skills were Mr. Floyd's poorest area of functioning. (Cardle 4/30/89, p. 2) Deficits in reasoning abilities were also evident, where it was noted he functioned three years below age-peers. According to Dr. Cardle: "When information needs to be organized by him, or there is a great deal of information he must integrate, Zane seems to have more difficulty utilizing his general reasoning skills." (Cardle 4/30/89, p. 2) It should be noted that organizational ability is an executive skill.

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Consistent with Dr. Cardle's analysis, Mr. Floyd recently told Dr. Mack that he had difficulty absorbing what he read because he was distracted. (Mack 10/13/06, Medical/Psychiatric History section) Testing in Dr. Mack's evaluation also revealed perceptual difficulties as well as attention and processing difficulties (i.e., all executive functions). A short-term working memory deficit was noted, both in recalling series of digits, which is a fairly straightforward short-term memory task, and in recalling and encoding more complex information. Consistent with Dr. Cardle's analysis, Mr. Floyd told Dr. Mack in his recent neuropsychological evaluation that his short-term memory was "real bad," that he was unable to remember which card he was playing during card games on his Unit, and that he would constantly forget what he had just said to someone or follow through with a recently stated intention. (Mack 10/13/06, Medical/Psychiatric History section) Dr. Cardle's neuropsychological test results indicated a slightly elevated impairment score, suggesting deficits. The psychologist noted that organizational deficits might affect Mr. Floyd's "overall behavior" and thereby impact his ability to behave appropriately. She also noted "significant emotional difficulties" and "unusual perceptual responsiveness," which she felt might be related to his exaggerated responding and socialization deficits. It is noteworthy that she provided an example of a specific behavior seen frequently in the histories of FASD youth: confabulation. She noted: "It was observed in a group setting that Zane tends to exaggerate or make up stories to 'outdo' other members who may be talking about something that is important to them. This seems to be a habitual response for Zane..." (Cardle 4/30/89, p. 4) It also is noteworthy that the psychologist concluded Mr. Floyd's difficulties "may be related to some subtle frontal lobe dysfunction and/or emotional dysfunction." (Cardle 4/30/89, p. 5) As a result of this extensive psychological evaluation, it was recommended that Mr. Floyd and his family participate in family counseling, that he receive remedial support for his visual-motor skill deficits, and that his parents and teachers provide him with more structure and organization. Records do not indicate that the psychologist's advice was followed. Dr. Cardle concluded her report prophetically: "While Zane may not qualify or have significant cognitive deficits to enable him to receive assistance in academic areas in the school system, he is a child who is extremely at risk for significant continued behavioral and emotional difficulties." (Cardle 4/30/89, p. 5)

29. Mr. Floyd displayed increasing evidence of cognitive disabilities as he entered middle school. In 7<sup>th</sup> grade, he received "Ds" in math and social science. (Clark County School District records) In 8<sup>th</sup> grade, he received Fs in several classes, including Study Skills. (Hyde Park records) His academic problems continued as he entered high school. When he was 16, he scored between the 6<sup>th</sup> and 42<sup>nd</sup> percentiles on three different aspects of his math skills in the Survey of Basic Skills exam. (Clark County School District records) An 11<sup>th</sup> grade achievement test indicated significant deficits in math and language skills. (Faith Lutheran High School records) A mid-year transfer dated February 16, 1993, noted that he was on "behavioral probation" and tended to have "little outbursts." (DS8247) A high school grade composite noted decreasing grades in math (i.e., from a B and C in pre-algebra in 10<sup>th</sup> grade to Ds and Fs in 11<sup>th</sup> and 12<sup>th</sup> grades) as the courses became more complex. (Faith Lutheran High School records) While there were a few occasions where Mr. Floyd did well in math, the majority of his school records indicated poor performance in mathematics in particular and overall poor academic performance in general. Because of his academic problems and poor judgment

about priorities, he eventually dropped out of traditional high school and obtained his diploma through night classes so that he could enter into the Marines. (Alfonso 7/12/00, p. 17)

30. Zane Floyd also had social skills deficits, another common neurodevelopmental or primary disability associated with FASD. Children with this diagnosis have significant difficulty making friends. Their social perception deficits interfere with their ability to detect social cues and interact easily with others. They often fabricate stories or exaggerate events in an effort to hold the interest of their peers and fit in. Because they lack awareness of social boundaries, they sometimes stand too close to others or touch them inappropriately. As a result of these skill deficits, their childhood histories typically reflect loneliness and isolation from peers. According to Dr. Cardle, Mr. Floyd recognized at age 13 that he had deficient social skills. (Cardle 4/30/89, p. 4) She observed during her evaluation of him that in a group setting, he would exaggerate or make up stories to "outdo" other group members who were talking about topics of interest to them. (Cardle 4/30/89, p. 4) Dr. Dougherty reported that Mr. Floyd would do anything to avoid rejection from peers (Trial 7/18/00pm, p. 59) and noted that a score at the 99<sup>th</sup> percentile on the Manson Evaluation indicated Mr. Floyd felt isolated from others and had significant difficulty establishing personal relationships. (Trial 7/18/00pm, p. 26) He also scored in the 99<sup>th</sup> percentile on a scale reflecting excessive fears, worries, feelings of insecurity, and inadequacy. Dr. Dougherty testified that based in part on results from the Basic Personality Test, Mr. Floyd appeared to be a social introvert with a very weak self-ego. (Trial 7/18/00pm, p. 29-30) Robert Jay Hall, Mr. Floyd's best friend, testified that he met Mr. Floyd when they attended Hyde Park Junior High School, thought of him as the "class clown," and decided to befriend him primarily because he felt sorry for Mr. Floyd's lack of popularity. (Trial 7/18/00am, p. 75)

31. In addition to the neurodevelopmental disorders addressed above, impulse control and judgment deficits are two other primary disabilities typically seen in individuals affected by prenatal alcohol exposure that have important implications in the current matter. Being able to control one's urges and emotional reactions and make appropriate choices are skills essential for pro-social behavior. Zane Floyd had significant deficits in both these areas. For example, Dr. Dougherty testified that a subscale score at the 99<sup>th</sup> percentile on the Basic Personality Test indicated Mr. Floyd likely was impulsive and prone to engage in risky and reckless behavior. (Trial 7/18/00pm, p. 29) Dr. Dougherty further noted in his testimony that in elementary school, it was difficult for teachers to get Mr. Floyd to control his behavior. Instead of attending to instruction, he acted out. Mr. Floyd's teacher at Princess Anne Elementary school noted he had problems with self-control. (Princess Ann records) During his middle school years, he was expelled for fighting and failing to go to class. (Alfonso 7/12/00, p. 16) Around this same time period, he was referred for psychiatric evaluation due to attention deficits and emotional problems. (Trial 7/18/00pm, p. 51; see also Dr. Cardle 4/30/89)

32. Zane Floyd also displayed deficits in his ability to express his sexuality in appropriate ways, a problem that is observed in about half of all individuals diagnosed with FASD (Streissguth et al., 1996). When he was ten, he was accused of anally penetrating the neighbor's three-year-old son.

(Alfonso 7/12/00, p. 8; DS9969) Although formal charges were never brought, his father and the boy's father were placed on probation for engaging in a fist fight over the incident. During his psychological evaluation with Dr. Cardle, she observed him make several inappropriate sexual comments to peers during group counseling sessions that made the other children uncomfortable. (Cardle 4/30/89, p. 3) In a letter written to a potential girlfriend, Mr. Floyd informed her that he was concerned about dating her because he was recently accused by a female classmate's father of statutorily raping the girl. (Jessica Letters DS10901)

33. Taken as a whole, Zane Floyd displayed almost every major neurodevelopmental disorder that has been associated with the primary disabilities typically seen in individuals with FASD. Beginning in adolescence, he also began displaying a number of adverse life outcomes because his primary disabilities were not accurately diagnosed and treated.

34. Review of data in this case leads to a strong conclusion that Zane Floyd displayed secondary as well as primary disabilities as a result of his brain damage and FASD. According to records, except for intermittent Ritalin to treat two of his problematic neurodevelopmental symptoms (i.e., inattention and hyperactivity), he never received accurate diagnosis or treatment for the wide-ranging primary disabilities inherent in his underlying condition. The lack of accurate diagnosis and treatment in early childhood is an issue that has profound effects on the later life histories of many individuals with FASD. In the case of Zane Floyd, the lack of an accurate diagnosis and treatment was a significant factor in his later mental health problems, substance abuse, disrupted school experience, inappropriate sexual behavior, dependent living, sporadic employment, criminal behavior, and, in particular, his unrestrained brutal aggression in the 1999 sexual assault and murders. Had he received appropriate treatment for his primary disabilities in childhood, it is highly likely that his secondary disabilities would have been more manageable and less extreme, if they had developed at all. This conclusion is based upon multiple studies of secondary disabilities in the 1990s (Streissguth et al., 1996; Streissguth et al., 1999; Yates et al., 1998), including research that I participated in during my postgraduate training.

35. As previously noted, deficits in impulse control and emotion self-regulation are hallmark behavioral symptoms in individuals with FASD. These deficits often lead to compulsive use of alcohol and drugs as well as other uncontrolled behaviors such as rage reactions, physical aggression, stealing, and other high risk behaviors. In some FASD-impaired individuals, there is very little self-control even when they are not under the influence of disinhibitory substances such as alcohol. In others, while they may generally function in a pro-social manner under the best of circumstances, when their central nervous system is affected by something that erodes inhibitory control, there can be a significant and abrupt decrease in volitional control. Alcohol and illegal street drugs are powerful disinhibitors because of their impact on the neurochemistry of the brain. In FASD-affected individuals with deficits in self-control caused by brain damage, the disinhibitory effects of alcohol and drugs tend to be greatly magnified. As a result, when faced with events that trigger negative emotions, individuals with FASD often overreact and behave impulsively without the moderating (i.e., socializing) steps involved in healthy executive functioning. Volitional control is not a

dichotomous issue in individuals with FASD or anyone else, for that matter. In some individuals with FASD, executive functions are severely affected, and there is constant difficulty in functioning in a pro-social manner. In other affected individuals, executive function impairment may appear more noticeable only at certain times, such as when the individual is severely stressed or is under the influence of a substance that compromises executive functioning (e.g., alcohol and/or illegal drugs). This analysis is relevant to Mr. Floyd's behavior on the day of the rape and murders, which apparently occurred shortly after he drank an excessive amount of alcohol, used methamphetamine, and experienced several stressful events: job problems, the death of his cousin, the "loss" of his best friend to homosexuality, the loss of his girlfriend, his unsuccessful return home to live with his parents, the loss of his entire paycheck to gambling, and \$10,000 debts that he was behind in paying (Paul 5/7/00, p. 29-30).

36. Mr. Floyd clearly appears to suffer from an elevated sensitivity to alcohol due to his FASD condition that affected his volitional capacity. For example, since his mid-teens, there is no evidence of physical aggression except when under the influence of intoxicating substances. However, when he was drinking in the military, he recalled provoking fights just to pick a fight and not really knowing why. (Alfonso 7/12/00, p. 4) He even reported an incident where he thought it was a good idea to "get into a fight with his locker" while intoxicated, which resulted in severe bruises on his hands. (Counsel Interview with Zane Floyd on October 10, 2005) He eventually received low marks in his competency scores for his excessive drinking and for his fighting and other disruptive behavior. (Alfonso 7/12/00, p. 20) His inability to see the effect of alcohol and drugs on his functioning and see the potential consequences of his continued use were beyond his functional capacity due to his FASD.

37. The fragility of Zane Floyd's executive functioning is a critically important issue in terms of his volitional control capacity. According to the Text Edition of the Diagnostic and Statistical Manual, Fourth Edition (DSM-IV-TR), the essential feature of Substance Intoxication is the development of a reversible substance-specific syndrome caused by recent ingestion of a substance. In Mr. Floyd's case, the "substances" involved methamphetamine and marijuana as well as excessive amounts of alcohol. The loss of volitional control caused by his alcohol and drug abuse combined with the judgment and emotion control impairments he already possessed due to his FASD and caused an exaggerated behavioral response beyond what is typically observed in people not impaired by prenatal alcohol exposure. According to the DSM-IV-TR, in unimpaired individuals, Substance Intoxication can cause "clinically significant maladaptive behavioral or psychological changes" associated with the intoxication, such as belligerence, mood lability, cognitive impairment, impaired judgment, and impaired social functioning – all of which are due to the direct physiological effects of the substance on executive functions within the central nervous system. The Manual further notes that the specific clinical picture in Substance Intoxication "varies dramatically" among individuals and also depends on "the person's tolerance for the substance." In Mr. Floyd's case, these symptoms were significantly magnified at the time he committed his 1999 crimes and may have triggered the Dissociative Disorder noted in Dr. Mack's report. This exaggerated response stems from an interaction between the *temporary* changes that alcohol and drugs cause in the frontal cortex of the

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brain where impulses are controlled and the *permanent* deficit in frontal cortex functioning that Mr. Floyd suffered as a result of his prenatal alcohol exposure.

38. By the time of Zane Floyd's trial in 2000, FASD had been recognized for over 25 years as a major known cause of neurodevelopmental disabilities, and the life-long implications of these disabilities had been recognized for 5 years. Follow-up studies in four countries had demonstrated the continuing adverse effects of prenatal alcohol exposure into adolescence and adulthood (Streissguth & Kanter, Eds., 1997). However, when Zane Floyd was a child and teenager, no one knew about the damage and long-term effects that prenatal alcohol exposure could cause. Thus, while he might have been identified as a child at risk and referred for evaluation had he been born in the 1990s, unfortunately he was born too early to be detected in routine screening by medical or school personnel and referred for medical evaluation. Thus, it was the timing of his birth that prevented him from being diagnosed and treated as a child for FASD.

39. Regular and unbridled abuse of alcohol by Mr. Floyd's caregivers undoubtedly interfered with adult recognition that Zane Floyd even had a learning disability, much less a pervasive birth defect that caused significant problems across all major domains of functioning. Although he was diagnosed as a child with ADHD and medicated intermittently until age 15, his parents were in denial regarding the fact that he had a learning disability and unaware that the source of the learning disability and his ADHD was brain damage. Instead of seeking appropriate treatment for problems he couldn't control, they severely disciplined him for poor academic performance. For example, Michael Floyd reported that when school officials told him his son should be placed in special education classes, he told them he wouldn't allow him to be a class with "retards." (Michael Floyd Declaration)

40. Not only were Mr. Floyd's primary disabilities not effectively treated, they were significantly increased by environmental influences (i.e., his parents' alcoholism and abusive parenting). Mr. Floyd reported examples of his father throwing him across the room and into a wall and pummeling him with fists as a method to discipline him for ADHD-related transgressions. (Dougherty 7/13/00, p. 9) He also reported an example of his mother becoming so intoxicated that she mistook the living room coffee table for a bathroom in front of her horrified and embarrassed teenaged son. (Counsel Interview with Zane Floyd, 10/10/05) Robert Jay Hall reported incidents where Valerie Floyd would give the boys beer during their teens, and the three of them would stay up late at night talking. (Trial 7/18/00am, p. 85) Mr. Hall also testified that Michael Floyd threw a 16<sup>th</sup> birthday party for his son and encouraged the teenagers present to play drinking games, during which several of the teenagers became inebriated. (Trial 7/18/00am, p. 85)

41. Secondary disabilities associated with fetal alcohol impairment are not just modifiable but preventable if an individual is diagnosed early and receives appropriate intervention. According to a four-year study at the University of Washington funded by the Centers for Disease Control and Prevention (1996), specific "risk factors" *increase* the probability that a fetal alcohol impaired individual will go on to develop secondary disabilities, and specific "protective factors" *reduce* that

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probability. These risk and protective factors apply to an individual's childhood up to 18 years of age and are mutually exclusive. These mediating factors include the following: living in a nurturing and stable home for at least 72% of childhood, receiving a diagnosis of fetal alcohol impairment prior to age six (which permits positive interventions to be applied early in life), never having experienced violence, living for at least 2.8 years in each household, experiencing a good quality home ("good quality" was operationally defined by 12 specific factors), being FAS rather than FAE (because the facial characteristics make the condition more noticeable to others and therefore more prone to positive intervention), and having basic needs met at least 13% of the time during childhood. Follow-up research (Streissguth et al., 2004) also found that having been sexually or physically victimized in childhood was an additional mediating factor that affected the later expression of inappropriate sexual behavior. Data reviewed in this case revealed that Zane Floyd experienced most of these mediating factors as *risk* factors rather than *protective* factors: he never lived in a "good quality" home (i.e., his early childhood and adolescence were spent in a non-nurturing, unstable home that involved frequent moves, caregiver alcohol abuse, domestic violence, child physical abuse, emotional neglect, and lack of structure), he was not diagnosed with FASD in childhood, and he was frequently the target of his father's violence during his childhood and adolescence. With respect to having his basic childhood needs met, data indicate that this was a secondary disabilities risk factor for Mr. Floyd during his entire childhood.

42. Behavior problems in children are often blamed on poor parenting, and by the time children reach adolescence, any antisocial behavior they display is usually interpreted as willful misconduct. Adolescents and adults are expected to have the developmental capacity to behave in pro-social ways, even if they are exposed to poor parenting and multiple traumas in their childhoods. However, for individuals with fetal alcohol impairment and associated deficits in executive functioning, maintaining good behavior without adequate support is beyond their capability. Defective executive functioning causes them to be highly suggestible and prone to direct influence from others in their lives. If that influence is aggressive or antisocial, they are not neurologically equipped to consider alternative choices and behaviors.

43. When Zane Floyd was born in 1975, little was known about the long-term effects of FAS/FAE on adult functioning. The term "Fetal Alcohol Syndrome" had just been identified publicly (Jones & Smith, 1973). It was not until Zane Floyd was nine that researchers began to publicize information about Fetal Alcohol Effects (Abel, 1984), and he was 14 (i.e., 1989) when Congress finally passed legislation to mandate labels on all alcohol beverage containers sold in the United States that warned against drinking alcohol during pregnancy. Although the term "secondary disabilities" was not widely recognized before the mid-1990s, by the late 1980s there was growing awareness that fetal alcohol impairment caused structural brain damage (West, 1986) and that this damage in turn caused long-term behavioral and developmental disturbances (Spohr & Steinhausen, 1987; Streissguth & Randels, 1988; Streissguth, 1990). By the mid-1990s, knowledge about secondary disabilities was widespread (e.g., Meyer et al., 1990; Phillips, 1992; Streissguth, 1992). For example, in 1992 the Centers for Disease Control and Prevention (CDC) funded a major research project at the University of Washington to study secondary disabilities, and in early 1994, *Alcohol*

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*Health and Research World* (now titled *Alcohol Research and Health*) devoted a full issue to the topic of FAS and other alcohol-related birth defects (see Volume 18, Number 1, 1994) that provided a comprehensive overview of the existing knowledge on the effects of prenatal alcohol exposure. (This issue was later awarded first prize in the technical publications category by the National Association of Government Communicators.) Thus, by the time of Zane Floyd's trial in 2000, any expert in neurodevelopmental disorders could have testified in general about the primary disabilities associated with FASD, and any expert armed with the data provided to me by post-conviction counsel could have testified about the specific impact of this condition on Mr. Floyd's childhood functioning.


44. With respect to long-term outcomes from untreated FASD, prior to the 2000 trial knowledge about the secondary disabilities associated with fetal alcohol exposure had become a primary focus in research studies. In the mid 1990s, the United States Congress directed the National Institute on Alcohol Abuse and Alcoholism (NIAAA) to prepare a comprehensive report on the subject. In response, NIAAA commissioned the Institute of Medicine (IOM) of the National Academy of Sciences to conduct a study. The resulting seminal report was titled, *Fetal Alcohol Syndrome: Diagnosis, Epidemiology, Prevention, and Treatment* (Stratton et al., 1996). This report critically reviewed the major scientific issues in fetal alcohol research and made a number of recommendations, including the new diagnostic terminology referred to earlier in this declaration (i.e., FAS Types 1-5). By 1996, research at the University of Washington had revealed that secondary disabilities became observable in people with FASD by their young adults years (Streissguth et al., 1996) and specifically identified the risk and protective factors associated with these secondary disabilities. A year later, Streissguth (1997) published a book for the lay public regarding these secondary disabilities. Thus, by 2000, the year of Mr. Floyd's trial, and certainly by his appeal, any expert with knowledge about FASD could have testified about the long-term social and behavioral ramifications of prenatal alcohol exposure in general, and any expert armed with the information provided to me could have testified about the long-term ramifications of FASD in Mr. Zane's life.

45. The awareness that FASD is a birth defect with pervasive and long-range neurodevelopmental effects has led to increasing awareness in the legal profession that a different level of attribution is warranted for individuals with this condition (Fast, Conry, & Loock, 1999; Baumbach, 2002). Rather than assuming they become unmotivated, manipulative, antisocial, and/or self-defeating solely because of poor parenting experiences and free will, research over the last 15 years has shown consistently that *untreated primary disabilities* are the basis for maladaptive behaviors. Notwithstanding the fact that environmental influences can play a significant role in the expression of secondary disabilities, it also has been established in the scientific research that individuals with FASD have structural brain damage that makes it highly unlikely that they will be able to withstand the negative influence of environmental risk factors without appropriate support and treatment. As Streissguth and colleagues noted recently (Streissguth et al., 2004), one of the strongest correlates of adverse outcomes in individuals with FASD is lack of an early diagnosis: "The longer the delay in receiving diagnostic information, the greater the odds of adverse outcomes." Thus, the research indicates that for Zane Floyd's debilitating substance abuse and subsequent brutal

aggression to have been prevented, he needed appropriate intervention in childhood to eliminate or reduce the risk factors he was exposed to and substitute protective factors. Through no fault of his own, this intervention did not happen. Thus, while environmental risk factors were clearly important in his outcome, unlike individuals without brain damage who have the capacity to withstand negative environmental influences and emerge from childhood as pro-social adults, those like Mr. Floyd who are affected by prenatal alcohol exposure but untreated do not have that ability.

46. Zane Floyd is sentenced to death for the crimes he committed while under the influence of alcohol and drugs. Given data in this case that support a diagnosis of FASD, it is clear that substance abuse (a secondary disability) and lack of impulse control and judgment (untreated primary disabilities) rendered him a very dangerous man and were significant factors in his violence. It is equally clear that given his birth defect and the pervasive short-term and long-term ramifications of that condition on his functioning, he had virtually no ability on his own to change the negative course of his life.

I declare under penalty of perjury that the foregoing is true and correct and that this declaration was executed in Seattle, Washington, on October 17, 2006.

  
Dr. Natalie Novick Brown

Appendix A  
IOM Criteria

In 1996, the Institute of Medicine (IOM) developed five diagnostic categories related to fetal alcohol exposure:

**Type 1.**

**Fetal Alcohol Syndrome (FAS) with Confirmed Maternal Alcohol Exposure**

*Requires:*

- a. confirmed maternal alcohol exposure
- b. facial dysmorphism, including short palpebral fissures and abnormalities of the premaxillary zone (e.g., flat upper lip, flat philtrum, flat midface)
- c. growth retardation, such as low birth weight, lack of weight gain over time, disproportional low weight to height
- d. neurodevelopmental abnormalities of the Central Nervous System (CNS), such as small head size at birth and structural brain abnormalities with neurological hard or soft signs (e.g., impaired fine motor skills, neurosensory hearing loss, poor tandem gait, poor eye-hand coordination)

**Type 2.**

**FAS Without Confirmed Maternal Alcohol Exposure**

*Requires:*

- b. through d. above

**Type 3.**

**Partial FAS With Confirmed Maternal Alcohol Exposure**

*Requires:*

- a. confirmed maternal alcohol exposure
- b. some components of the FAS facial pattern
- c. growth retardation as in Category 1
- d. CNS neurodevelopmental abnormalities as in Category 1
- e. Complex pattern of behavioral or cognitive abnormalities inconsistent

with developmental level and unexplained by genetic background or environmental conditions (e.g., learning difficulties, deficits in school performance, poor impulse control, problems in social perception, language deficits, poor capacity for abstraction, specific deficits in mathematical skills, and problems in memory, attention, or judgment)

**Type 4.****Alcohol-Related Birth Defects (ARBD)***Requires:*

- a. confirmed maternal alcohol exposure
- b. one or more congenital defects including malformations and dysplasias of the heart, bone, kidney, vision, or hearing systems

**Type 5.****Alcohol-Related Neurodevelopmental Disorder (ARND)***Requires:*

- a. confirmed maternal alcohol exposure
- b. CNS neurodevelopmental abnormalities as in Category 1 *and/or*
- c. complex pattern of behavioral or cognitive deficits as in Category 3

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**CONFIDENTIAL REPORT**

October 13, 2006

Tiffani D. Hurst, Esq.  
Law Offices of the Federal Public Defender  
411 E. Bonneville Avenue, Suite 250  
Las Vegas, NV 89101

**RE:** Zane Michael Floyd  
**REPORT:** Neuropsychological Evaluation  
**DATE(S) OF EVALUATION:** 10/02/2006; 10/03/2006  
**DATE OF BIRTH:** 09/20/1975  
**AGE:** 31  
**YEARS OF EDUCATION:** 12  
**EXAMINERS:** Jonathan H. Mack, Psy.D.

Dear Ms. Hurst:

The following represents my report of Neuropsychological Evaluation of Zane Michael Floyd. As you know, Mr. Floyd is a 31-year-old, Caucasian, single male on death row at Ely State Prison for crimes committed on or around June 3, 1999. This report is based on extensive review of medical records, an 1 ½ hour clinical interview with myself of Mr. Floyd and about 10 plus hours of face to face testing conducted by myself. My MA level clinical assistant, Elizabeth Maurer, MA, assisted in records summarization, scoring, and data entry for this report. All interpretive conclusions and opinions are solely my own.

**TESTS ADMINISTERED:**

Beck Anxiety Inventory  
Beck Depression Inventory-II  
Beck Hopelessness Scale  
Boston Diagnostic Aphasia Screening Examination, Complex Ideational Material  
Subtest, Cookie Theft Subtest  
Controlled Oral Word Association Test/Animal Naming  
Grooved Pegboard  
Halstead-Reitan Neuropsychological Test Battery  
Aphasia Screening Test  
The Booklet Category Test-II  
Finger Oscillation Test  
Grip Strength Test

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Lateral Dominance Examination with Right/Left Orientation  
 Reitan-Klove Sensory Perceptual Examination with Visual Field Screening  
 Seashore Rhythm Test  
 Speech Sounds Perception Test  
 Tactual Performance Test  
 Trail Making Tests, A and B  
 Paced Auditory Serial Addition Test  
 Rey-Osterrieth Complex Figure Test with Recognition and Recall  
 Ruff Figural Fluency Test  
 Stroop Color and Word Test  
 Test of Memory Malinger  
 Visual Cancellation Tests, Verbal and Nonverbal  
 Wechsler Adult Intelligence Scale-III  
 Wechsler Memory Scale-III  
 Wide Range Achievement Test - 4  
 Wisconsin Card Sorting Test

#### RECORDS REVIEWED:

Copious amounts of records provided by the Office of the Federal Public Defender, Region of Nevada, were reviewed. The majority, but not all of, the records reviewed are summarized in the following table.

DATE	SUMMARY	DOCUMENT
Various	<p>Berkeley County School District Records were reviewed. Cognitive Skills Assessment Battery for Grade 1 and Grade 2 were reviewed and indicated readiness for further assignment.</p> <p>Referral for Psychological Evaluation dated 1/20/83 indicated that Zane was being referred for evaluation as a result of a very poor attention span, poor fine motor skills, immaturity and poor frustration tolerance. Zane was in the 2<sup>nd</sup> grade at the time.</p> <p>South Carolina Basic Skills Assessment for Grade 1 reported a Total Math Score of 733 (range 256-884) and a Total Reading Score of 826 (range 371-955). South Carolina Basic Skills Assessment for Grade 2 indicated a Math Total Score of 927 (range 195-927) and a Reading Total Score of 829 (range 310-940).</p> <p>Marrington Elementary School Grade Sheet for the 3<sup>rd</sup> Grade (1983-1984) was reviewed. Failing grades were noted for Arithmetic, Reading, Language/phonics, and Social Studies. Zane received a "B" in Spelling, a "C" in Science and an "A" in Health.</p> <p>Pueblo, Colorado School District Records were reviewed for Grade 4 (1985-1986). Academic achievement for the first and second marking periods were generally satisfactory.</p> <p>Clark County Academic Records were reviewed for Zane Michael Floyd. Grades for the following school years were included: 1987-</p>	School Records

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	<p>1988 (6<sup>th</sup>), 1988-1989 (7<sup>th</sup>), 1989-1990 (8<sup>th</sup>), 1990-1991 (9<sup>th</sup>), 1991-1992 (10<sup>th</sup>), 1992-1993 (11<sup>th</sup>), 1993-1994 (12<sup>th</sup>). Academic achievement for the 6<sup>th</sup> and 7<sup>th</sup> grades were noted to be variable to poor with significant improvement in the 8<sup>th</sup> grade. A significant decrease in academic achievement was noted beginning in the 10<sup>th</sup> grade.</p> <p>Clark County Educational Testing for 04/1991 and 10/1992 were reviewed. Results of CTBS testing of 4/91 reported that Mr. Floyd was proficient above the 50<sup>th</sup> percentile in all areas. SRA Survey of Basic Skills dated 10/92 reported less than 50<sup>th</sup> percentile marks for Reading Usage (37%), Language Total (31%), Math Concentration (42%), Math Total (21%), Total Battery (38%), Reading Comprehension (45%), Language Mechanics (9%), Math Computation (6%), Problem Solving (35%), and Reference Skills (31%).</p> <p>Faith Lutheran Transcript for Zane Michael Floyd was reviewed.</p> <p>PSAT/NMSQT Score Report for 1993, grade 11 reported a Verbal score of 47 (74<sup>th</sup> percentile) and a Math score of 46 (51<sup>st</sup> percentile). Educational plans completed by Mr. Floyd noted that he had a "C" average with an anticipated college major of Criminal Justice Studies with an eventual career in Law Enforcement.</p> <p>ASVAB Counselor Summary dated 1/15/94 was reviewed. Mr. Floyd's Academic Ability was at the 90<sup>th</sup> percentile, Verbal Ability was at the 97<sup>th</sup> percentile, and Math Ability was at the 81<sup>st</sup> percentile. No score fell below the 57<sup>th</sup> percentile.</p> <p>Pupil Release and Transfer Form dated 12/2/1992 indicated that Mr. Floyd was withdrawn from the Faith Lutheran School with the following grades noted at time of withdrawal: Technical Math - D, Physical Science - F, English III - F, Vocational Marine Mechanics - D, US History - D.</p> <p>Clark County School District Secondary Student Entry/Withdrawal History was reviewed. Mr. Floyd was enrolled in the following schools at the following times: <u>Grade 7</u> : Clark County - Madison Elementary school (3/88 - 8/88), Clark County - Dell Robinson School (8/88 - 11/88), Clark County - Hyde Park School (11/88 - 89); <u>Grade 8</u> : Clark County - Hyde Park School (89 - 90); <u>Grade 9</u>: Clark County - Hyde Park School (90 - 91); <u>Grade 10</u>: Clark County - Southern NV Vocational Technical Center H.S (8/91 - 92), Clark County - Southern NV Vocational Technical Center H.S (9/92-12/92), Faith Lutheran Jr./Sr. H.S. (12/92 - 6/93) (Private School); <u>Grade 11</u>: Faith Lutheran Jr./Sr. H.S. (93 - 1/94) (Private School), ED W. Clark County - Clark High School (2/94 - 3/94); <u>Grade 12</u>: Clark County Adult High School (2/94 - 7/94) Zane Obtains Diploma</p> <p>Immunization Records and Health Inventory were reviewed. Health history noted a surgery in 1979-80 for an undescended testicle. Mr. Floyd was noted to have had German Measles at 1977, Chicken Pox at age 3, and pneumonia at 6-7 years old.</p>	
04/30/1989	Evaluation Summary Report of Maria J.P. Cardle, Ph.D. was	Evaluation Summary

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	<p>reviewed. It was indicated that Mr. Floyd's chronological age at the time of testing was 13 years, 5 months. Background information was reviewed. Dr. Cardle reported that Zane was born 1 ½ months premature and weighed 4 pounds, 10 ounces. He was reportedly placed in an incubator for 4-5 days and was given oxygen. Developmental milestones were reported to be delayed. Walking and talking were noted to be delayed until 18 months. Difficulty with fine motor skills in addition to a slight motor tremor was reported. Parental information noted that Zane was easily frustrated, had difficulty sitting still and lacked social skills and the ability to develop friendships. He was also immature, defensive, noncompliant and overly sensitive. To their report, he would get into fights frequently. Corporal punishment was noted. Referral had been received from neurologist Susan Kehne, M.D. who had evaluated Zane for neurological difficulties. It was indicated that Zane had a history of taking Ritalin in the 2<sup>nd</sup> grade until the 5<sup>th</sup> grade and that medication was begun due to exacerbation of behavior problems. As of 12/1988 he reportedly received 20 mg of sustained released Ritalin. It was also reported that in the spring of 1989 that Zane was prescribed Imiprimine by Dr. Roitman.</p> <p>Results of testing indicated that Zane was average for intelligence although a significant discrepancy was noted between high average Verbal skills and low average Performance skills (Wechsler Intelligence Scale for Children-Revised; Verbal IQ-111, Performance IQ - 91, Full Scale IQ-101). Visual-motor skills were noted to be a weakness in addition to memory problems when information is not structured. Some deficits in reasoning ability was indicated. It was noted that organizational difficulties limited Zane's performance, although his basic skills were average. Perceptual difficulties and attention/processing difficulties were indicated. The Luria-Nebraska Neuropsychological Test Battery was reportedly administered and revealed an elevated score of 48. Visual motor skills were again identified as a significant area of weakness. Significant emotional distress was indicated on projective testing. There was also a documented concern about Zane's focus on sexual issues.</p> <p>Dr. Cardle offered the following diagnoses: Adjustment reaction with mixed emotional and behavioral symptoms; Attention Deficit Disorder; Developmental Coordination Disorder; and Organizational Deficits. Dr. Cardle opined, "The most significant difficulties are seen in his visual-motor performance and also his ability to integrate and organize information. His difficulties in organizational skills are more likely related to dysfunction in higher level processes of the brain. These tendencies to be somewhat disorganized and fail to integrate information appropriately, at times, may contribute to some of Zane's social and behavioral difficulties, as he is not accurately accessing and utilizing information in all situations. Emotionally, he is quite anxious, depressed, and insecure. This also appears to be contributing significantly to social, behavioral, and academic difficulties." Dr. Cardle concluded that Zane was "a child who is extremely at risk for significant continued behavioral and emotional difficulties." Family counseling was strongly advised.</p> <p>Raw Data of Dr. Cardle was reviewed. The Woodcock Johnson</p>	<p>Report of Maria J.P. Cardle, Ph.D.</p>
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	Psychoeducational Battery was administered and scores were reviewed although were not clear in regards to grade equivalents and age equivalents. The Wechsler Intelligence Scale for Children-Revised (WISC-R) was administered and revealed a Verbal IQ of 111, a Performance IQ of 91 and a Full Scale IQ of 101. On the Bender Gestalt, visual-motor test, performance was noted to be at the 11-12 year age equivalent. Scores for the Luria-Nebraska Neuropsychological Test Battery were included and reviewed.	
06/03/1999	Voluntary Statement of Zane Floyd was reviewed. The record was noted to be a transcript of the tape recorded interview conducted by Detective Paul Bigham. Mr. Floyd was noted to be a white male adult, DOB: 9/20/75 living at 4101 West Oakley in Las Vegas, NV. Mr. Floyd was noted to provide his phone number. Detective Bigham asked Mr. Floyd as to whether he was aware that he was being tape recorded to which Mr. Floyd replied, "yes." Mr. Floyd was asked if he would like to give a statement pertaining to the events of that morning and Mr. Floyd responded, "Yeah." After this he began to talk about another gun he owned, a Ruger P-97 which he reportedly left under the passenger seat of his friend, Kenny Ascencio's car. He then later said that it was actually Rob Godman's car that he left it in. Mr. Floyd also indicated that he was a bouncer at "Sneakers." Mr. Floyd continued to talk about leaving his gun in Mr. Godman's car and how he had called his girlfriend on the phone and then began talking about how Mr. Godman used to be a cop in Michigan. He then began talking about how Kenny was a bounty hunter. The detective redirected Mr. Floyd and he began when he started his day. Mr. Floyd said that he went to Sneakers at around 4:30 in the afternoon, did paperwork and then his girlfriend Paulina picked him up. As per the statement, he was not aware of her last name. He said that they went to Olympic Gardens and then to Rio and had been drinking "quite a bit" of alcohol. Mr. Floyd denied doing any drugs at that time. He reported drinking "a lot of Jack Daniels...Uh I had like eight doubles..." He continued to describe the evening but then backtracked to earlier in the day when he was at Sneakers. Mr. Floyd said that he had gone to "Affirmative" earlier that day to get his final paycheck as he had quit because they "shorted" him. Mr. Floyd then continued to talk about the events of the evening and said that he was gambling and dancing at Rio and stayed at the Blackjack tables until he reportedly lost all his money. He said that when he left it was still dark out and he was unaware of the time. Mr. Floyd indicated that he went home and was listening to Korn and playing with his shotgun. Mr. Floyd was asked whether he did this a lot to which he replied that he had "extensive, extensive training and experience with guns and I just, uh, I'm constantly takin' my guns out..." Mr. Floyd was asked about his profession. He said that he had worked at Affirmative and at Sneakers. Prior to Affirmative he reported that he had worked at Costco. Before that he said that he was a machine gunner and weapons instructor in the Marine Corps for four years. Mr. Floyd reported that he had gotten out of the Marine Corps the previous July and had been living in his parent's guest house until he moved to another apartment across the street from Albertsons which reportedly did not work out. He said that he had just recently moved back into his parent's house. Mr. Floyd was asked what was going through his mind during the incident to which he replied, "I real.... I realize that I'm just, I don't know."	Las Vegas Police Department Officer's Report - Voluntary Statement of Zane Floyd 0516

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I've always just, uh, I've always, with all the, with all the training I've had and I'm not trying to say that, you know, it's because of the training and, you know, the Marine Corps made me psycho or anything, uh, but because I've always, you know, you know, for the last five years the main focal point of my life was my job. You know, besides Costco, you know, and being armed security, you know it's just been, has been weapons. That was my main, my main job was to know weapons to teach and shoot 'em. That was it and I just, I just..." Mr. Floyd continued, "this is hard for me 'cause I never, I never considered myself psychotic, but what I, what I did tonight definitely... I don't know, I honestly, I ....I've, I've always just, I've always just wanted to know, call me crazy, psychotic, whatever, I've just always wanted to know what it's like to shoot someone...Always. I don't know. Ever since I was a little kid I've always, you know, ever since I saw my first, my first war movie, I've always just wanted to go to war and kill people and, you know, I, that's why I joined the Marine Corps. That was the only reason I joined the Marine Corps. You know, in infantry I was a machine gunner just, you know, the sole purpose was I, I wanted to go to war and I wanted to..." The detective again redirected Mr. Floyd and Mr. Floyd answered that there was a lot of "shit" going through his head. He gave the reasons of Affirmative shorting him on his check, losing his money at blackjack, his girlfriend being mad at him, feeling like a loser for moving into his parent's house, and not having a job. He said, "uh, I wouldn't say shit was fallin' apart. If it was fallin' apart, it was 'cause I was, I was tearin' it apart and I was makin' it fall apart. But, you know, I, I know the problems that I had were my fault and were of my, my doing, you know. I caused 'em. I just, I, I don't wanna make excuses." Mr. Floyd continued, "I don't, I really can't tell you. Honestly, I really can't tell you what, what made me load that shotgun, throw the shells in my pocket, and walk down to Albertson's. I mean, I, I just can't, I can't tell, there's not one thing in my mind that I can pin point. I just can't...." Mr. Floyd indicated that he remembered loading the shotgun and walking to the supermarket but that he could not remember why. Mr. Floyd began to discuss his walk to Albertson's, "And I remember I was, I remember just being in a kind of a, kind of daze. Just kind of not really focused, I mean, focused, but not focused, thinkin' about what I was going to do but not really believing that I was going to do it. And, you know, I would say probably thirty feet, from thirty to fifty feet from the door, I, uh, I threw the robe off, uh, and I walked up to the door, the, the door on the east side. And, uh, I remember seein' the, the guy that was there. He was pushing the carts. I remember, I remember when I was shuckin', when I was getting' rid of my robe, he was pushin' carts inside the, inside the door. And I was surprised that that door was open because, you know, I worked graveyards for months and that door was always closed. I was, you know, I was surprised that door was open, which I don't know why that came into my head right now. I mean, you know, just... You know, probably just 'cause he was collecting the carts. And, uh, I remember walkin' up behind him. I walked right in the door and I had the shotgun pointed right at his back. Uh, I was probably fifteen, I would say probably fifteen feet away and I just remember thinkin' to myself, what, what am I doin'? What am I doin', am I gonna shoot this guy or am I not gonna shoot this, you know, what, what's goin' on? What am I doin'? and, and

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	<p>then I just shot him. Uh, I honestly can't remember if I said anything to him or not." Mr. Floyd reported that after he shot this man, he did not remember much until he got to the back of the store. He said that all he remembered was pumping his shotgun and reloading as he was running. He noted that he slipped and fell on something. Mr. Floyd said, "I can remember, I mean, I can't remember, I mean actually seeing targets and shootin' 'em, but I can remember, you know, pulling the trigger, you know, feeling the recoil, pumpin' and reloadin'. I can, I can remember that, but I can't remember targets at all, uh, until I went in the back. Uh, and, uh, the lady that was back there, uh, I remember her very clearly. She kept begging me not to shoot her and walked up to within two or three feet and shot her right in the head. I then, I, I just remember her head came apart and then, uh, then after that everything is just, everything is just clear as a bell. Uh, I remember running. I ran all the way towards the, uh, the east door, the one that I came in at." Mr. Floyd reported that he had wanted the cops to shoot him because, "I just, I just remembered that lady's head comin' apart and what I, what I'd done and I just. In my whole mind frame at that point was just, I, I just wanted the cops to shoot me but I couldn't, I couldn't, I couldn't point, I couldn't point my gun, my shotgun at the cops. I just, for years I wanted to be a cop and then fuckin' meth got the better of me and then.." Mr. Floyd was asked whether he had done "meth" on this night and he said that he had before he left the house. Mr. Floyd denied that robbery was part of his motive. The detective asked about his parents and Mr. Floyd said, "Uh, yeah. My, my parents are, my parents are great. They haven't....they've never been better." Mr. Floyd indicated that his father was a fire inspector and that his mother was a school bus driver. Mr. Floyd reported that he had been honorably discharged from the Marines as an E-3 Lance Corporal after having some altercations within the barracks related to his drinking in addition to having been arrested for a DUI in 1997. Mr. Floyd reported that he had done some alcohol counseling. Mr. Floyd was noted to ramble and summarize his statement at the end of the tape transcript.</p>	
06/03/1999	<p>Voluntary Statement of Zane Floyd was reviewed. It was noted that the tape-recorded interview was conducted by Officer C. Catanese. A Miranda Warning was included on this statement and it is unknown as to whether Mr. Floyd signed the Rights waiver. The interview began with Mr. Floyd stating, "I killed those people— oh God, what I'd do. I, I..." Officer Catanese was then asking Mr. Floyd about where he was stationed and how long he was in the Marine Corps at which point Mr. Floyd said, "Why did I kill those people? Why did I kill those people? I, I don't know...I just, I looked at her. I looked right at her and I just, I just, just, blew her head apart. I don't know why, I don't know why...I just, I just started shooting and I just and I just kept shooting. Got to..." At this point in the interview, Officer Catanese read Mr. Floyd his Miranda Rights and was asked whether he understood his rights to which Mr. Floyd answered "yeah." Mr. Floyd then was questioned by Officer Catanese and indicated that he walked to the scene with his shotgun under his robe which he left by the front door when he walked in. Mr. Floyd said that he shot the guy at the front door and then continued shooting. He said, "An then, then I mean I, I remember shooting her. I don't remember shooting anybody except the, that one lady. She just, she kept asking me not to shoot her and I just..." Mr. Floyd indicated that the woman was in</p>	Las Vegas Police Department Officer's Report – Voluntary Statement of Zane Floyd 0540

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	<p>the back of the store. Officer Catanese was noted to say to Mr. Floyd, "It's okay, Zane, Alright. Relax." Mr. Floyd was noted to consistently ask out loud why he had killed those people. Mr. Floyd indicated that he remembered shooting the guy at the front door and then he remembered shooting a lot, shooting anything that moved. Mr. Floyd said that the only other person he remembered shooting was the woman in the back. He then stated that he wanted to shoot himself but that he could not pull the trigger, and then he asked the Officer, "Why didn't you just shoot me?" Consistent with his previous statement, Mr. Floyd said that he was unable to point his gun at the officers. Mr. Floyd's statement was wholly consistent with the statement reviewed above. He was noted to comment, "I mean I'm so fucking far in debt, dude, the blackjack tables calling me, man." Mr. Floyd was then noted as saying, "I feel bad for my family. It's gonna, it's gonna, it's gonna embarrass my...my mom is gonna...my mom and dad, they're going to be, they're going to be crushed. I mean my whole family. We only got like, you know, like three grandkids, you know and my cousin Clayton he died in a car wreck last, last...like a year ago last May." Then, in regards to his cousin Cole, And he's gonna, he's...he's, you know, he's like, he's a good kid. His mom, my aunt's all fucked up...she's a, she's a fucking jerk, dude. She used to, she used to say shit to that kid that just, fuck, if she'd have been here, I'd have shot her ass, too, that bitch. She was..." Mr. Floyd then needed to be redirected and Mr. Floyd began to speak about where he had gone to school and how he used to smoke pot and meth. Officer Catanese then questioned Mr. Floyd as to what he was thinking about. Mr. Floyd answered, "I don't know. I just, I just walking and...I just thought I wanted to sh... I just wanted...I don't know, man. I just, I went through so much. I, I went through so much, so much training and shit and I just, you know, teaching me how to shoot people and like kill people and shit. And I never got... I don't...its fucking crazy. I'm a....I'm stupid, I'm a fucking idiot. I, and...you know, I went through all that shit teaching me how to shoot people and kill people and you know, and it's not like the Marine Corps' fault, they didn't like turn me into a killer and shit, you know. I mean that's what you gotta do, you know. I mean I was a machine gunner." Mr. Floyd went on to say that he was a "fucking loser" having just moved back in with his parents, working as a bouncer. He stated that he may have said something to the effect of "Hey mother fucker" to the victim in the front of the store. When asked how it felt to shoot these people, Mr. Floyd answered "I don't know. I didn't really feel anything."</p>	
06/03/1999	<p>Statement of Paulina Atamoh was reviewed. It was noted to have been tape recorded and conducted by Detective Paul Bigham. Ms. Atamoh reported that she and Mr. Floyd had been dating for about three weeks. Ms. Atamoh corroborated Mr. Floyd's story of the night prior to the crime. Ms. Atamoh noted that Mr. Floyd reportedly spent over a hundred dollars on double shots of Jim Beam double shots. She said that his mood was "happy," "huggy and kissy." According to her report, she also stated that he would black out from hard liquor while in the Marines. Ms. Atamoh indicated that Mr. Floyd was very drunk and needed help going down the stairs. She noted that they then went to Rio and Mr. Floyd was observed to "slam" beers. She recalled that Mr. Floyd had said he was going to the bathroom but then never returned. She reportedly spent over an hour looking for him and then eventually found him at the blackjack tables and</p>	<p>Las Vegas Police          Department Officer's          Report - Voluntary          Statement of Paulina          Atamoh</p>



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	requested her keys so she could leave. Ms. Atamoh then noted that she saw what Mr. Floyd had done on the news and she was in disbelief. She said, "he never even raised his voice at me."	
06/03/1999	Murder Supplement Report was reviewed. It was noted that an interview with Scott Morelli had been conducted. Mr. Morelli was noted to be the father of a boy who had attended school with Mr. Floyd. Mr. Morelli related that Mr. Floyd had not been popular in high school and had been described as a "geek." Mr. Floyd's mother was reportedly a heavy drinker, according to Mr. Morelli, who was very racist towards African Americans. Mr. Morelli reported that he had never observed Mr. Floyd under the influence of alcohol and understand that his home life was "not that great."	Las Vegas Police Department Officer's Report
06/03/1999	<p>Psychiatric Evaluation Report completed by Jakob Camp, M.D. was reviewed. It was indicated that Mr. Floyd was interviewed for approximately 3 hours. Dr. Jakob reported that, "Zane Michael Floyd does not suffer from a mental illness or defect that interferes with his capacity to proceed to trial and cooperate fully with counsel in a rational manner." It was noted that Dr. Jakob was able to interview Mr. Floyd approximately eight hours after the alleged crimes. It was noted that, "Mr. Floyd did provide an overall psychological context for his actions that appears to stem from his role as an only child, spending his early childhood years with an absent step-father, living on naval bases with a mother suffering from alcoholism and quite aggrieved from the loss of her first-born son."</p> <p>Confidential Work Product of Dr. Jakob Camp was reviewed. The report indicated Mr. Floyd admitted to a fascination with a desire to kill since an early age, and it was noted that this coincided with the onset of his fascination with John Wayne. Dr. Camp opined, "I believe that Zane's smothering attachment/detachment to his mother, interrupted by the introduction of Mr. Floyd's violent predilections, contribute directly to his gradual development of homicidal thoughts during his late adolescence." According to the report, Mr. Floyd reportedly joined the Marines to gain the respect of his step-father where he was ultimately discharged for his alcohol addiction. After being discharged, Mr. Floyd moved back in with his parents and described this period as "the lowest in my life." After his discharge, Mr. Floyd reportedly used drugs heavily and was in debt. Dr. Camp reported, "He [Mr. Floyd] also acknowledged hopelessness with vague suicidal ideations gradually developing, beginning in February, but always coupled with narcissistic rage, as Zane made it clear in the interview that he felt 'cheated' out of his military career, and poorly understood by all that knew him." Dr. Jacob further stated, "I believe Zane Floyd may have been operating on some level of state-related knowledge, as if he was still in the Marines, suited up in combat garb as he had every morning before discharge." According to Dr. Camp, Mr. Floyd described a "no turning back" experience and described the victims as targets. Dr. Camp stated, "The fact that he notes a 'realization' when he fires upon his last victim, a woman his mother's age who begs for her life, suggests a trance-like state possibly induced by the repeated firearms training Zane both received and gave during his tour of duty as a Marine." Dr. Camp described Mr. Floyd as having reached a "degree of disillusionment and resultant dissociative rage."</p>	Psychiatric Evaluation Report of Jakob Camp, M.D.
06/04/1999	Officer's report was noted to be a murder follow-up/video tape. The	Las Vegas Police

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	<p>surveillance tape from the Albertson's supermarket was confiscated and reviewed. It was noted that the incident began at 4:03:04 when Mr. Floyd entered the store. Mr. Floyd was described as a white male, bald wearing a camouflage field jacket, dark trouser and carried a black pump shotgun with a pistol grip stock. Each camera was documented and reviewed.</p> <p>Murder Supplement report was reviewed. Mr. Floyd reportedly had purchased a Winchester Model 1300 12 gauge shotgun and a Bersa Model Thunder .380 caliber pistol from Mr. Craven of Craven's Gun Haven.</p>	Department Officer's Report
06/07/1999	<p>Voluntary statement of Zachary Emenegger given to Detective Paul Bigham on the aforementioned date was reviewed. Mr. Emenegger provided his recollection of the events of 6/3/1999. He reported that he had come back from lunch and heard loud noises that he thought were wooden pallets. He then saw Mr. Floyd. Mr. Emenegger described Mr. Floyd as a white male, short hair/shaved bald, dressed in fatigues and holding a shotgun. He recalled that Mr. Floyd shot at him and missed, shot at him again, hitting him and then shot him a final time. He said that after he was shot the last time, Mr. Floyd said, "Yeah, you're dead."</p>	Las Vegas Police Department Officer's Report - Voluntary Statement of Zachary Emenegger
06/10/1999	<p>Charges were noted to be murder with a deadly weapon, 4 counts and attempted murder with a deadly weapon. Victims were noted to be Thomas Michael Darnell, Carlos Leos, Dennis Troy Sargent, Lucille Alice Tarantino and Zachary T. Emenegger. Location of occurrence was indicated to be Albertson Supermarket at 3864 W. Sahara. Events were noted to take place on 6/3/1999. Synopsis indicated that Mr. Floyd entered the supermarket in possession of a 12 gauge shotgun and began shooting employees in the store. Persons at scene were listed. Witnesses interviewed were reviewed. A description of the crime scene, location and description of the bodies, and visible evidence at the scene was included and reviewed.</p> <p>Interview of witnesses was reviewed. Interview of victim Zachary Emenegger, who had survived the attack, indicated that that he ran from Mr. Floyd but that he was shot twice. To his report, he feigned death and laid on the floor. Mr. Floyd reportedly walked up to him and said "ya, you're dead" and then walked away. Additional statements were taken from a number of witnesses who described Mr. Floyd as white male wearing military type clothing carrying a shotgun.</p>	Las Vegas Police Department Officer's Report
Unknown	<p>Neuropsychological Assessment Review report, date unknown, completed by Thomas F. Kinsora, Ph.D. was reviewed. It was noted that the neuropsychological assessment report of Maria J. P. Cardle, Ph.D. of January 20, 25, 1989 and February 3, 10, 1989 of Zane Michael Floyd were reviewed and assessed. Dr. Kinsora indicated that Dr. Cardle's report "left out several important social-developmental details that would help us understand Zane better." He stated that the major issues that related to his delayed development, neurological symptoms and behavior were included and that the assessment was "fairly comprehensive." Dr. Cardle's test battery was noted to pick up problems with processing speed, visual motor skills, memory processing, advanced reasoning skills, organizational skills (self-regulatory skills), attentional focusing skills, and difficulties with integration of visual and verbal information. Dr. Cardle's report</p>	Neuropsychological Assessment Review of Thomas F. Kinsora, Ph.D.

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	<p>indicated behavioral manifestations of Mr. Floyd's neuropsychiatric disorder that included difficulties managing and regulating emotions with an excessive focus on sexual issues. Average to above average performance was noted in spelling, reading, arithmetic, basic abstraction, vocabulary knowledge, understanding of social norms, basic fund of knowledge and spatial memory. Subtle neurological problems were implied as a result of the discrepancies in Mr. Floyd's test performance. Dr. Kinsora wrote, "Obviously, environment issues can affect performance and may be at play somewhat, however, when one considers his neuro-developmental history, it is clear that there is an over-riding neurologic component to his performance on the neuropsychological measures and to his behavior." These included:</p> <ul style="list-style-type: none"> <li>- Premature Birth with birth weight of 4 pounds 10 ounces and 4 weeks of hospitalization with oxygen/incubation;</li> <li>- Motor tremors throughout childhood;</li> <li>- Delayed speech and motor development;</li> <li>- Motor dominance confusion;</li> <li>- Enuresis until age 5;</li> <li>- Recurrent ear infections</li> </ul> <p>Dr. Kinsora opined that Dr. Cradle's evaluation was well-written and appropriate for that context but that he would have focused on more sensitive measures of sustained attention, advanced mental tracking, complex and varied memory measures, those specific to executive/self-regulatory skills and measures of motor speed, strength and fine motor dexterity. Dr. Kinsora reported, "It should, however, be kept in mind that many patients with subtle neurologic problems as children grow up to have negligible neurologic problems on formal testing as adults but may still have behavioral evidence that something is significantly impaired in certain aspects of functioning, particularly when the system is stressed."</p>	
06/26/2000	<p>Psychological Evaluation report completed by Dr. Dougherty was reviewed. It was noted that the evaluation took place on 5/15 and 5/16/2000 at which time Mr. Floyd's chronological age was indicated to be 24 years, 8 months. Mr. Floyd was examined at Clark County Detention Center and administered a number of psychological tests (raw data review to follow below).</p> <p>Mental Status and Background – Mr. Floyd was noted to be oriented to all three spheres and to have a tattoo of a skeleton and USMC on his left forearm. Mr. Floyd reported his biological father to be Jim Cobis who left his mother and with whom he never had a relationship. He indicated that his mother remarried when he was about 3-years-old to Michael Floyd. Michael Floyd reportedly worked in the Navy as a guidance missile technician. Mr. Floyd reported that he attended kindergarten, first and second grades in South Carolina at Goose Creek School. He then described moving to Colorado with his grandparents and attending school in Colorado until his family moved to California. He recalled having repeated the 2<sup>nd</sup> grade in Colorado. Mr. Floyd said that his family then moved to Las Vegas where he completed the 6<sup>th</sup> through 12<sup>th</sup> grades in many different schools. Mr. Floyd said that he was doing a great deal of drugs around the 10<sup>th</sup> grade and did not receive his high school diploma until completing courses at the Clark County Adult High School. He said that he entered boot camp for the Marine Corp on 8/1/1994. To Mr. Floyd's report, he took Ritalin for hyperactivity until he was about 12 or 13 at</p>	<p>Psychological Evaluation Report of Edward Dougherty, Ed.D.</p>

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which time he recalled possibly seeing a psychologist/psychiatrist.

Mr. Floyd reported that he smoked one pack of Marlboro cigarettes a day since the age of 15 and that he began to drink steadily at 16. He reported drinking at 14 and 15 when alcohol was available. Mr. Floyd noted that he used marijuana on a daily basis around the age of 15 while in vocational school. He also reported use of crystal methamphetamine, LSD and cocaine experimentation. He indicated that he preferred crystal meth, that it would "keep him up for days, help him concentrate and he would get a huge rush. He said when coming down, he could not sleep, he had muscle aches, and could not concentrate." Mr. Floyd reported that while in high school he was active in sports and had been employed in various food service jobs. He said that he had been in a motor vehicle accident while living in California in which he received a cut to his right eyebrow and right eye. He said he had another injury while in Colorado where he received thirty stitches. He recalled having broken his hand twice while fighting in junior high. Mr. Floyd talked about his experience while stationed in Cuba. He said that he began drinking "to the point where he felt he was out of control." He also recalled witnessing a local teenager's death when he blew up on the mine field.

Dr. Dougherty indicated that he questioned Mr. Floyd about his behavior during the week of the incident in question. Mr. Floyd was noted to be tangential and required refocusing, as per Dr. Dougherty's report. He was again asked about his history in the Marine Corp. Mr. Floyd noted that he left the Marine Corp in 7/1998 at which point he moved home and had a series of jobs. He reported excessive drug use at that time, and that while working at Sneakers he would smoke marijuana everyday and use methamphetamine on his days off.

In regards to the incident in question, Mr. Floyd said that he had a vague recollection of events and that he believed he blacked out. He said that he remembered walking and reportedly said, "Like watching myself doing something. It wasn't like I was really there. It was like it wasn't really happening." He said the experience was like watching a movie. He recalled that he had been drinking and that he took meth about one half hour before he walked to Albertsons. He said that he was shooting targets but that he did not remember specific details. As per the report, Mr. Floyd became very emotional and stated that he was not sure what happened to him or why he committed the crimes. Dr. Dougherty reported that Mr. Floyd's recall of the events and his childhood was confused and often illogical and it was opined that Mr. Floyd's recent and remote memory was impaired.

Parental background information was reviewed. Mr. Floyd's mother, Valeria Floyd was noted to be the eldest of three children. His maternal grandmother was noted to have been treated for depression as was his maternal aunt. Ms. Floyd reportedly did not go to college and was involved in heavy drug use that included LSD, mushrooms, cocaine, heroin and mescaline. She was reportedly admitted to the Brady Hospital in Colorado at the age of 22 and diagnosed with manic depression. It was noted that she lived in Alaska for 4 years before marrying Mr. Floyd's father at the age of 26. They were noted to have a child, Francisco who died of Sudden Infant Death

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Syndrome. Ms. Floyd reportedly returned to heavy drug and alcohol use but stopped after she learned she was pregnant with Zane Floyd. She was noted to marry Michael Floyd when Mr. Floyd was 3-years-old. Michael Floyd was reportedly from a hostile family and tended towards violence and abuse.

Mr. Floyd's developmental history was reviewed. Alcohol use in the first two weeks of the pregnancy was noted with 1 ¼ packs of cigarettes smoked per day throughout the pregnancy. Mr. Floyd was premature and was airlifted to Boulder Colorado. Developmental delays were noted for walking and talking not beginning until 18 months. Mr. Floyd was noted to be left handed but became right handed when he started school. Fine motor tremors were indicated as an infant and through school. Enuresis was indicated until the age of 5 in addition to episodic night terrors of snakes.

Educational history was reviewed and was noted to be very detailed. It was noted that while in first grade in South Carolina the school wanted to place Zane in special education because of his "mood disorder." He was described as having been hard to control and hyperactive at which point he was reportedly placed on Ritalin. It was also indicated that Mr. Floyd's mother was a severe alcoholic until Zane turned 15. Upon moving to Colorado, Zane repeated the second grade because he reportedly lacked emotional maturity. During his time in Colorado, Zane was noted to not be prescribed Ritalin. When the family moved to California, Mr. Floyd recalled that his father was moody and that his drinking increased. He reported, "whippings, beating, loss of freedom, being shoved into walls, and being pounded." While in California, Michael Floyd recalled that Zane had been expelled from school for "being out of control." The family reportedly moved to Las Vegas when Zane was 12 years old. Michael Floyd reported that they moved there to get help for Zane who was sent to Dr. Roitman, a psychiatrist, who again prescribed Ritalin. Mr. Floyd reportedly took the Ritalin for 2 ½ years at which point he decided to stop. Mr. Floyd was noted to have needed glasses for nearsightedness and that he had to become a "fighter" because of the school environment. In tenth grade, Mr. Floyd attended Vocational Technical School for "marine mechanics" although by the second semester had "become a stoner." He then attended the Faith Lutheran School until his junior year when he reportedly became "disenchanted being an 18-year-old his junior year." He then entered boot camp for the Marine Corp after he earned his diploma in night school. Mr. Floyd reported that from 2/10/94 until 8/1/94 he used alcohol, marijuana and crystal methamphetamine daily. Dr. Dougherty took a detailed history of Mr. Floyd's military experience. A review of records was also included.

Dr. Dougherty's Raw Data was reviewed. Computer printout for the Kaufman Adolescent and Adult Intelligence Test was reviewed. Crystallized IQ was indicated to be 104, 60<sup>th</sup> percentile rank, Fluid IQ was indicated to be 84, 14<sup>th</sup> percentile rank with a Composite IQ of 94, 34<sup>th</sup> percentile rank. The Individual Test Record Form for this test was attached and reviewed.

The Manson Evaluation Raw Data was reviewed. Elevations on the

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	<p>profile were noted for Anxiety (99<sup>th</sup> percentile), Depressive Fluctuations (99<sup>th</sup> percentile), Emotional Sensitivity (92<sup>nd</sup> percentile), Resentfulness (99<sup>th</sup> percentile), Incompleteness (99<sup>th</sup> percentile), Aloneness (94<sup>th</sup> percentile) and Interpersonal Relations (99<sup>th</sup> percentile). Total Raw Score of 51 was at the 99<sup>th</sup> percentile.</p> <p>Basic Personality Inventory Profile Report was reviewed. Elevations were noted for Depression, Interpersonal Problems, Alienation, Persecutory Ideas, Anxiety, Thinking Disorder, Impulse Expression, Social Introversion, Self-Depreciation and Deviation.</p> <p>Expressive Vocabulary Test raw data was included. Mr. Floyd's score of 149, 55<sup>th</sup> percentile rank, was in the average range.</p> <p>The Human Figure Drawing Test (HFDT) Profile Sheet was reviewed. Moderate cognitive impairment was observed. Dr. Dougherty indicated in his report that, "Zane's drawings are reflective of a person who feels inadequate, sexually confused, and dependent."</p> <p>The Kaufman Short Neuropsychological Assessment Procedure Record Booklet was reviewed. The standard score for the K-SNAP Composite Index was 99 at the 27<sup>th</sup> percentile rank.</p> <p>Dr. Dougherty discussed Mr. Floyd's history in the context of the aforementioned test results. He indicated, "His [Mr. Floyd] personality factors indicated that he has a personality consistent with that of people identified as serious alcoholics or drug abusers. It is also clear from his personality assessment that this man has a serious personality disorder with characteristics of borderline, antisocial and paranoid features." Dr. Dougherty further noted that Mr. Floyd's description of feeling like he was watching a movie in response to the events that occurred on 6/3/99 was consistent with a dissociative response. Dr. Dougherty concluded that Mr. Floyd, "suffers from the mental disease of Mixed Personality Disorder with Borderline, Paranoid and Antisocial Features. In addition, I confirm the diagnosis of Attention Deficit Hyperactivity Disorder which was previously diagnosed during his developmental years." He continued, "...at the time of the alleged incident, Mr. Floyd's reasoning was impaired, his rational thought was impaired and he did not at all times act knowingly and purposeful due to the mental illness of Attention Deficit Hyperactivity Disorder and Mixed Personality Features exacerbated by the extensive ingestion of methamphetamine over an extended period of time and the recent ingestion of alcohol prior to the incident which resulted in the death of four people at the Albertson's store."</p>	
04/15/2000	Documented Opinions of Dr. Camp were reviewed.	Opinions of Jakob Camp, M.D.
05/07/2000	Psychological Report completed by Frank E. Paul, Ph.D. on Zane Michael Floyd. Dr. Paul indicated that Mr. Floyd had been psychologically tested on seven occasions at the Clark County Detention Facility for a total of 18 hours at the time of this report. Significant Parental Information indicated that Mr. Floyd's mother, Valerie Floyd, was the eldest of three siblings and daughter to a World War II veteran and retired Judge. Her father reportedly described her as a manic-depressive who was often treated for	Psychological Report completed by Frank E. Paul, Ph.D.

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depression. Valerie Floyd reportedly described her father as cruel and unpredictable. She noted using street drugs as a child and was eventually admitted to the Brady Hospital in Colorado and was treated with Melleril and ECT with a diagnosis of manic depression. She was reportedly hospitalized for six months and then lived in Alaska for some years. Valerie reportedly married James Cobis, a Vietnam Veteran with a "love relationship with his own sister, Rose" who was reportedly present after their first year of marriage. While living in Spain, Valerie gave birth to a son, Francisco, who later died from Sudden Infant Death Syndrome. Severe depression followed the death of her son and she reportedly had an affair, and eventually returned to heavy alcohol use. She reported that once she found out that she was pregnant with Zane, she stopped drinking and using drugs. Valerie then married Michael Floyd when Zane was 3-years-old, "married partially because Mr. Zane Floyd needed surgery for an undescended testicle and Mr. Michael Floyd had insurance." She noted that Michael Floyd was an episodic drinker who tended towards violence and abuse. According to the report Michael Floyd's family was severely hostile and was often beaten with a 1x4. Dr. Paul wrote, "The family history, as given above, was highly descriptive of incidents of heroism under pressure, episodes of violence and loss of control of impulses, severe drug usage with often blatant procedures used to get the drugs, chronic and severe alcoholism by nearly all members of the family, and, most prominently, a history of depression and mania in the maternal genetic line. Mr. Zane Floyd had always been taught these conditions within his family and knew most of this before he was ten years old." Developmental History was consistent with other reports. It was noted that while living in Susanville, California that Michael Floyd's drinking increased as did his propensity for abuse. It was at this time that Mr. Zane Floyd began collecting John Wayne movies, as per the report. Dr. Paul noted that Mr. Floyd's affect would brighten "for the only observable time" when he talked of John Wayne.

Mr. Floyd's military history was discussed. It was noted that Mr. Floyd requested Infantry in the Marine Corps. As per the report, once Mr. Floyd passed the enlistment exam on 2/10/94 that he used alcohol, marijuana and crystal methamphetamine everyday until he left for boot camp on 8/1/94. Mr. Floyd reported that he had made Sharpshooter but records reported only a Marksman Badge. Mr. Floyd reportedly requested to be a Machine Gunner because he "loved shooting guns." The record reported Mr. Floyd being stationed in Guantanamo Bay, Cuba and later as an assistant instructor at the weapons and logistic training school at Camp Pendleton. While teaching at Camp Pendleton, Mr. Floyd reportedly "developed a permanent routine that was practiced continually for almost 2 1/4 years." It was noted that he would teach the Corpsman how to pick out the enemy "targets." His reported favorite part of the week was the full combat scenario which entailed demonstrations of killing. The weekends were reportedly reserved for "liberty" and included becoming inebriated. Dr. Paul stated, "This routine to relax, detoxify and fantasize remained after the Marine Corps." Dr. Paul also described Mr. Floyd's "weapons history" which included a .22 caliber rifle bought by his grandfather while living in Colorado (approximately 4<sup>th</sup> grade). It was noted that "Most of his

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<p>preoccupations with weapons came from movies and his John Wayne collection of films." Dr. Paul engaged Mr. Floyd in clinical interviews and it was noted that when asked about the criminal incident, Mr. Floyd was "obviously avoidant and appeared to be shutting down."</p> <p>Mental Status and Observation described Mr. Floyd as having a beard/goatee that he was observed to continually play with. "He tended to exaggeration and lying to present himself as strong, straight, and heroic with avoidance when caught in a lie. He was fully, even hypervigilantly aware of his surroundings." Dr. Paul offered the following diagnostic impressions:</p> <p>Axis I: Dysthymic Disorder, Primary, early onset; Major Depression, recurrent, without psychotic features secondary to above; Rule Out Bipolar II Disorder; Attention Deficit Hyperactivity Disorder, Combined Type; Alcohol Dependence; Cannabis Dependence, manifested by immediate return to use when available; Amphetamine Dependence, manifested by immediate return to use when available; Cocaine Abuse; Pathological Gambling; Insomnia related to Major Depression; Sexual Disorder, NOS;</p> <p>Axis II: Personality Disorder, NOS with Avoidant, Passive-Aggressive, and Dependent personality characteristics, severe;</p> <p>Axis III: Rule Out neurological injury from birth;</p> <p>Axis IV: Psychosocial Stressors: 5 -Severe, chronic physical abuse in family, educational problems with two setbacks, unable to keep or maintain steady work performance, living with parents as unable to live on own, severe indebtedness, chronic return to drug usage, in jail for multiple murders, adaptation to prison life, public court case pending, facing the death penalty;</p> <p>Axis V: GAF 48/100</p> <p>Among Dr. Paul's many findings, he opined that, "The habitual use of these two drugs [methamphetamine and alcohol] along with an attention deficit hyperactivity disorder are the causes for his ability to act out on impulse in this vicious crime."</p> <p>Dr. Paul's raw data was reviewed.</p> <p>The Minnesota Multiphasic Personality Inventory-2 (MMPI-2) and the Millon Clinical Multiaxial Inventory-3 (MCMI-3) were administered on 7/23/99. The Scantrons was available for review.</p> <p>Interpretive Corrections report for the MCMI-3 was reviewed. Recent problems reported by Mr. Floyd included drug use and low self-confidence. His response style was noted to "indicate a tendency to magnify illness, an inclination to complain, or feelings of extreme vulnerability associated with a current episode of acute turmoil." His profile was noted to be severe in that it was assumed that he was experiencing a severe mental disorder. Mr. Floyd's profile elevations were noted for Schizoid, Avoidant, Depressive and Negativistic Clinical Personality Patterns, in addition to Dysthymic Disorder, Alcohol Dependence and Drug Dependence Clinical Syndromes. Correctional summary noted,</p> <p>The MMPI-2 Report for Forensic Settings was reviewed. Validity</p>
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	<p>Scale elevations were noted for the F, F(B) and F(P) scales with a T of 85, 108, and 77, respectively. Report noted that Mr. Floyd's scores on the latter portion of the test should be interpreted with caution (F(B) = 108), although the basic clinical scales were interpretable. Basic scale elevations were indicated for Depression, Psychopathic Deviate, Psychasthenia, Schizophrenia and Social Introversion. Supplemental Scores, although less reliable were noted for the Addiction Admission Scale (T=85), the Posttraumatic Stress Scale (T=90) and the Hostility Scale (T=77). All but four of the Content Scales were noted to be above the clinically significant range. The Fears, Obsessions, Health Concerns and Bizarre Sensory Experiences fell within normal limits.</p> <p>The Beck Depression Inventory-II was included with the date 4/21/2000, with a total score of 31, in the severe range. The Beck Anxiety Inventory was administered on 4/21/00 with a total score of 10, in the mild range. The Wechsler Adult Intelligence Scale-Revised test form, date unknown, was reviewed and noted a Verbal IQ of 105, Performance IQ of 98 and a Full Scale IQ of 102.</p> <p>The HARE Psychopathy Checklist Revised was included with a total score of 21. This was noted by Dr. Paul to be in the moderate range of psychopathic disturbance but that he was well below the average for psychopathy among prison inmates.</p> <p>The Validity Indicator Profile was administered on 4/21/00 and again on 5/3/00. Interpretive Report of 4/21/00 indicated that Mr. Floyd had exerted good, consistent effort throughout the test and attended well to item content.</p> <p>The Wide Range Achievement Test-3 dated 6/14/1999 was reviewed. Reading grade equivalent was noted to be post-High School, Spelling Grade Equivalent was in the High School range, and Mr. Floyd was noted to have an 8<sup>th</sup> grade Arithmetic grade equivalent. The "Mincog" version 1.18 was also administered by Dr. Paul on 6/17/99. Mr. Floyd was noted to be a non-patient in the "D&amp;A" category.</p> <p>The Test of Variables of Attention-Visual was reportedly administered to Mr. Floyd on 5/5/00 by Dr. Paul. Mr. Floyd's ADHD score of 0.30 was within normal limits, although results of Quarter 3 were not within normal limits and suggestive of an attentional disorder. Mr. Floyd's Variability of Response time for Quarter 3 was indicated to be a standard score of 66, at the 1<sup>st</sup> percentile rank. The Auditory Version of the Test of Variables of Attention was also administered on 5/5/00 with results suggestive of an attentional disorder. It is noted, however that this test is normed on individuals 19 years and younger, therefore Mr. Floyd's results were normed against a 19-year population and may not be reflective of his abilities.</p>	
06/13/2000	<p>Neuropsychological Assessment Report of David L. Schmidt was reviewed. It was noted that Mr. Floyd was evaluated over the course of two days, 6/8 and 6/9/2000. The full Halstead Reitan Battery was utilized in the evaluation in addition to the Minnesota Multiphasic Personality Inventory-2, the NEO Personality Inventory-Revised, and the Kaufman Test of Educational Achievement - Brief.</p>	<p>Neuropsychological Assessment Report of David L. Schmidt, Ph.D.</p>

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Mr. Floyd's history was reviewed in the report but will not be summarized herein.

During the evaluation, Mr. Floyd was indicated to be calm and cooperative. Eye contact was appropriate. Speech was reportedly normal and he was noted that he appeared to be in a mild level of psychological distress. No evidence of stuttering or articulation problems was indicated. Emotional responsiveness was somewhat restricted. Mr. Floyd reported that he had experienced one or two episodes of depression in the six months preceding the interview. Thought processes were noted to be characterized by distracted thinking.

Test results were reviewed and are summarized in the context of the raw data provided below.

MMPI-2 Extended Score Report for Zane Floyd administered by Dr. Schmidt on 6/8/00 was reviewed. The F-Scale was noted to be elevated at T=92 with both the L and the K with T=35. Significant Basic Scales were noted to be Depression (T=72), Psychopathic Deviate (T=92), Paranoia (T=72), Psychasthenia (T=70), Schizophrenia (T=84) and Social Introversion (T=76). Supplementary scales were also noted to be elevated including the F(B) validity scale (T=120), Anxiety (T=80), College Maladjustment (T=82), and Posttraumatic Stress (T=95). All but four of the Content Scales were noted to be above the clinically significant range. Clinical Subscales were reviewed in addition to Critical Items. An additional MMPI-2 report was attached, however no date was provided. Dr. Schmidt reported that Mr. Floyd's MMPI-2 administration was invalid.

Mr. Floyd was noted to have received 27 correct on the Seashore Rhythm Test. Mr. Floyd's score on the Finger Tapping Test with his Left Hand was noted to be 47.8 and 54.8 with his Right Hand. Strength of Grip with the Left hand was noted to be 41.5 kg and with the Right hand was 45.0 kg. Mr. Floyd had 8 errors on the Speech-Sounds Perception Test. He received a score of 30" with no errors on Trail Making Test A and 73" with no errors on Trail Making Test B. Mr. Floyd had 37 errors on the Booklet Category Test. Form for the Portable Tactual Performance Test was reviewed. Time with the Dominant Hand (right) was recorded as 2'28"; Time with the Non-Dominant Hand (left) was recorded as 1'39"; Time with Both hands was recorded as 48" and Total Time was indicated to be 4'55". It was reported that Mr. Floyd was able to remember 9 shapes and the location of 6 shapes. Dr. Schmidt reported Mr. Floyd's General Neuropsychological Deficit Score to be 17.

The Kaufman Test of Educational Achievement yielded a Reading grade equivalent of 12.9-- with a scaled score of 105.

The Revised NEO Personality Inventory was attached and reviewed. Mr. Floyd was noted to score High for Neuroticism and Excitement Seeking. He was noted to score Very High on Angry Hostility, Depression, Impulsiveness, Vulnerability and Fantasy. He scored Low on Extraversion, Openness, Gregariousness, Assertiveness,

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	<p>Feelings, Actions and Values. He scored in the Very Low range on Agreeableness, Conscientiousness, Warmth, Activity, Positive Emotions, Aesthetics, Ideas, Trust, Altruism, Compliance, Tender-mindedness, Competence, Order, Dutifulness, Achievement Striving, Self-Discipline and Deliberation.</p> <p>Dr. Schmidt relied upon the data collected by Dr. Frank Paul (10/99) for the Wechsler Adult Intelligence Scale-Revised. Verbal IQ was reported to be 105, Performance IQ was 98 and Full Scale IQ was 102.</p> <p>Dr. Schmidt offered the following diagnostic impressions:        Axis I - 305.00 Alcohol Abuse; 304.80 Polysubstance Abuse (marijuana, methamphetamine); 314.0 Attention Deficit Hyperactivity Disorder (by history);        Axis II - 301.4 Personality Disorder Not Otherwise Specified (Mixed Personality Disorder) with Paranoid, Schizoid and Antisocial Features.</p> <p>Dr. Schmidt opined that Mr. Floyd did not evidence any chronic neuropsychological dysfunction at that time. Dr. Schmidt did opine that Mr. Floyd's psychological conditions, as noted above, were long-standing. He further indicated that Mr. Floyd had positively adjusted to the structured environment of prison and opined that the structure of the prison setting "should be sufficient to control his acting out behavior."</p>	
Unknown	<p>Neuropsychological Assessment Review of Dr. David L. Schmidt's Neuropsychological Assessment on 6/8 and 6/9/00 of Zane Floyd by Thomas F. Kinsora, Ph.D. was reviewed. Dr. Kinsora opined that he disagreed with Dr. Schmidt's conclusion that the MMPI-2 was invalid for interpretation. Dr. Kinsora opined that Mr. Floyd's profile was a "near perfect fit" to the 4/8 clinical profile which he described as, "Individuals with this profile have schizoid qualities and often manifest full blown schizophrenia. These individuals, according to research have great difficulty with interpersonal relationships. They tend to have trouble regulating their emotions and are often depressed and dissatisfied with their inability to form lasting bonds with others. High levels of stress can almost predictably push some of these individuals into dissociated states where reality testing is poor and logical reasoning is suspended or severely impaired. Some of these individuals accumulate criminal records involving poorly thought out crimes and sometimes extremely violent and bizarre behavior. Violence typically follows a psychotic or psychotic-like break from reality and is often accompanied by a dissociation from normal awareness and a clear break or disconnection between the brain's control over rational judgment and core self-regulatory skills. These individuals are not true sociopaths, but are instead marginally functioning individuals who are trying desperately to fit in, but never seem to be able to do so. When their fragile personality is stressed, it simply falls to pieces. Suicide among these individuals is very high. (Derived in part from Green, R.L. (1999). MMPI-2/MMPI: An Interpretive Manual)."</p> <p>In regards to the neuropsychological testing, Dr. Kinsora indicated that Dr. Schmidt did not interpret the scores in a detailed manner but</p>	<p>Neuropsychological Assessment Review of Thomas F. Kinsora, Ph.D.</p>

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	instead "lumped" them together. Dr. Kinsora stated, "There is a definite but subtle pattern of problems with the processing of some aspects of language and with self-regulatory and problem solving skills." He also discussed his criticism that Dr. Schmidt failed to explore sustained attention, complex mental tracking, executive/self-regulatory skills, many aspects of language functioning and to administer a difficult memory test. Dr. Kinsora again reiterated his statement regarding the difficulty with formal testing of adults who had subtle neurologic problems as children. He concluded by saying that he would not be surprised if Mr. Floyd continued to display evidence of neurologic problems on a more comprehensive assessment.	
06/19/2000	Supplementary Findings of Dr. Camp were reviewed.	Supplementary Findings of Jakob Camp, M.D.
07/12/2000	Psychosocial Evaluation Report completed by Jorge L. Abreu, CSW was reviewed. Findings were reviewed within transcript of Trial Testimony.	Psychosocial Evaluation Report completed by Jorge L. Abreu, CSW
07/13/2000	Amended Psychological Evaluation Report of Dr. Dougherty was reviewed.	Amended Psychological Evaluation Report of Edward Dougherty, Ed.D.
07/12/2000	Trial Transcript was reviewed. Witness Tracie Rose Carter was called to testify. Ms. Carter's history was briefly reviewed during her testimony. It was noted that she had been convicted of a drug offense in Oregon. She said at the time of the current crime of 6/3/99, she was working at the outcall service, Love Bound, where she would dance. She testified that she was driven to Mr. Floyd's residence and arrived between 3 and 3:30am. She said that when she arrived, Mr. Floyd immediately grabbed her and pushed her into the house and pointed the shotgun at her. Ms. Carter described Mr. Floyd's residence. She stated that she was unable to leave because Mr. Floyd was blocking the door. She proceeded to describe the weapon he was holding and what she was wearing at the time. According to Ms. Carter, "It was, he told me, he tells me, you know, ask him why is he doing this, you know, what, what's his purpose. He tells me it's just his sick little fantasy that I happen to become a part of. He mentions this, numerous things about how he, he, he wants to know what it's like to kill. He, he tells me what, you know, what this gun did, can do to you. And he's, you know, have I ever seen Predator. He mentioned either the movie Predator or Terminator. I'm not sure which one it was. And to me they're the same thing. But, and, you know, I was like, well, yeah. I've seen that movie, and I don't recall, you know, the gun or whatever. He tells me, you know, he would blow a hole through my chest the size of his fist. That's what, you know, I don't know." Ms. Carter indicated that Mr. Floyd wanted her clothes off. But that no sexual activity had occurred at that point. She then described the sexual activity that occurred. She described that Mr. Floyd had spread her legs apart with his gun and engaged in digital and penile penetration of the vagina and anus and that he had placed a hanky sack in her mouth. Ms. Carter then described that Mr. Floyd had said that he had 19 bullets and that he was going to kill the first people he saw and then take his own life. She testified that she	State of Nevada vs. Zane Michael Floyd Transcript of Jury Trial, Testimony of Tracie Rose Carter

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	<p>said that he had a bullet with her name on it. At the end of the act, Ms. Carter reported that Mr. Floyd offered her seven dollars of which she took two. Ms. Carter also testified that Mr. Floyd, <i>"Told me that he was, he went to the military to fulfill his killing, that he wanted to kill, and that he wanted to see what it was like. And that's why he went into it."</i> She added that Mr. Floyd had suggested that she shoot him. Prior to her leaving, she recalled Mr. Floyd telling her to watch the news, that <i>"He's going to be on the front cover of the paper, like telling me that he was not joking. He was going to do something drastic."</i> Ms. Carter testified that she could not be certain if Mr. Floyd was drunk at the time of the events but she noted that he was on something, that something was wrong with the way he looked. During Cross Examination, Ms. Carter answered affirmatively to Mr. Brown's question that Mr. Floyd had, after he stated that it was sick fantasy, that he "had to do it. He didn't know why, and that he didn't know what's wrong with him."</p>	
07/12/2000	<p>Trial Transcript was reviewed. Witness Louis Mortillaro, psychologist was called to testify. One of Dr. Mortillaro's specialties was noted to be clinical neuropsychology. Direct Examination as conducted by Stewart Bell, Esq., District Attorney. Dr. Mortillaro indicated that a battery of neuropsychological testing had been administered to Mr. Floyd that included the Halstead Reitan Neuropsychological Test Battery. He also testified that he had interviewed Mr. Floyd and had an opportunity to review psychological and discovery records, including the report of Dr. Cardle when Mr. Floyd was 13-years-old. When asked about his opinion as to whether Mr. Floyd suffered any neurological deficit/brain damage on 6/3/1999, Dr. Mortillaro replied "No." According to his testimony, Dr. Mortillaro reported Mr. Floyd's IQ to be in the "hundreds." He reported that Mr. Floyd did not suffer from hallucinations, delusions or was mentally ill at the time he committed the crime. Dr. Mortillaro also testified as to Mr. Floyd's diagnosis of Attention Deficit Hyperactivity Disorder when he was 13-years old by Dr. Cardle. Dr. Mortillaro opined and testified that Mr. Floyd's ADD was in remission as he "was able to do a lot of things on the test that are suggestive of good integration in his brain function." Dr. Mortillaro went through four of the tests that comprise the Halstead Reitan battery and described Mr. Zane's performance on those tests to be either "within normal limits" or to have shown "reasonably good effort." Dr. Mortillaro also commented on the use of the Minnesota Multiphasic Personality Inventory-2 and the NEO. He testified that the NEO results were valid but that the MMPI-2 results were "marginally valid" as the F Scale score was above the cutoff of 90 at a T=92. Dr. Mortillaro indicated that he relied on the MMPI-2 critical items of the MMPI-2 to form his opinion in addition to the NEO interpretive results provided in the form of a computer printout. Dr. Mortillaro testified that Mr. Floyd, "indicated that he tends to be very hostile and he gets angry very quickly. So his own behavior tends to cross-validate what he had scored on this particular test [in reference to the NEO]." Dr. Mortillaro further stated that Mr. Floyd's test results support the notion that he had a "vivid imagination" and that he expressed depressed suicidal ideation on the testing. Dr. Mortillaro opined that personality testing with the use of NEO and the MMPI-2 supported evidence of a difficulty handling aggression and impulse control. Dr. Mortillaro testified that at the time of the crime</p>	<p>State of Nevada vs.          Zane Michael Floyd          Transcript of Jury Trial,          Testimony of Dr. Louis          Mortillaro</p>

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	<p>in question, Mr. Floyd exhibited traits consistent with Antisocial Personality Disorder, Borderline Personality Disorder and Alcohol Use/Substance Abuse history. He reported that he did not diagnose Mr. Floyd with the aforementioned diagnoses, but that Mr. Floyd showed similar personality traits to these disorders at the time of the crime. Dr. Mortillaro also indicated that Mr. Floyd had difficulty related to authority figures and that he makes his own rules. Dr. Mortillaro opined that he did not see any evidence of Dissociative Disorder in Mr. Floyd at the time of the crime and briefly described the characteristics of Dissociative Disorder. He said that Mr. Floyd's clarity for the events was not consistent with an individual with Dissociative Disorder and opined that Mr. Floyd's tape recorded statement reflected more of an adrenaline rush rather than a dissociative state. Dr. Mortillaro then testified that he did not believe that Dr. Dougherty's testing was appropriate for the purpose of the evaluation, especially with the use of the Kaufman Short Neuropsychological Assessment Procedure, Bender Gestalt Test and the Human Figures Drawing Test.</p> <p>Cross Examination was conducted by Curtis Brown, Esq. Dr. Mortillaro testified that he spent only 1 ½ hours with Mr. Floyd in the interview. It was also revealed that Dr. Mortillaro was asked by the prosecution to provide a "retrospective analysis of the information" and that he did not produce a report. Dr. Mortillaro was asked as to whether individuals with Borderline Personality Disorder have dissociative symptoms to which Dr. Mortillaro replied "yes." He was then questioned about his previous testimony regarding ADD to which he had testified that Mr. Floyd's ADD was in remission. According to the testimony, Dr. Mortillaro reportedly had testified on another case that 70 percent of those children with attention deficit still have it as an adult. Dr. Mortillaro indicated that he did not recall having previously testified to this.</p>	
07/17/2000	<p>Testimony of Jorge L. Abreu of Alfonso Associates was reviewed. Mr. Abreu testified that he was hired to conduct a psychosocial evaluation of Mr. Floyd. According to Mr. Abreu's testimony, Ms. Valerie Floyd had admitted to using alcohol, smoking cigarettes and LSD throughout her pregnancy with Zane Floyd and her first child, Francisco. Mr. Abreu noted that Valerie Floyd had kept a meticulous photo albums. He indicated a number of moves for the family and a delay in Zane's attainment of development milestones. Mr. Abreu indicated, "Between the ages of five to seven Zane began to experience and describe difficulties concentrating. He also shook a lot, his body trembled, and the mother said to me he had difficulties with fine motor movements..." Domestic violence was also discussed and a specific incident when Zane was 13 was referenced.</p>	State of Nevada vs. Zane Michael Floyd Transcript of Jury Trial, Testimony of Jorge Abreu
07/18/2000	<p>Testimony of Norton A. Roitman, M.D., child psychiatrist, was reviewed. Dr. Roitman testified that he had met with Mr. Floyd and his mother approximately ten years prior in 1989. He indicated that he was treating Mr. Floyd for what was thought as "a straightforward attention deficit hyperactivity disorder by a neurologist, Dr. Kean." According to Dr. Roitman's testimony, Dr. Kean reportedly referred to himself and Dr. Cardie because the medication "wasn't helping fully and it didn't look like the, you know, typical attention deficit hyperactivity disorder." Dr. Roitman further testified that seeing Mr. Floyd at that time was somewhat urgent after meeting with Dr. Cardie</p>	State of Nevada vs. Zane Michael Floyd Transcript of Jury Trial, Testimony of Dr. Norton A. Roitman

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	(see above). Dr. Roitman then said, "When I saw Zane, I thought there was the potential that he would run in and develop a permanent emotional problem. And then I was further concerned because he showed some thinking problems. That's the best way I can describe it. They call it information processing learning disability." Dr. Roitman testified that he had switched Mr. Floyd from Ritalin to Imipramine, an antidepressant, to try to address the underlying issues which he noted suggested "learning disabilities, home trouble, a residual depression and anxiety."	
07/18/2000	<p>Trial Transcript of the testimony of Dr. Edward Dougherty was reviewed. Dr. Dougherty was qualified as an expert in the field of psychology. Direct Examination by Curtis Brown, Esq. reported that Dr. Dougherty was hired by the defense in order to provide an opinion as to Mr. Floyd's mental health at the time of the crime on 6/3/1999. Dr. Dougherty initially indicated that he had reviewed the entire discovery which included Mr. Floyd's two voluntary statements of which he was noted to stutter throughout. He then offered his conclusion that Mr. Floyd, "suffers from the mental disease of mixed personality disorder with borderline, paranoid, and depressive features. In addition, I conformed the prior diagnosis of attention deficit hyperactivity disorder which was previously diagnosed in developmental years...Mr. Floyd's reasoning was impaired as to rational thought at times, and at times he did not act knowingly and purposely at the time of the alleged incident. His symptoms were exacerbated by a long history of the ingestion of drugs and alcohol." Dr. Dougherty testified about the difference between depersonalization and dissociation and then proceeded to describe his test findings to the Court. Dr. Dougherty testified that results of the Manson Evaluation indicated that Mr. Floyd, "...has marked confusion, distractibility, and he's disorganized at times, particularly under severe stress. At times he can't even remember simple things from day to day. He reports feeling life is dream-like, and there's a marked difference between himself and others." Dr. Dougherty further stated that his clinical judgment was that Mr. Floyd was "...impulsive. He lacks the ability to think beyond the present and to consider the consequences of his actions. Now, that's consistent, very consistent with his early diagnosis of ADHD." Dr. Dougherty continued his testimony with diagrams and descriptions of normal development and pointed out things that affected Mr. Floyd's development [this will not be reviewed here but will be reviewed in Dr. Dougherty's report]. Dr. Dougherty ultimately testified that he believed that Mr. Floyd suffered from a psychotic break/total breakdown of his mental functioning.</p> <p>Cross Examination was conducted by William Koot, Esq. Dr. Dougherty was questioned about certain aspects in his report, particularly those that pertained to the accuracy of Mr. Floyd's recall of events to Dr. Dougherty.</p>	State of Nevada vs. Zane Michael Floyd Transcript of Jury Trial, Testimony of Edward J. Dougherty
02/16/2006	Order of Affirmance was reviewed. It was indicated that the Order was an appeal from an order of the district Court denying a post-conviction petition for a writ of habeas corpus. The facts of the case were cited. It was indicated that on 6/3/99, Mr. Floyd had a woman from an "outcall" service sent to his apartment. When she arrived, he reportedly threatened her with a shotgun and repeatedly sexually assaulted her. After the assault, Mr. Floyd reportedly said that he was	Order of Affirmance in the matter of Zane Michael Floyd vs. The State of Nevada

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	going to go out and "kill the first people that he saw." Mr. Floyd then left his apartment, allowing the woman 60 seconds "to run or be killed," and walked to an Albertson's supermarket here he shot five employees, killing four. Mr. Floyd then reportedly pointed the shotgun at his own head after he encountered numerous police officers outside the store, was subdued and arrested. It was indicated that Mr. Floyd admitted to having shot the people in the store. Mr. Floyd was found guilty of four counts of first degree murder with the use of a deadly weapon, one count of burglary while in the possession of a firearm, one count of first degree kidnapping with the use of a deadly weapon, and four counts of sexual assault with the use of a deadly weapon. According to the Order of Affirmance, Mr. Floyd filed a post-conviction petition for a writ of habeas corpus in 6/2003 and a supplemental petition in 10/2004. The district Court reportedly denied habeas relief, without an evidentiary hearing, in 2/2005. The appeal was noted to address whether the district Court had properly denied Mr. Floyd's petition without an evidentiary hearing.	
Unknown	Zane Floyd Trial Summary was reviewed.	Zane Floyd Trial Summary
Unknown	Developmental History of Zane Floyd was reviewed. It was noted that Zane's mother, Valerie Floyd, drank alcohol and used marijuana and LSD during her first trimester of her pregnancy with Mr. Floyd. She reportedly smoked 1 ½ packs of Camel Cigarettes during the pregnancy. She was noted to be emotionally distraught after being abandoned by her husband, James Cobis. Handwritten notes indicated that she had experienced the death of a child from SID's. Mr. Floyd was noted to have been born on 9/20/1974, six weeks premature with a birth weight under 5 pounds. He was reportedly taken to Boulder Colorado via airlift because of his premature lungs and was placed in an incubator for 4 weeks. Mr. Floyd was noted to not walk until 18 months with fine motor tremors. Speech was reportedly delayed. According to this summary he had no contact with his biological father. Between the ages of 2 and 4, it was noted that Mr. Floyd had an operation for an undescended testicle. He reportedly did not become toilet trained until age 4. He had the German Measles at age 2 and the Chicken Pox at age 3. His mother, Valerie, reportedly met Michael Floyd in a bar and married this gentleman. His maternal grandfather described Mr. Floyd as "overly sensitive." According to the summary, Mr. Floyd began kindergarten at age 4 and was described as "immature and emotionally unprepared to deal with school." Hyperactive behavior was reported. From ages 5-7, Mr. Floyd reportedly lived in South Carolina. Special Education was recommended but not pursued as his mother felt he would be placed with the mentally retarded children. At age 7 he was noted to be placed on Ritalin for hyperactivity. It was indicated that his mother would binge drink on weekends. Between the ages of 8 and 12, it was reported that Mr. Floyd's parents moved to Colorado Springs with the maternal grandparents. Zane reportedly repeated the second grade "due to poor performance and emotional immaturity." The family was noted to move again to Pueblo, Colorado where Zane was to finish the 4 <sup>th</sup> grade at which point Ritalin was discontinued as a result of an insurance change. A move to Susanville, California was indicated when Zane was age 10 and the family was noted to stay there for 2 ½ years. During the 6 <sup>th</sup> grade, Zane was "out of control" at school and placed on home instruction. It was during this time period	Developmental History of Zane Floyd, of Dr. Edward Dougherty



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	<p>that Michael Floyd was noted to increase drinking behavior. According to Mr. Floyd he recalled, "whippings, beatings, being shoved into walls and being pounded." A diagnosis of Attention Deficit Hyperactivity Disorder was indicated and Ritalin was again started. Improvement was noted in his behavior and became the captain of the Academic Team. Mr. Floyd reportedly began collecting John Wayne movies around this time and was noted to be called a "woos" by his grandfather. The family then moved to Las Vegas, Nevada. Zane reportedly required glasses at that time. He was described as hyperactive and was referred to a psychiatrist at age 13 and again placed on Ritalin. At that time, Zane underwent a psychological evaluation by Dr. Cardle (as reviewed above). During the 7<sup>th</sup> grade, Mr. Floyd was to meet his friend Jay who was reportedly living at the Mojave Detention Center at the time. It was Jay who reportedly introduced Mr. Floyd to marijuana and eventually methamphetamine. Mr. Floyd was noted to decided to change schools and attended the Vocational Technical School, however motivation by the second semester had waned and he described himself as a "stoner." His parents then enrolled him at the Faith Lutheran School, which was reportedly a more structured environment. Zane was enrolled as a sophomore and stopped doing drugs "cold turkey." He then began actively participating in sports, as per the report. It was noted that upon returning from a school dance, Mr. Floyd witnessed his stepfather being taken away in handcuffs for physically abusing his mother. According to the record, he and his mother left the family home for several weeks. In his junior year, Mr. Floyd reportedly left the Faith Lutheran School and enrolled in the Clark High School but rarely attended. He then enrolled in the US Marine Corp and completed classes in Night School in order to continue with boot camp. After passing the physical, Mr. Floyd reportedly returned to drug use. While in the Marine Corp, Mr. Floyd was promoted to Lance Corporal. He continued using alcohol and was arrested for driving under the influence. He was then discharged and not asked to re-enlist because of his drinking problems. Mr. Floyd returned to Las Vegas and moved in with his childhood friend, Jay and continued his drug use. It was note that he eventually moved back in with his parents.</p>	
Various	<p>Inmate contact information dated 6/3/99 indicated that Mr. Floyd had been involved in a high profile crime and was to be isolated until he could be interviewed by classification and psych. He was later reportedly placed on suicide watch.</p> <p>Initial Medical Screening dated 6/3/99 was reviewed.</p> <p>Mental Health report dated 6/3/99 noted that Mr. Floyd was on suicide watch. Mr. Floyd was described as appearing "numb" with no emotion. When asked why he killed he replied, "I don't know why." Status summary noted that Mr. Floyd had been "kicked out" by his roommate and moved back in with his parents whom he reportedly had a good relationship with. Mr. Floyd reported that his mother was an alcoholic and that his father was abusive at times when he was a child.</p> <p>Medication Log was reviewed. Mr. Floyd reportedly was prescribed Desyrel (Trazadone) 75 mg QHS for 90 days beginning in June 1999</p>	EMSA Correctional Care Medical Records

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# NEUROPSYCHOLOGICAL TEST FINDINGS:

( ) = standard deviation units from the mean in a (+) positive or (-) negative direction  
 SS = standard score (mean of 100, standard deviation of 15)  
 ss = scaled score (mean of 10, standard deviation of 3)  
 wnl = within normal limits  
 T = T-score (mean of 50, standard deviation of 10)  
 " = Seconds  
 PR = Percentile Rank  
 NDS = Neuropsychological Deficit Scale  
 HRB = Heaton 2004 Normative Data

## INTELLECTUAL FUNCTIONS:

### Wechsler Adult Intelligence Scale-III

Index	IQ/Index	Percentile Rank
Verbal Score	122	93
Performance Score	105	63
Full Scale Score	115	84
Verbal Comprehension	118	88
Perceptual Organization	103	58
Working Memory	117	87
Processing Speed	106	66

### Wechsler Adult Intelligence Scale-III, Verbal Subtest Scores

Verbal Subtests	Raw	ss	Percentile Rank	Strength or Weakness
Vocabulary	61	16	98	Strength
Similarities	21	9	37	Weakness
Arithmetic	17	12	75	
Digit Span	23	14	91	
Information	25	15	95	Strength
Comprehension	29	15	95	
Letter/Number Sequencing	13	13	84	

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	<p>through August 1999. Elavil 25 mg (Amitriptyline) QHS was prescribed for 90 days prior to August 2000 and through September 2000.</p> <p>Physician's Orders were reviewed. Psychotropic medications were reportedly stopped at Mr. Floyd's request as of 7/26/99. Elavil was then prescribed on 7/14/00.</p> <p>Inmate Request/Grievance Forms were reviewed, completed by Mr. Floyd. Handwriting was noted to be poor.</p> <p>Detention Services Division Information Reports were reviewed Progress Notes for various dates of service were reviewed. Progress Note of 6/4/99 reported that Mr. Floyd stated, "I don't know why I did it. I was walking there (Albertson's) and I knew what I was doing was wrong, I just did it." The note also reported that he had little memory of what he did or what had happened. It was noted that he did not appear to be mentally ill. Note of 6/4/99 reported that Mr. Floyd said that thoughts were constantly going through his mind." He reportedly stated that he had a "vague" recollection of the incident. The following day, 6/5/99, Mr. Floyd was described as being "preoccupied" and was advised to relax. Progress note of 6/7/99 noted that Mr. Floyd denied suicidal ideation because he did not want to "hurt my parents any more than I have." He also admitted to having used methamphetamine the morning of the shooting although he reported that it was not much. Mr. Floyd reported that the incident was a "blur" to him. Progress note dated 12/14/99 indicated that Mr. Floyd admitted to a history of cocaine, methamphetamine, and marijuana with one DUI.</p> <p>Mental Health Report dated 7/21/00 noted a diagnosis of Adjustment Disorder. Mr. Floyd was noted to be agitated and somewhat defiant. He reportedly did not feel like talking and denied suicidal ideation.</p> <p>Psychiatric Follow-Up Evaluation of Giles Desmarais, MD dated 8/17/00 was reviewed. Mr. Floyd was reportedly depressed with blunted affect. Hallucinations were denied. He was indicated to be coherent and cooperative with no active suicidal ideation.</p>	
Various	<p>Various Memoranda to and from the Clark County Public Defender's Office were reviewed.</p> <p>Memorandum of Cessie Aldonzo, LCSW of Alfonso Associates dated 1/21/2000 was reviewed. It was noted that a psychosocial had been started on Mr. Floyd including collateral interviews with his mother, maternal grandfather, maternal grandmother, friend Robert "Jay" Hall, and his godparents Carolyn and Herbert Smith. Interview with Mr. Floyd was consistent with the record. He reportedly admitted to recurrent thoughts of killing from the age of 7-8 and that he "wanted to go to war and kill." The memorandum also indicated that Mr. Floyd witnessed multiple instances of violence while stationed in Guantanamo Bay, Cuba. Collateral interview with Jay Hall reported that Michael Floyd was very strict with Zane and that Zane was not well-accepted by his peers in school. He recalled their extensive substance abuse in addition to statements Zane had made while watching television related to killing after he had been discharged</p>	<p>Memoranda to and from the Clark County Public Defender's Office</p>

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	<p>from the Marines. Jay recalled that after Zane was discharged, "He was 'obsessed with guns.' He did not seem like the same guy. He always talked about guns and war. Jay feels the Marine experience changed Zane." Opinions offered following the psychosocial evaluation noted that Mr. Floyd's substance abuse was triggered by the following psychosocial dynamics, "Perceived rejection by his biological father; exposure to domestic violence; hyper-masculine ideals (you have to be like John Wayne); familial demands to behave in a harsh, aggressive and tough manner; familial alcoholism; behavioral problems in school; possible congenital/pre-natal neurological impairment due to maternal alcohol use; impact of the long term use of Ritalin."</p> <p>Memorandum from Dr. Jakob Camp dated 1/25/2000 regarding Dr. Camp's visit with Tracie Carter was reviewed. The interview reportedly revealed three main points that included the following: "1. The military style in which Zane Floyd ordered Tracie Carter around as if she was a prisoner and he were a soldier. Also the fact that beyond pushing her cheek with his shotgun barrel, there was no gratuitous physical violence; 2. Zane Floyd did engage in phallic foreplay with a sadistic nature and in the sodomy, apparently discussed aspects of his frustration and mental state, that Ms. Carter cannot now recall; 3. Ms. Carter describes their interaction as efforts on his part to convince her that he was capable of killing. This continued until she was convinced and no longer resisting his insistent statements regarding his killer status." It was indicated that Tracie Carter noted that Mr. Floyd "zoned in and out" and that he "looked through her," making little direct emotional contact.</p>	
Various	Various medical records from Mr. Floyd's tenure in the Marine Corps were reviewed in addition to letters of appreciation and valor.	Military Records

#### INTERVIEW OF ZANE MICHAEL FLOYD:

#### CRIMINAL HISTORY:

Mr. Floyd denied prior criminal history other than one DUI in California. Mr. Floyd said that on the evening preceding the shooting on June 3, 1999 he had been drinking heavily at the strip club where he went with his girlfriend of one month. He could not remember her name at the time of this examination and could not remember her last name when he was going out with her. He said that the strip club had a male and female floor and that his girlfriend and her female friend went to the male stripper's floor and that he was downstairs playing video Black Jack and drinking Jim Beam. He said he then went to a casino. He said his girlfriend became angry because he was playing Black Jack when he said he was going to the bathroom and did not come back. When she found him at the Black Jack table she "took off because she was pissed." He said that he had sex with this woman about a dozen times. He said she was working, had an apartment and a car. He said he was not in love with her. He said some things about the night he remembers clearly and others not.

Mr. Floyd said he took a cab home from the casino and stopped along the way and made a call to a hooker. He said that when he got home he did a line of methamphetamine.

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When I asked him about what he did with the call girl he said, "We did our thing and I don't really remember going to shoot people." He said he did not rape her because he paid her. He said, "I don't remember everything I said." He said that the sex with her was, "Kind of a bore. Nothing special about it." He said he was not sure when she left. The records indicated that Mr. Floyd solicited the call girl at about 3:30am to come to his parent's guest house. The records indicated that he forced sexed on her and sodomized her for about 1 ½ hours, threatening to kill her if she did not get him to achieve a third orgasm. When he had the third orgasm he let her go. The records indicate that at about 5:10 am he left his house with a cut down shot gun under a bath robe and walked to Albertson's Food Store at Sahara and Valley View, walking from his home at 4101 West Oakley. Apparently, he entered the store from the east end and shot and killed four people out of a possible 25 in the store, leaving one man wounded who was presumed to be dead. Apparently he was unable to find the remaining 20 people, walked outside to find the police waiting for him and begged to be killed by the police, but refused to shoot at the police, and surrendered the shotgun after an 8-minute confrontation. Mr. Floyd reported to the police disbelief at his own behavior. He apparently admitted to the police that he wanted to know what it was like to kill someone, as he had been trained to do.

Mr. Floyd said that he remembers it was just getting light out when he walked to Albertson's. His description of that time frame is, in my opinion, consistent with his being in a dissociative state. He said, "It didn't seem like I was doing it. I felt like I was watching myself do it," as if he were looking down at himself doing it. Mr. Floyd said that as far as the shooting was concerned, "All I could remember is shooting the first guy. I remember the first shot and the last shot." I asked him if something in the time frame preceding the Albertson incident stirred him up or inflamed him. He said, "I wish I remembered." Mr. Floyd said that he remembers one instance of clarity walking to the store in which he said, "What the hell am I doing going to the store" and one time also wondered what he was doing shooting in the store. He said, "I still can't believe I did that." I said to Mr. Floyd that his friend Jay said in the record that he would talk about killing people. Mr. Floyd replied, "Maybe I did when I was high, I don't know." Mr. Floyd said Jay was in jail at the time that he did this. Mr. Floyd said, "I know I had problems with drugs and with my family history. I don't blame anybody for the (incident). I didn't like to face up to my problems (and tried to) forget about them."

#### MEDICAL/PSYCHIATRIC HISTORY:

Mr. Floyd did not have a lot of awareness of his early history, including the fact that he was born weighing 4 pounds, 10 ounces and 1 ½ months premature and was severely oxygen deprived for the first few days of his life. He does not have much recollection about his history until about the age when his stepfather came on the scene.

Mr. Floyd said that he knew he was on Ritalin and Tofranil as a child. He said he did not like being on Ritalin and that he was on it inconsistently due to his mother's inconsistency. He said he knew he had been seen by a child psychiatrist.

Mr. Floyd was questioned as to his physical, cognitive and emotional symptoms.

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Mr. Floyd denied recent headaches other than headaches from tooth decay. He said he has had bad experiences with dentists. Dizziness, tinnitus, vertigo, and changes in taste or smell were denied. He said he does not have corrective lenses, but believes he needs glasses for distance vision, but not for close-up work. Mr. Floyd denied photophobia, sonophobia, chronic pain, and auditory, visual and olfactory hallucinations. However, Mr. Floyd detailed a number of dissociative instances, and a history of experiencing illusions. Mr. Floyd said his sleep was regular and that he sleeps predominantly from 2am to 5am, eats breakfast and then goes back to sleep until 10am. He said he has tended to overeat. He said he will "pig out" if he has the opportunity, such as buying food supplies from the canteen.

Mr. Floyd said that he feels he has trouble absorbing what he reads due to being highly distracted. He feels his left hand is less coordinated than his right hand. He said that in some things his short-term memory is "real bad." He said he is unable to remember which card he is playing when playing cards on his Unit. Mr. Floyd said he gets absent-minded and "zones out" all the time. He said he constantly forgets what he said to somebody, or to do what he had just said he would do.

Mr. Floyd said that in his sleep, he will wake up and see his identification card in his door, where it is supposed to be. He looks at this in his hypnogogic state and then could "swear to God" that when he wakes up that there is somebody there in the doorway. He said eventually he realizes it is just his ID card in the window. Mr. Floyd said that he walks in his sleep all the time, he believes close to nightly. He wakes up frequently. He goes to bed with the blankets on himself and wakes up and the blanket is folded up in the corner, he is sleeping without a blanket and no one else has been in his cell. He said he has thrown his alarm clock against the wall in his sleep and broke it. He said that he is extremely afraid of snakes in his cell, although there has never been one in there. He said that after reading Sho Gun he was sleep walking and he was told that he kept saying "I gotta chop their heads off, gotta chop their heads off."

Mr. Floyd described marked obsessive compulsive rituals which he has to perform. He said that everything in his cell has to be arranged and rearranged "just so." He denies being a "neat freak" but says "some things I just can't get out of my head." He said that after he finishes playing cards with someone on the Unit, such as his friend Dave, he has to put the cards and the dominoes away in exactly the right order. He said if Dave takes them and does it he will do it "the wrong way." Mr. Floyd said that when this happens he will return to his cell and obsess about the cards or the dominoes being in the wrong order until he comes out again and can fix them. He said if Dave does it and he does not go to his cell right away, he has to check on the order of the cards regardless of what Dave says. Mr. Floyd said that another compulsion he has is that he has to have all of his electrical sockets plugged up/in use. He can not stand staring at an empty socket. He also said that everyday he has to ritualistically stack up his packets of Kool Aid. He said he also obsesses about his photo albums that he has where he cuts pictures out of magazines and makes photo albums. He said he has to arrange his photo albums "a dozen times a day."

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Mr. Floyd said that he has had occasional suicidal thoughts in jail. He said he had "a couple of bad months" when his mother died. He said he thinks that the way he would commit suicide would be by waiving his appeals.

Mr. Floyd said that he has very vivid dreams but usually does not remember them. He said he does not know what his dreams are about. He denied frank flashbacks but said he thinks a lot and has vivid images of abuse by his stepfather.

In regards to temper, Mr. Floyd said, "I really work at controlling my anger in here." He said that "if you pick the wrong spot to lose your temper you'll get badly hurt."

#### **DRUG AND ALCOHOL HISTORY:**

Mr. Floyd said he used marijuana starting from age 15 about two to three times a week, "as often as possible." He said he used LSD one time a month from age 15. He said he used methamphetamine very heavily right before the Marine Corp for three to four months and then "cleaned myself up" for boot camp. He said he drank alcohol very heavily in the Marine Corp and both before and after the Marine Corp. He said he only got high on drugs, specifically marijuana one time at the base in Guantanamo, Cuba. He said he was caught by some MCO's but that they did not turn them in. He said that in the Marine Corp he drank very heavily and was blacking out "all the time." He said, "A fifth of Jack Daniels was nothing. He said he was a "functioning alcoholic." He said that after leaving the Marine Corp he stopped drinking as much alcohol and started doing marijuana daily and methamphetamine two to three times a month for three to four days at a time. He said he would use methamphetamine very heavily in a bingeing pattern.

Mr. Floyd said he was out of the Marine Corp for less than one year when the shooting incident happened. He said that at the time of the crime he had been drinking alcohol heavily that night, and he recalled drinking Jim Beam on the rocks at a strip club. He said he used one line of methamphetamine in the preceding period before the shooting. I asked Mr. Floyd if the methamphetamine and Ritalin seemed similar. He said that he remembered always going off and on the Ritalin from the choices of his parents and doctors. He said, "I know I didn't like to take a pill everyday."

#### **EDUCATIONAL/VOCATIONAL HISTORY:**

Mr. Floyd said that, "I could not get interested in school." He said the only time he recalls being interested in class was in eighth grade Geography. He said that he was held back between the moves from South Carolina to Colorado, with the school in Colorado feeling he was too young to enter the third grade so he repeated second grade. Mr. Floyd said that in high school he was in Vocational Technical School and his parents put him in the Lutheran School. He said he transferred to Clark High School and they gave him senior status and then he dropped out of Clark and attended Adult High School, from which he received his diploma. He said he recalls being the only person in his class in Adult High School who was white and not pregnant. He said he always liked history and government, but never did "get into" school. He said studying was "torture" for him. He

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said most of the classes interested him. He said he never did his homework. He said he was unable to keep his attention focused on his homework.

Mr. Floyd stressed that he learned from his family environment that how well you did on tests was extremely important. He said that he always did better on tests than he did in the normal course of school and in terms of staying focused on his homework. It appears that he was able to "pull it together" for the relatively short period of time necessary to stay focused on a test, but outside that very highly structured situation, he would fall apart and be unable to focus and become extremely easily distracted. Mr. Floyd said that math was "always my short suit." He said he went through three years of Algebra and "never got it."

Once Mr. Floyd completed his senior year in Adult High School and graduated, he joined the Marine Corp for four years. Mr. Floyd said he had trouble passing the hearing test in the Marine Corp. He was discharged from the Marine Corp in July 1998, to his report. Right after leaving the Marine Corp Mr. Floyd said he lived with his parents and then lived with his friend Jay and a Hawaiian man. When Jay went to move in with his homosexual lover, Mr. Floyd remained living with the Hawaiian man for approximately six months until he was asked to leave. At that point, Mr. Floyd returned to stay at his parent's guest house. He had lost three jobs.

Mr. Floyd said that he has been in Ely since October 2001. Mr. Floyd said that in jail he has had only "one little write up" for passing something back and forth between cells.

#### SOCIAL HISTORY:

Mr. Floyd indicated that in his family, "I never felt like I could do anything good enough. It felt like no matter what I did the bottom was gonna fall out, something bad was gonna happen, and that is the way I felt as an adult too and that's what I felt about weed and meth. You just lose yourself in it...I get lost in it...I was always a lot harder on myself on some things and not as responsible about some things as I should have been." Mr. Floyd said he was teased a great deal in school. "I was always the odd man out...I only had one to two close friends growing up, Jay and Scott Morelli for a bunch of years."

Mr. Floyd said he does not remember his biological father Mr. Cobis and considers Mr. Floyd his biological father. He calls Mr. Floyd his dad. Mr. Floyd said, "I didn't like my dad, but I didn't wish for a new one. I hated him growing up. He was always there. He always gave me everything he could... The violence was hard." He gave several examples of extreme violence towards him from his stepfather. He said that Mr. Floyd would, "Kick me across the floor and throw me across the room." Mr. Floyd gave an example of when he was 9 or 10 years old at school and was "screwing around" and was suspended. His stepfather picked him up from school and later Zane was doing the dishes. Mr. Floyd said he broke a dish and his stepfather "went off." Mr. Floyd said his stepfather kicked him and hit him and kicked him into another room and whipped him with a board. He said he was terrified of his stepfather. Mr. Floyd said that one time he was playing soccer outside his house at age 9 to 10 and he kicked a ball into the window



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of his bedroom in their house in Standish, California. Mr. Floyd said that when this happened his stepfather did not get mad. A little later, Mr. Floyd said he was in his bedroom with his stepfather cleaning up the glass from the broken window. Mr. Floyd said something that apparently set his stepfather off, and his stepfather threw him onto the floor, entirely across the room, to the other side of his water bed. Part of the reason Mr. Floyd said he was terrified of his stepfather was because his stepfather was large (5'11" and 240 pounds). Mr. Floyd said that the violence was not consistent and was unpredictable. Thus, he was constantly on pins and needles. When his father was not at home he would count the minutes until he knew his father was coming back. And when he was at home with his stepfather he would count the minutes until his stepfather had to go back to work. His stepfather's outbursts were generally not due to alcohol, to Mr. Floyd's report.

Mr. Floyd remembers that at one point living in their small house in Standish, California, he became scared of his stepfather and ran down the street and their neighbors called the police on his father but his mother did not press charges. His stepfather had been beating him, but he reportedly never got punished. Mr. Floyd said that his stepfather was a fire fighter who worked 24 hours on and then was off for 24 hours. He described his mother as being passive towards the violence from his stepfather, stating that she never did anything about it. Mr. Floyd said that he felt like nobody responded to his desperation or cries for help. He said his mother worked at a store like a K-Mart and had a bunch of different jobs over the years. He remembers being very scared of his stepfather when he was home with him.

Mr. Floyd gave another example of his stepfather's violence in which he (Zane) lost his pass for Wet and Wild, which cost about \$80.00 for the season. Mr. Floyd said that his best friend Jay wondered why Zane was so scared of his stepfather. Jay told Mr. Floyd's father about the lost card, and Mr. Floyd picked Zane up off the street by his hair and slammed him against the wall, with no warning. Mr. Floyd said that after this, Jay had a better understanding of his situation at home. Mr. Floyd said that he did not know if he ever had concussions from the physical abuse from his father. Mr. Floyd reiterated that whenever his stepfather was at work he would count "the hour glass" until his stepfather came home.

Mr. Floyd said that he and his stepfather and mother moved to Las Vegas when he was 11 or 12 years old. Mr. Floyd said that when in Las Vegas an incident occurred in which his stepfather put his mother, Valerie's, head through a sheetrock wall. Zane was at a school dance with friends and when he and his friends walked around the corner towards his house he saw his mother running down the street being chased by his stepfather. The police were called and the stepfather spent the night in jail, came home the next day, and Mr. Floyd said his mother forgave Mr. Floyd and again never did anything about it. He said he was angrier at his mother than at his stepfather for her not standing up to him. Mr. Floyd said that he thought that his mother felt that he needed a father and that was her stated reason for not standing up to him more (coincidentally making him feel guilty about the situation).

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Mr. Floyd said his family moved a lot up until they finally moved to Las Vegas because his stepfather was in the Navy. He said his stepfather left the Navy in South Carolina and they went to Colorado. He said that the abuse from his stepfather started most significantly when they were living in California at about age 9 - 11. He said he was with his stepfather since the latter part of his third year of life.

Mr. Floyd said that his maternal grandmother would criticize his mother for hitting him. However, Mr. Floyd was much more focused on and able to talk about the violence from his stepfather as opposed to the violence from his mother.

Mr. Floyd said his mother died of a heart attack at age 60, approximately a year ago. He said that currently his stepfather is working as a fire inspector in Area 51 in Nevada. He said he speaks to his stepfather on the phone once a week and feels better about him now than he did when he was growing up.

**BEHAVIORAL OBSERVATIONS, MENTAL STATUS AND MEASURES OF NEUROPSYCHOLOGICAL EFFORT:**

**Beck Inventories**

Test Type	Raw Score
Beck Depression Inventory-II	32
Beck Anxiety Inventory	5
Beck Hopelessness Scale	16

**Test of Memory Malingering**

Trial	Score	Cutoff
Trial 1	47	
Trial 2	50	<45
Retention Trial	50	<45

Zane Floyd presented in an orange jumpsuit appearing overweight. Throughout the testing, Mr. Floyd was highly competitive and became extremely impulsive and frustrated when he felt he was not doing well. For example, on a verbal paired associate memory task, Mr. Floyd would pound the table when not thinking of the word pair, even though he overall was able to recall 7/8 pairs by the fourth learning trial. Throughout the testing when he thought he did badly he would curse but remember it was inappropriate and would try to keep his voice down. When upset with himself at the testing he would make waving motions with his hands. This examiner observed Mr. Floyd's anger and irritability to be highly impulsive. Mr. Floyd was observed having flashes of severe anger which he had difficulty containing even in this highly structured environment. Some very mild resting tremor was noted, right somewhat worse than left. On the Ruff Figural Fluency Test he became very easily frustrated with himself and lost his place easily. Overall, Mr. Floyd was observed to have an explosive and poorly regulated

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personality style. Mr. Floyd was observed to hold his pencil halfway up the pencil with his thumb over his second finger and the pencil between his second and third fingers. This represents an inappropriate pencil grasp, and is considered a "soft sign" of neurodevelopmental dysfunction. On two visual scanning tasks, Mr. Floyd was noted to cover parts of the page with his hand so that he only had to look at one part of the page at a time. This appears to be a compensatory strategy for Mr. Floyd's being overwhelmed by the stimulus complexity on the page. This is also consistent with underlying neurodevelopmental/marked attentional difficulties. This is consistent with his history of attentional difficulties.

Mr. Floyd indicated that he can focus on attention tasks like the Paced Auditory Serial Addition Test for short periods of time, but as noted above cannot stay focused over longer periods of time like when reading or trying to stay focused in a classroom setting. Mr. Floyd demonstrated an extreme competitiveness and overwhelming self-dislike and frustration at himself when he perceived himself to be doing poorly on a task.

Mr. Floyd was oriented to person, place and time. He was observed to be right handed. He reported batting left-handed and throwing right-handed.

The Beck Inventories are face valid measures of depression, anxiety and optimism/pessimism. The Beck Depression Inventory-II was in the severe range at 32. He said he has suicidal thoughts but would not carry them out. Self-dislike is high. Concentration difficulties are perceived as poor. Irritability is perceived by Mr. Floyd recently as high. He said he sleeps more than usual lately. The Beck Anxiety Inventory was within normal limits at 5. Mr. Floyd reported mild inability to relax, mild fear of the worst happening, mild feelings of terror, feeling mildly scared and mild fear of dying. The Beck Hopelessness Scale was in the severe range at 16.

Mr. Floyd was observed to put forth maximum effort and in fact to be likely overachieving to a degree on the neuropsychological testing, due to his severe fear of failure, and extremely high standards for himself in test taking. This hypothesis was evaluated formally through the Test of Memory Malingering, to determine if Mr. Floyd was in the poor effort/possible malingering range on this memory test which is insensitive to the effects of even severe brain injury, but has high specificity in terms of being an easy task and having a high false negative rate in terms of its insensitivity to brain damage. However, the utility of this test is that individuals with even marked brain damage obtain at least 45/50 correct on Trial 2 and the delayed Retention Trial. Mr. Floyd's scores on Trial 2 and the Retention Trial were both at 50/50. Thus, the clinical impression of Mr. Floyd putting in excellent effort is confirmed by the Test of Memory Malingering.

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**Wechsler Adult Intelligence Scale-III, Performance Subtest Scores**

Performance Subtests	Raw	ss	Percentile Rank	Strength or Weakness
Picture Completion	20	9	37	
Digit Symbol-Coding	80	11	63	
Block Design	48	12	75	
Matrix Reasoning	18	11	63	
Picture Arrangement	17	11	63	
Symbol Search	35	11	63	

**Wechsler Adult Intelligence Scale-III, Discrepancy Comparisons**

Discrepancy Comparisons	Score 1	Score 2	1 <sup>st</sup> - 2 <sup>nd</sup>	Sig.
Verbal IQ-Performance IQ	122	105	17	0.05
Verbal Comprehension-Perceptual Organization	118	103	15	0.05
Verbal Comprehension-Working Memory	118	117	1	n.s.
Perceptual Organization-Processing Speed	103	106	-3	n.s.
Verbal Comprehension-Processing Speed	118	106	12	0.05
Perceptual Organization-Working Memory	103	117	-14	0.05
Working Memory-Processing Speed	117	106	11	0.15

The Wechsler Adult Intelligence Scale-III is a reliable and valid measure of intellectual functions. Mr. Floyd's Full Scale IQ was in the High Average range at the 84<sup>th</sup> percentile rank. Mr. Floyd's Verbal Intellectual Functioning was in the Superior range at the 93<sup>rd</sup> percentile rank, whereas his Performance Intellectual Functioning was in the Average range at the 63<sup>rd</sup> percentile rank. This 17-point discrepancy is highly significant. This difference was also found in terms of the Verbal Comprehension Index at the 88<sup>th</sup> percentile rank, High Average range and the Perceptual Organization Index at the 58<sup>th</sup> percentile rank, Average range. The 17- and 15-point discrepancies were consistent with Dr. Dougherty's report of July 13, 2000, using the Kaufman Adolescent/Adult Intelligence Test with a crystallized IQ of 104 and a fluid IQ of 84, indicating a very significant 20 point difference between Verbal and Performance/Non-Verbal abilities.

Dr. Maria J. P. Cardle's report dated April 30, 1989 using the WISC-R yielded a Verbal IQ of 111, High Average range and a Performance IQ of 91, lower end of Average range with again a 20-point, highly significant difference. Thus, at age 13 years, 5 months

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through the present day, Mr. Floyd continues to have a marked discrepancy between his Verbal and Non-Verbal performance abilities. In neuropsychology, a 20-point difference between Verbal and Performance IQ is considered a likely sign of significant neurological dysfunction in the hemisphere associated with the lower scores. In this case, Mr. Floyd's pattern of results over time suggests significant weakness in the neurological functioning of the right cerebral hemisphere compared to the left.

Additional findings from the WAIS-III included the Working Memory Index at the 87<sup>th</sup> percentile rank, High Average range and the Processing Speed Index in the Average range at the 66<sup>th</sup> percentile rank. Processing Speed is a weakness at the .05 level in comparison to Verbal Comprehension. The Vocabulary subtest score on the WAIS-III at the 98<sup>th</sup> percentile rank, Very Superior range, along with scores at the 95<sup>th</sup> percentile rank for fund of Information and Comprehension, overall support the hypothesis that Mr. Floyd had highly discrepant abilities with excellent strengths in the area of crystallized, verbal intelligence. This is further supported by the fact that Mr. Floyd had a weakness on the Similarities subtest assessing verbal abstract reasoning. Thus, when reasoning is required, even in the verbal modality, his performance diminishes. His Performance subtest scores were all essentially average.

#### ATTENTION AND CONCENTRATION:

Wechsler Memory Scale-III	Index Score	Percentile Rank
Working Memory Index	105	63

#### Visual Cancellation Test

	Verbal	Non-Verbal
Left Errors:	0	0
Right Errors:	0	0
Total Errors:	0	0
Total Time:	120"	115"
Starting Place:	Left	Left
Approach:	Systematic	Systematic

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#### Speech Sounds Perception Test

# Errors	T-Score	Percentile Rank	NDS
6	45	30-32	0

#### Seashore Rhythm Test

# Correct	T-Score	Percentile Rank	NDS
27	42	21-23	1

#### Paced Auditory Serial Addition Test

Trial	Raw Score	T-Score	Percentile Rank
1 (2.4")	48	55	70
2 (2.0")	48	56	73
3 (1.6")	45	60	84
4 (1.2")	28	53	61-63
Total	169	55	70
Total HRB	169	67	96

The Working Memory Index of the Wechsler Memory Scale-III (WMS-III) was in the Average range. This measure was 12 points lower than the Working Memory Index on the Wechsler Adult Intelligence Scale-III. This is because the WMS-III Working Memory Index was made up of Letter/Number Sequencing at the 84<sup>th</sup> percentile rank and Spatial Span, which was a relative weakness at the 37<sup>th</sup> percentile rank, whereas the WAIS-III Working Memory Subtest was made up of Letter/Number Sequencing and Digit Span which was at the 91<sup>st</sup> percentile rank for Mr. Floyd. Thus, Visual, non-Verbal attention is worse than Auditory, Verbal Attention on this measure.

On measures of verbal and non-verbal scanning of the visual fields for specific stimuli, Mr. Floyd's performance was intact. The Speech Sounds Perception Test and Seashore Rhythm Test measure auditory-verbal processing and attention and auditory, non-verbal processing and attention, respectively. Mr. Floyd's performance was in the average range for auditory verbal processing and attention and in the below average range for auditory, non-verbal attention. These test scores on the Speech Sounds Perception Test and the Seashore Rhythm Test were compared to the data from Dr. Schmidt. Mr. Floyd's score on the Seashore Rhythm Test was the same as the one done by Dr. Schmidt in June 2000. His score on the Speech Sounds Perception Test was 8 errors in 2000 and 6 errors currently. Performance in 2000 was mildly impaired as opposed to average functioning currently.

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The Paced Auditory Serial Addition Test was measured to assess the value of simultaneous attention. Mr. Floyd was frustrated with this test in the beginning, but once he got the hang of it in the practice sessions, he was able to perform in the average to above average range on all of the subtests. He was in the above average range for the Total Score.

The Test of Variables of Attention could not be administered currently to Mr. Floyd due to the difficulty of bringing a laptop computer into a prison. It is noted that this test was administered by Dr. Frank Paul and written up in his report of May 7, 2000. Dr. Paul gave Mr. Floyd both the visual and auditory versions of this test. The visual Test of Variables of Attention appeared to be essentially normal and consistent with his intellectual functioning, or better. On the auditory version of the Test of Variables of Attention, Mr. Floyd showed severe impairment on the 2<sup>nd</sup> and 4<sup>th</sup> quarters of this measure for errors of omission. Commission errors were severe for the 1<sup>st</sup> and 2<sup>nd</sup> quarters, improving in the last half of the test. Response time scores were severely impaired overall. Response time variability was reported to be consistent across quarters about 10 points below IQ functioning. Dr. Paul interpreted these results to be consistent with an Attention Deficit Disorder mostly prominent in the auditory as opposed to the visual modality.

#### **MEMORY FUNCTIONS:**

##### **Wechsler Memory Scale-III**

<b>Index/Subtest</b>	<b>Index Score</b>	<b>Percentile Rank</b>
<b>Auditory Immediate</b>	102	55
<b>Visual Immediate</b>	97	42
<b>Immediate Memory</b>	100	50
<b>Auditory Delayed</b>	102	55
<b>Visual Delayed</b>	100	50
<b>Auditory Recognition Delayed</b>	100	50
<b>General Memory</b>	101	53
<b>Working Memory</b>	105	63

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#### Wechsler Memory Scale-III: Primary Index Differences

Indexes	1st Score	2nd Score	1 <sup>st</sup> - 2 <sup>nd</sup>	Sig.
Auditory Immediate-Visual Immediate	102	97	5	n.s.
Auditory Immediate-Auditory Delayed	102	102	0	n.s.
Visual Immediate-Visual Delayed	97	100	-3	n.s.
Auditory Delayed-Auditory Recognition Delayed	102	100	2	n.s.
Auditory Delayed-Visual Delayed	102	100	2	n.s.
Immediate Memory-General Memory	100	101	-1	n.s.
Immediate Memory-Working Memory	100	105	-5	n.s.
General Memory-Working Memory	101	105	-4	n.s.

#### Ability-Memory Differences

Primary Indexes	WAIS-III FSIQ	WMS-III Index	Predicted	Difference	Sig.
Auditory Immediate	115	102	109	7	n.s.
Visual Immediate	115	97	105	8	n.s.
Immediate Memory	115	100	109	9	n.s.
Auditory Delayed	115	102	109	7	n.s.
Visual Delayed	115	100	106	6	n.s.
Auditory Recognition Delayed	115	100	107	7	n.s.
General Memory	115	101	109	8	n.s.
Working Memory	115	105	110	5	n.s.

#### Rey-Osterrieth Complex Figure Test with Recall and Recognition

Trial	Raw Score	T-Score	Percentile Rank
Immediate Recall	13.5	27	1
Delayed Recall	13.5	27	1
Recognition Trial	19	36	8



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#### Tactual Performance Test

Variable	Raw Score	T-Score	Percentile Rank	NDS
Memory	10	74	99	0
Localization	3	42	21-23	2

The Wechsler Memory Scale-III was administered. Mr. Floyd had a General Memory score of 101, average range, at the 53<sup>rd</sup> percentile rank on this measure. However, this scale was 16-points lower than his Full Scale IQ, indicating that memory is a full standard deviation unit weakness in comparison to intellectual functioning. Immediate, Auditory Delayed, Visual Immediate and Visual Delayed Memory were all average, clustering between the 42<sup>nd</sup> and 55<sup>th</sup> percentile ranks. There were no significant intra-subtest discrepancies on this measure.

Mr. Floyd did have moderate impairment of immediate and delayed incidental visual recall, in an instance where he was not cued beforehand of the need to remember. Immediate and delayed recall of the Rey Complex Figure were both at the 1<sup>st</sup> percentile rank. Delayed recognition cueing on this measure improved to within the mild range of impairment. Incidental memory for the location of shapes was above average. Memory for the spatial location of the shapes was below average using the Heaton normative data and mildly impaired using the Halstead Reitan normative data, i.e. the Neuropsychological Deficit Scale (NDS). The NDS involves comparisons of subjects with known groups of brain damaged patients, whereas the Heaton data compare individuals to others of the same age, normal subjects, matched on various moderator variables.

#### LANGUAGE FUNCTIONS:

##### Controlled Oral Word Association Test

Total Score	T-Score	Percentile Rank
32	40	16

##### Animal Naming

Total Score	T-Score	Percentile Rank
24	52	58

##### BDAE Complex Ideational Material Subtest

Raw Score	T-Score	Percentile Rank
12/12	60	84

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#### Aphasia Screening Test

<b>Pathognomonic Signs</b>
Mild Constructional Dyspraxia

#### Wide Range Achievement Test-4

Subtest	Standard Score	Percentile Rank	Grade Equivalent
Word Reading	114	82	>12.9
Sentence Comprehension	108	70	>12.9
Spelling	100	50	>12.9
Math Computation	107	68	>12.9
Reading Composite	111	77	

Mr. Floyd was at the 16<sup>th</sup> percentile rank on a measure of phonemic verbal fluency, the Controlled Oral Word Association Test. Normatively speaking the 16<sup>th</sup> percentile rank is borderline between the below average and mildly impaired performances and is still considered to be in the low end of the below average range. However, this score also needs to be looked at compared to Mr. Floyd's performance on a test of semantic verbal fluency involving naming all the animals he could think of in 60 seconds, as well as to his Verbal IQ. Semantic fluency was >1 standard deviation unit better than phonemic fluency (58<sup>th</sup> vs. 16<sup>th</sup> percentile ranks). The fact that Mr. Floyd's phonemic fluency was 37 IQ points lower than verbal intellectual functioning, almost a 2 ½ standard deviation difference, indicates that phonemic fluency is impaired for Mr. Floyd (using the dictum in neuropsychology that average is not necessarily normal for all people). The Complex Ideational Material Subtest of the Boston Diagnostic Aphasia Examination measures semantic comprehension which was in the above average range, and relatively consistent with semantic fluency. On an Aphasia Screening Test, there was evidence of borderline constructional dyspraxia, which is considered a right hemisphere sign, and is consistent with a relative weakness in Performance IQ in comparison to Verbal IQ and with severe impairment of his copy of the Rey Complex Figure Drawing.

The discrepancy between phonemic fluency and semantic fluency/semantic comprehension suggests the possibility of greater dysfunction of the anterior aspect of the left hemisphere, i.e. left frontal lobe, in comparison to the more posterior temporal cortex of the left hemisphere. This hypothesis will need, however, to be considered within the totality of the data. A writing sample was taken from Mr. Floyd using the Cookie Test Picture of the Boston Diagnostic Aphasia Examination. This test revealed spelling dyspraxia with Cookie being spelled "coocbies." There was also evidence of some dysgraphia with writing of the letter "k" as a "b" in cursive.

The Wide Range Achievement Test-4 was administered. Word Reading was high average at the 2<sup>nd</sup> percentile rank, Sentence Comprehension was average at the 70<sup>th</sup>

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percentile rank, and Reading Composite was high average at the 77<sup>th</sup> percentile rank. Spelling and Math Computation were average at the 50<sup>th</sup> and 68<sup>th</sup> percentile ranks, respectively. These findings were more or less consistent with Dr. Cardie's WRAT-R scores.

#### **MOTOR & PERCEPTUAL-MOTOR FUNCTIONS:**

##### **Lateral Dominance Exam**

	Right	Left	Mixed
Hands	X		
Feet	X		

##### **Right-Left Orientation**

Raw Score	T-Score	Percentile Rank
20/20	55	70

##### **Grip Strength**

Hand	Kilograms	T-Score	Percentile Rank
Right Dominant	41	35	7
Left Non-Dominant	47.5	45	30-32

##### **Finger Oscillation Test**

Hand	Raw Score	T-Score	Percentile Rank	NDS
Right Dominant	51.2	42	21-23	1
Left Non-Dominant	45.2	43	25	1

##### **Grooved Pegboard**

Hand	Raw Score	T-Score	Percentile Rank
Right Dominant	69"	43	25
Left Non-Dominant	79"	38	12-13

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**Key-Osterrieth Complex Figure Test with Recognition and Recall – Copy Trial**

	Score	T-Score	Percentile Rank
Time	182"	51	53
Copy	29	6	<0.01

**Trail Making Test A**

Time	Errors	T-Score	Percentile Rank	NDS
26"	0	47	39	0

**Tactual Performance Test**

Hand	Time (minutes)	# Blocks Placed	T-Score	Percentile Rank
Dominant	4.0	10	53	61-63
Non-Dominant	2.5	10	57	75-77
Both	1.8	10	51	53-55
Total	8.3	30	58	79-81

Mr. Floyd was fully right side dominant to hands and feet. Right/Left orientation was fully intact. Grip Strength on the right, dominant hand was mildly impaired at the 7<sup>th</sup> percentile rank and a marked weakness in comparison to Grip Strength on the left, non-dominant hand at T=45, 30 – 32<sup>nd</sup> percentile rank, average range. The fact that Mr. Floyd was able to squeeze 41 kilograms with the right hand and 47.5 kilograms with the left hand is an abnormal finding, given that typically there is a 10% superiority of the dominant hand, compared to the non-dominant hand. On a measure of motor coordination and speed, the Finger Oscillation Test, Mr. Floyd was in the below average range with both the right and left hands, with some degree of dominant hand superiority shown. On the Grooved Pegboard test, a measure of manual dexterity, Mr. Floyd was in the below average range with the right hand and in the mildly impaired range with the left hand.

The Rey Complex Figure was assessed to measure ability to copy a complex figure. Mr. Floyd's score on this test was in the severe range of impairment at <.01 percentile rank. His approach to this task was highly disorganized. His score was impaired despite multiple erasures. His copy was at points somewhat dilapidated. This test correlates with Dr. Cardle's finding of Zane having a weakness in the area of visual motor skills. Dr. Dougherty also found this to a mild extent using the Bender Gestalt test, which is a less sensitive measure than the Rey Complex Figure of visual-motor dysfunction.

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Simple sequencing to Trail Making Test A was in the average range at the 39<sup>th</sup> percentile rank without error. His score on this measure was slightly better than the one done by Dr. Schmidt in 2000, in which his score was in the below average range with a T-score of 43 compared to that of 47 on current testing.

The Tactual Performance Test is a measure of tactile-kinesthetic problem solving. Mr. Floyd attacked this task in an organized manner and his total performance on this measure was in the above average range, with average performance on the right hand, above average performance on the left hand, and average performance for both hands. These findings were fairly consistent with Dr. Schmidt's results.

#### SENSORY-PERCEPTUAL FUNCTIONS:

Sensory Imperception				Sensory Suppressions		
Modality	Right	Left		Modality	Right	Left
Tactile	0	0		Tactile	0	0
Auditory	2	0		Auditory	0	0
Visual	0	0		Visual	1	0
Total	2	0		Total	1	0

#### Finger Agnosia

Hand	Errors
Right	0
Left	0

#### Fingertip Number Writing

Hand	Errors
Right	1
Left	1

#### Tactile Form Recognition Test

Hand	Errors	Time	T-Score	Percentile Rank
Right	1	9	59	83
Left	0	8	62	88-90

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#### Sensory-Perceptual Total Score

Hand	Errors	T-Score	Percentile Rank
Right	4.5	39	14
Left	1.5	47	39
Total	6	38	12-13

Mr. Floyd made no suppressions to bilateral, simultaneous tactile stimulation. In the auditory modality, he made two sensory imperception errors on the right, but had no sensory suppressions to bilateral simultaneous stimulation. Thus, hearing in his right ear appears to be decreased in comparison to his left, in terms of the functioning of the peripheral auditory structures. On a measure of bilateral, simultaneous stimulation in the visual modality, Mr. Floyd made on right-sided error and no left-sided errors. On a measure of the ability to localize the number of his finger being touched by touch alone, Mr. Floyd was fully intact. A measure of finger tip number writing perception (through touch alone) showed one error each on the right and left sides, which is essentially within normal limits. Mr. Floyd made one right-sided tactile form recognition error, which is an abnormal finding, with no errors on the left. Tactile processing speed was intact. Mr. Floyd's sensory perceptual functions are mildly impaired at the 14<sup>th</sup> percentile rank with the right hand and average with the left hand.

#### EXECUTIVE FUNCTIONS, SEQUENCING AND MENTAL FLEXIBILITY:

##### Trail Making Test B

Time	Errors	T-Score	Percentile Rank	NDS
71"	0	45	30-32	1

##### The Booklet Category Test-II

# Errors	T-Score	Percentile Rank	NDS
18	59	83	0

##### Stroop Color and Word Test

Subtest	Raw Score	T-Score	Percentile Rank
Word	107	48-50	42-50
Color	71	44	27
Color-Word	45	50-52	50-58
Interference	2.32	52	58

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#### Ruff Figural Fluency Test

Subtest	Raw Score	Corrected Score	T-Score	Percentile Rank
Total Unique Designs	72	85 (+13.00)	47	38.2
Perseverations	7		50	50
Error Ratio*	0.097	0.117 (+0.02)	57.5*	77.5*

\*Equivalent to a T-Score of 42.5, 22.5 percentile rank, below average range.

#### Wisconsin Card Sorting Test

	Raw Score	T-Score	Percentile Rank
Number of Categories Completed	6		>16
Trials to Complete First Category	15		6-10
Failure to Maintain Set	1		>16
Learning to Learn	2.0%		>16
Total Number of Errors	14	55	68
Perseverative Responses	9	54	66
Perseverative Errors	6	60	84
Perseverative Errors (HRB Norms)	6	60	84
Percent Perseverative Errors	7.2%	61	87
Nonperseverative Errors	8	51	58
Percent Conceptual Level Responses	79.5%	53	61

#### Neuropsychological Deficit Scale (NDS)

Indicator	Raw Score
General Neuropsychological Deficit Scale score	16
Right Neuropsychological Deficit Scale score	7
Left Neuropsychological Deficit Scale score	4
Halstead Impairment Index	0.1

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Complex sequencing to Trail Making Test B was average at the 30 - 32<sup>nd</sup> percentile rank, and essentially consistent with Dr. Schmidt's performance in the below average range. On the Booklet Category Test, a measure of concept formation, Mr. Floyd's score was above average and showed significant improvement relative to Dr. Schmidt's score in the below average range. These test findings are in comparison to Dr. Schmidt's findings on the Category Test, where there was some degree of improvement from 37 errors to 18 errors currently. On the Stroop Color and Word Test, Mr. Floyd was in the average range for Word, in the below average range for Color and in the average range for Color-Word Interference. He showed improvement from Dr. Cardle's testing in the Word and Color Trials, which were in the moderate to severe range of impairment.

The Ruff Figural Fluency Test is designed as a right frontal correlate to the Controlled Oral Word Association Test, measure of phonemic fluency. Thus, the Ruff Figural Fluency Test measures design fluency. Total Unique Designs was average at the 38.2 percentile rank and the Error Ratio was below average at the 22.5 percentile rank.

The Wisconsin Card Sorting Test is a measure of mental flexibility and the ability to shift mental set, was within normal limits.

The Neuropsychological Deficit Scale of the Halstead Reitan Battery yielded scores overall within normal limits, however, as explained below, in the case of Mr. Floyd's situation, this does not effectively rule-out neurocognitive dysfunction and neurodevelopmental brain damage.

#### **PERSONALITY FUNCTIONS:**

##### **Multiscale Dissociation Inventory (MDI)**

Scale	Raw Score	T-Score	Percentile Rank
Disengagement (DENG)	16	88	>99
Depersonalization (DEPR)	8	74	99
Derealization (DERL)	15	101	>99
Emotional Constriction/Numbing (ECON)	11	71	98
Memory Disturbance (MEMD)	10	77	99.2-99.3
Identity Dissociation (IDDIS)	6	59	83



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#### Detailed Assessment of Posttraumatic Stress

Scale	Raw Score	T-Score
Positive Bias (PB)	0	<36
Negative Bias (NB)	8	46
Relative Trauma Exposure (RTE)	5	60
Peritraumatic Distress (PDST)	24	61
Peritraumatic Dissociation (PDIS)	13	58
Reexperiencing (RE)	23	74
Avoidance (AV)	28	83
Hyperarousal (AR)	29	79
Posttraumatic Stress-Total (PTS-T)	80	80
Posttraumatic Impairment (IMP)	10	63
Trauma-Specific Dissociation (T-DIS)	8	70
Substance Abuse (SUB)	10	46
Suicidality (SUI)	20	87

Because of evidence of dissociation and Posttraumatic Stress Disorder in the clinical history and records, I administered the Multi-Scale Dissociation Inventory (MDI) and the Detailed Assessment of Posttraumatic Stress (DAPS). The MDI is set at a high cutoff score which may favor the test in terms of specificity (false negative error) in comparison to sensitivity (i.e. false positive errors). That is, the cutoff scores may miss people who are in the clinical range on a particular scale. Comparatively, the MMPI-II sets the clinical cutoff at  $T=65$ , 1 ½ standard deviations above the mean. The standard cut-off score used by many neuropsychologists is of a  $T \leq 39$  or  $\geq 61$  in terms of the MMPI-2 or the PAI. The Personality Assessment Inventory sets the cutoff at  $T=70$ , 2 standard deviations above the mean. The cutoff for the MDI is at  $T=80$ , 3 standard deviations above the mean. When using the highly conservative cutoff of the MDI, Mr. Floyd is in the definite clinical elevation range with  $T=88$  on the Disengagement Scale and with a  $T=101$  on the Derealization Scale. However, when using a less stringent cutoff of  $T=70$ , which is still a conservative cutoff of 2 standard deviations above the mean Mr. Floyd still has significant Depersonalization, Emotional Constriction/Numbing and Memory Disturbance. He does not show any evidence of Identity Dissociation.

Mr. Floyd does, then, demonstrate significant evidence of dissociative symptomatology on the MDI, when completely sober and free of any substances. In particular, he reports numerous symptoms of Derealization, the presence of severe symptoms of Derealization and Disengagement from the environment and moderate symptoms of Dissociative Memory Disturbance, Emotional Constriction/Numbing and Depersonalization.

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On the Detailed Assessment of Posttraumatic Stress (DAPS), Mr. Floyd was in the clinically elevated range for Re-Experiencing traumatic symptoms, Avoidance of traumatic triggers, Hyperarousal/Hypervigilance and Posttraumatic Stress Total Score which was severely elevated at 3 standard deviations above the mean. The Re-Experiencing Scale was moderately elevated, the Avoidant Scale was severely elevated and the Hyperarousal/Hypervigilance Scale was moderately to severely elevated. The Traumatic Dissociation Scale was moderately elevated. The Substance Abuse Scale on this measure was severely elevated. The Suicidality Index was within normal limits. Other scales in the normal range include Relative Trauma Exposure, Peri-traumatic Distress and Peri-traumatic Dissociation. Taken on a whole, the DAPS indicates the likely presence of Posttraumatic Stress Disorder.

**FORMULATIONS AND IMPRESSIONS:**

Based on the evidence available to me from testing and records reviewed, Mr. Floyd has diagnoses that were, in my considered, professional opinion, present at the time of the incident in question in June 3, 1999.

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Psychological and Neuropsychological evaluation reveals the following DSM-IV-TR diagnostic impressions:

Axes		Codes	Descriptions
Axis I	Clinical Disorders	314.9	Attention Deficit Hyperactivity Disorder, Combined Type;
		310.1	Personality Change due to Neurodevelopmental Brain Damage;
		315.4	Developmental Coordination Disorder;
		315.9	Learning Disorder NOS;
			Dysgraphia/Constructional Dyspraxia;
		309.81	Posttraumatic Stress Disorder, chronic;
		300.15	Dissociative Disorder NOS;
		307.46	Sleepwalking Disorder by history;
		305.00	Alcohol Abuse in institutional remission;
		305.20	Cannabis Abuse in institutional remission;
		305.70	Amphetamine Abuse in institutional remission;
		300.3	Obsessive Compulsive Disorder;
Axis II	Personality Disorders/MR	301.82	Avoidant Personality Disorder with Antisocial Personality Features;
Axis III	Medical Conditions		Premature birth and birth weight at 4 pounds, 10 ounces, 1 ½ months premature; Prenatal intoxicia; Prenatal alcohol and drug exposure; History of mental tremors; History of recurrent ear infections in the past; Probable history of concussions from abuse at home.
Axis IV	Psychosocial Problems		Problems with primary support group; Problems related to the legal system; Problems related to the social environment; Educational Problems; Occupational Problems;
Axis V	Global Assessment of Functioning (on 6/3/99)		30/100

### CONCLUSIONS:

The neuropsychological testing deals with patterns of neuropsychological dysfunction which was present upon evaluation by Dr. Cardle in 1989. Although her evaluation was not done for forensic purposes, her report appears to better capture Mr. Floyd's neurocognitive difficulties/disabilities far better than the testing by Dr. Dougherty or Dr. Schmidt. Dr. Cardle notes average to above average verbal skills with particularly good expressive language skills, with significant difficulties in visual motor performance and in his ability to integrate and organize information. She noted, "Difficulties in organizational skills related to the dysfunction in higher level processing of the brain.

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These tendencies to be somewhat disorganized and fail to integrate information appropriately, at times, may contribute to some of the same social and behavioral difficulties, as he was not accurately assessing and utilizing information in all situations."

It is my opinion that Dr. Schmidt failed to capture Mr. Floyd's neurocognitive difficulties because he underreported some of his own data, such as mild impairment on the Speech Sounds Perception Test and Grip Strength test, and because he relied solely on the overall summary scores of the Halstead Reitan Battery, and did not go beyond the basic battery and utilized only the Halstead Reitan Neuropsychological Battery and the WAIS-R given by another practitioner, Dr. Paul in 1999, along with the MMPI-2, and Neo-Personality Inventory-Revised and a Brief Kaufman Test of Educational Achievement.

If Dr. Schmidt had gone beyond the Halstead Reitan Battery *and given tests such as the Rey complex Figure Test, a more elaborate writing sample and the Controlled Oral Word Association Test*, and attempted to explore the points raised by Dr. Cardle, it is my opinion that he would have captured more of the neurocognitive difficulties of this young man. From a behavioral perspective, I was cued in quickly to some underlying neurodevelopmental dysfunction just by the way he held his pencil, which was an abnormal pencil grip, often associated with developmental neurobehavioral disorders.

Dr. Paul, in using the TOVA did help to prove and substantiate Dr. Cardle's diagnosis and the previous psychiatric diagnosis of Attention Deficit Disorder. Dr. Schmidt failed to support this diagnosis in his testing and evaluation, although he cited it by history.

It is my opinion that Dr. Schmidt was too reliant on the cutoff scores of the Halstead Reitan Neuropsychological Battery in the presence of obvious prenatal and perinatal neurological insult, and given the signs of neurological dysfunction on Dr. Cardle's testing. The fact that Mr. Floyd consistently had a 20-point discrepancy between verbal and non-verbal intellectual functions, in and of itself, is highly suggestive of brain damage. In the current testing, there is evidence of deficient verbal fluency. There is evidence of bilateral motoric dysfunction. There is evidence of right-sided sensory perceptual dysfunction. There is evidence of constructional dyspraxia. There is evidence of organizational difficulty. I accept many of the conclusions made in Dr. Kinsora's review of records; however he failed to verify these through his own testing. There was *also* the issue of dissociative rage and the possibility that Mr. Floyd was in a dissociative state during the time of the shooting at Albertson's, *that no one fully evaluated and diagnosed. If the doctors who originally evaluated Mr. Floyd had used such instruments as the Multiscale Dissociation Inventory, the Detailed Assessment of Posttraumatic Stress, the Posttraumatic Diagnostic Scale, they would have been confronted with the need, in my opinion, to diagnose a Dissociative Disorder and Posttraumatic Stress Disorder.*

Dr. Dougherty did support the diagnosis of Attention Deficit Hyperactivity Disorder during his testing with which I agree. However, he stressed the Mixed Personality Disorder more than he stressed the Attention Deficit Disorder.

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Thus, many of the psychologists or neuropsychologists that evaluated Mr. Floyd, failed to pick up the full extent of his residual neurodevelopmental dysfunction on the one hand, and his Posttraumatic Stress Disorder and Dissociative Disorder on the other. The report submitted by Alfonso Associates in January 2000 did identify ADHD, compulsive personality features in terms of weapons related behavior, and obsessive thoughts about violence.

It is my considered professional opinion, that overall, the records and test findings from my evaluation support numerous areas of potential mitigation which could have been used in the penalty phase of Mr. Floyd's trial. It is my opinion that at the time of the incident in question, Mr. Floyd was in an extremely high state of self-hatred and self-distress due to cumulative blows reinforcing the underlying message from his family that he was a failure. This included mandatory termination from the military, getting fired from his jobs after his discharge from the military, perceived rejections from his girlfriend and by Jay, and by the failure represented by his having to move back into his parents' guest house. All of these factors interfered with Mr. Floyd's obvious needs and desire to see himself as effective and competent. It is my opinion that at the time of the incident in question, Mr. Floyd was not able to deal with the massive and overwhelming feelings he had at the time and that this triggered a series of dissociations and dissociative experiences related to his Dissociative Disorder Not Otherwise Specified and his exposure to extreme violence from his stepfather. It also seems reasonable to assume that Mr. Floyd, although obviously clearly angry about his family and his stepfather in particular, did identify with his stepfather in a fashion consistent with identification with the aggressor.

It is my opinion that all of the experiences of intense failure and rejection combined to create a situation which was further aggravated by an organic impulsivity and inability to control impulses, as clearly manifested behaviorally during my evaluation, and as a direct consequence of his Attention Deficit Hyperactivity Disorder, Combined Type/Personality Change Due to Brain Damage, Combined Type. That is, Mr. Floyd's organic impulsivity and inability to control impulses, especially under stress, was fueled by the extreme stress caused by his temporally associated serial failures and rejections causing him to resort to at least a partially dissociated soldier hero state, as described to some extent by Dr. Paul.

In summary, the doctors in Mr. Floyd's original trial failed to identify his Dissociative Disorder NOS with very severe derealization and severe disengagement and moderate memory disturbance/psychogenic amnesia, depersonalization and emotional constriction/numbing. They failed to identify Mr. Floyd's Posttraumatic Stress Disorder, even though on the MMPI-2 by Dr. Schmidt his PK (PTSD scale) was T = 95 and that of Dr. Paul's was T = 90, both extremely elevated. They failed to identify Mr. Floyd's Personality Change due to neurodevelopmental brain damage. They failed to emphasize the fact that neuropsychological testing in adulthood may not fully capture the residual deficits of neurodevelopmental brain damage (as explained by Dr. Kinsora in his report). They failed to diagnose Mr. Floyd's obvious Obsessive Compulsive Disorder.

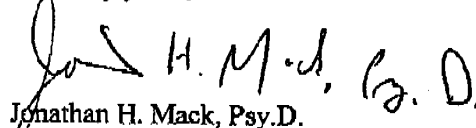
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Dr. Paul's was T = 90, both extremely elevated. They failed to identify Mr. Floyd's Personality Change due to neurodevelopmental brain damage. They failed to emphasize the fact that neuropsychological testing in adulthood may not fully capture the residual deficits of neurodevelopmental brain damage (as explained by Dr. Kinsora in his report). They failed to diagnose Mr. Floyd's obvious Obsessive Compulsive Disorder.

It is my further opinion that the experts in the penalty phase of Mr. Floyd's trial failed to fully explain Mr. Floyd's extreme level of mental and emotional disturbance at the time of the crime; nor did they adequately explain how his diagnoses of Dissociative Disorder NOS, Personality Change due to Neurodevelopmental Brain Damage, Obsessive Compulsive Disorder and Attention Deficit Hyperactivity Disorder caused Mr. Floyd to not be fully in control of his impulses and actions at the time of the crimes in question, as further supported by his own disbelief at his actions in his post-incident statements to the police. Thus, the intentionality of Mr. Floyd's actions, although he stated his intention to do what he did immediately beforehand to Ms. Carter, was clearly influenced and controlled by his underlying diseases of the mind and brain, as enumerated above.

Thank you for the courtesy of this referral.

Sincerely yours,



Jonathan H. Mack, Psy.D.

N.J. Professional Psychology License #SIO2321

Director, Forensic Psychology and Neuropsychology Services, P.C.

Diplomate, American Board of Forensic Examiners

Diplomate, American Academy of Experts in Traumatic Stress

Diplomate, American Academy of Pain Management

Diplomate and Senior Analyst, American Academy of Disability Analysts

Registrant, National Register of Health Service Providers in Psychology

**Child Focus Psychological Services**

3690 S. Eastern Ave., Suite 101

Las Vegas, NV 89109

(702) 734-0734

**Evaluation Summary****Name:** Zane Floyd**Date of Birth:** 9-20-75**Chronological Age:** 13 years 5 months**Report Date:** 4-30-89**Evaluation Dates:** 1-20, 1-25, 2-03, 2-10-89**Referral Source:** Susan Kehne, M.D.**Background Information**

Zane was born one and a half months premature and weighed four pounds, ten ounces at birth. He was placed in an incubator for four or five days and was administered oxygen. His developmental milestones were achieved late, with his mother reporting that walking, talking, etc., did not really develop until at least eighteen months. However, she reports that once he began walking and talking his development progressed rapidly. As a child he had recurrent ear infections, did not show early hand preference and tended to be ambidexterous, and has had difficulty with fine motor skills since a young age. A slight motor tremor has also been reported. His mother and stepfather have been together since he was about three and a half years of age. He has not had any contact with his natural father.

His parents describe him as having a short attention span, getting easily frustrated, having difficulty sitting still, lacking in social skills and development of friendships, immature, defensive, noncompliant, and overly sensitive. Zane has also had a history of getting into fights with other children, lying, and general behavioral difficulties. Parents have utilized a variety of disciplines in the past, including physical punishment.

Zane had been referred to this clinician by Dr. Susan Kehne, a neurologist who had evaluated him for neurological problems. Ritalin had been administered in the second grade, and was continued until two years ago, in fifth grade. Medication was begun again this year due to exacerbation in problem behaviors. At the time of his visit to Dr. Kehne, in December of 1988, he was receiving a low dose of sustained-release Ritalin, twenty milligrams in the morning. That was discontinued by parents. In the spring of 1989, he was placed on Imipramine by Dr. Norton Roitman.

The family has moved approximately ten times during Zane's elementary school years and this has created a great deal of stress for Zane, as well as the family. Parents report that they are planning on remaining in the Las Vegas area and the family is expected to stabilize more if no further moves occur in the near future. Parents feel that these constant moves may have contributed to Zane's behavioral difficulties, as well as social problems and academic difficulties.

**Evaluation Procedures**

WISC-R; WRAT-R; Bender; Stroop; Woodcock-Johnson Tests of Cognitive Ability; Luria-Nebraska Neuropsychological Battery; drawings; Robert's Aperception Test for Children; Rorschach Ink Blot Test; Child Depression Inventory; Manifest Anxiety Scale; Self-Perception Inventory; Sentence Completion; parent interview; child interview; observations.

**Test Results:** See attached sheet.

**Observations and Interpretations**

Zane is a right-handed, seventh grade, thirteen year old male who has had a history of attention deficit disorder and behavioral difficulties. During the assessment, he was cooperative, though he became somewhat anxious and agitated, at times. He was quite fidgety, but also able to persist and focus on tasks. When completing motor tasks, he held the pencil with a very tight grip, and worked quite slowly and laboriously.

Zane's overall I.Q. falls within the average range. However there is a significant discrepancy between his high average verbal skills and his low average performance skills, as indicated by scores on the WISC-R. As mentioned, verbal expression and utilization of verbal skills appear to be strengths for Zane. Visual motor skills are his poorest area of functioning. There are also some memory difficulties when information needs to be organized and is not structured. Furthermore, Zane's concept development and reasoning related to that is age appropriate or slightly above average for his age. This is indicated by his performance on the similarities subtest of the WISC-R and the analogies subtest of the Woodcock-Johnson. These are both tasks which require verbal reasoning to associate concepts. Despite these high scores and Zane's overall high average verbal skills, he does demonstrate some deficits in his reasoning abilities, nevertheless. This is clear if one looks at his scores on the analysis synthesis subtest and the concept formation subtest of the Woodcock-Johnson. On these tasks, he is functioning at about a nine to ten year old level, approximately three years below his chronological age. When information needs to be organized by him or there is a great deal of information he must integrate, Zane seems to have more difficulty utilizing his general reasoning skills. Again, organization difficulties limit his performance, though his basic skills are well-developed.

Perceptual difficulties were noted as he completed the block design on the WISC-R, and seemed to have difficulty perceptually orienting the blocks at times, although his score does fall within the average range. Attention or processing difficulties were noted, in that Zane requested to have questions repeated several times throughout the assessment. This suggests possible attention difficulties and/or processing problems. Zane's ability to express himself verbally is quite well developed, and is one of his most developed skills. In terms of verbal memory, Zane seems to do well when information presented to him "makes sense." He is able to recall sentences at an age appropriate level, but he seems to have some difficulty recalling bits of information which are disconnected and do not have any apparent meaning. For instance, Zane had significant difficulty recalling series of digits, either forwards or backwards. He has difficulty recalling more than four digits at a time. This problem was observed on both the Woodcock-Johnson and the WISC-R. He also appears to have some difficulties related to recalling more complex information. When administered items on the Luria-Nebraska Neuropsychological Battery, which required more language comprehension and processing, at times Zane would lose information or fail to recall it properly. These difficulties were not frequent enough to cause him to have significantly elevated scores, but behaviorally they appeared to be somewhat of a problem for him, at times. Memory for visual information



appears to be slightly more developed, and Zane was able to recall five of the nine Bender designs immediately after completing the test. However, he performed quite poorly on the visual/auditory learning subtest of the Woodcock-Johnson, suggesting that when visual and verbal information need to be integrated and recalled, Zane has some difficulty with this. It may relate to his difficulty with verbal encoding of information.

With regards to achievement skills, he is functioning in the high average to above average range, as indicated by scores on the WRAT-R. His most developed area relates to reading skills, while mathematical skills are somewhat less developed. Nevertheless, these are all at age appropriate levels. Thus, Zane is picking up and retaining general strategies and concepts relating to academic performance.

A neuropsychological battery was completed to look further at the subtle difficulties which were evident in the prior testing. None of Zane's scores exceed critical level or fall above fifty. However, his impairment score of 48 is slightly elevated and does indicate that there are tendencies for him to have difficulties in certain areas of functioning. As indicated by the results of other testing, visual motor skills are a significant area of weakness for Zane, and he also has difficulty organizing information when provided with large amounts at one time. This organizational difficulty is considered a higher level function of the brain, and seems to relate to Zane's overall behavior. While he has many skills, he is not always capable of putting together his knowledge and behavioral responses into efficient or appropriate behavior. This may also contribute or be related to some of the attentional difficulties which he exhibits.

In addition to some of the cognitive difficulties of a more subtle nature which Zane exhibits, there are significant emotional difficulties. The sequence of responses on the Stroop color word test indicates that Zane's poor performance is related not to a primary cognitive deficit, but rather to an emotional disorder. Responses to projective tests also indicate significant emotional distress. His Rorschach responses show unusual perceptual responsiveness, indicating that Zane attempts to perceive what is going on around him but is unable at times to utilize information appropriately. There are also some tendencies to be oppositional, and this may relate to tendencies to create arbitrary boundaries. Of more concern is the tendency for violence exhibited by Zane in responding to the Rorschach. For instance, in response to the third card, he stated, "It looks like the head to something, an ant or something...usually ants have these fancy things and small eyes and lots of legs. Looks like a squished ant and that's blood. It's red, splattered blood." And then in responding to the following card, Zane stated, "Looks like some big, grey monster...it's big, the arms look like they are all shredded, it looks like it's all slimy and gross." These types of responses predominated his Rorschach and indicate significant emotional distress. The constant responses indicating texture, an overfocus on color, and/or shading aspects of the blots are also indicative of significant emotional distress.

Of further concern is Zane's focus on sexual issues. He participated in a group with other children his age and during each group session would make extremely sexual references and remarks, which typically made the other children uncomfortable. This was addressed with him and he was confronted with this. Conversations with his mother indicate that she also sees this as a significant problem. Several of Zane's responses on the projective testing also demonstrate this focus.

Results of the self-perception profile indicate that while Zane feels that social acceptance is extremely important to him, he feels that this is an area which he is least competent. His area of most competence, from his perception, appears to relate to athletic abilities. He is currently engaged in sports activities and reports that he enjoys such activities. He does not feel confident in relationship to his physical appearance or scholastic abilities. However, these do not appear to be as significant a concern for him as social acceptance. His desires to be accepted by his peers may relate to some of the behavioral problems he exhibits. It was observed in a group setting that Zane tends to exaggerate or make up stories to 'outdo' other members who may be talking about something that is important to them. This seems to be a habitual response for Zane, and since he has been confronted with this he appears to be more conscious when he begins to do such things. However, it is a response which he has developed and continues to be problematic for him.

His drawings of himself and his family are quite primitive and immature, typically being simple stick figures or very unexpressive or unelaborated forms. Some of this may relate to his perceptual motor difficulties, but it is also felt that his reluctance to deal with emotional issues is also contributing to this type of performance.

### Summary

Zane is a thirteen year old, seventh grade, right handed male who functions in the overall average range of abilities. He is achieving academically in the average to above average range. Strengths lie in the verbal skills, particularly expressive language skills. The most significant difficulties are seen in his visual motor performance and also his ability to integrate and organize information. His difficulties in organizational skills are more likely related to dysfunction in higher level processes of the brain. These tendencies to be somewhat disorganized and fail to integrate information appropriately, at times, may contribute to some of Zane's social and behavioral difficulties, as he is not accurately accessing and utilizing information in all situations. Emotionally, he is quite anxious, depressed, and insecure. This also appears to be contributing significantly to social, behavioral, and academic difficulties.

- Dx:**
1. Adjustment reaction with mixed emotional and behavioral symptoms.
  2. Attention deficit disorder.
  3. Developmental coordination disorder.
  4. Organization deficits.

### Recommendations

1. Continued counseling with Zane and his family is strongly recommended. He has completed participation in group counseling, and some positive changes were seen as a result of that. However, there continue to be significant behavioral and emotional difficulties which need to be addressed. It is felt that further counseling should focus on individual and family issues, at this time. Further group counseling in the future may also be appropriate.

2. Zane does not show excessive deficits in his cognitive functioning as indicated by performances on the intelligence and achievement testing. However, there are significant deficits in his performance if one looks at the pattern of scores and evaluates the deficits in terms of functional abilities. Visual motor skills continue to be significantly delayed, and it is quite likely that written work is more taxing for him. Utilization of calculators, typewriters, or computers may assist Zane in completing some of his academic tasks and this type of assistance is strongly recommended.

3. Due to the indications of organizational difficulty, which may be related to some subtle frontal lobe dysfunction and/or emotional dysfunction, it is strongly recommended that parents and teachers provide as much structure and organization for Zane. This will assist him immensely in utilizing his skills related to verbal functioning, reasoning, and overall planning. Most delayed scores on cognitive tests indicate that he becomes overwhelmed with too much information and any assistance which can be provided to him to help structure information is likely to result in improved performance.

4. During the assessment there were behavioral indications of attentional and/or processing difficulties. There were situations in which Zane missed out on information which was provided to him and needed to have things repeated. While this was not excessive, it was frequent enough to be an observable problem to him. Parents and teachers should be alert to this so that they can provide him with further information or repeat directions. Furthermore, the information should be provided simply, as he is observed to have most difficulty when an excessive amount of verbal information is provided at one time.

5. While Zane may not qualify or have significant cognitive deficits to enable him to receive assistance in academic areas in the school system, he is a child who is extremely at risk for significant continued behavioral and emotional difficulties. There are significant emotional problems which are felt to be interfering with his abilities to function effectively in an academic setting. He is also beginning anti-depressant therapy with Dr. Roitman. It is felt that with counseling, as well as with medication, some improvements in his behavior are likely to occur. However, it is felt that he may also need further support in the academic setting and may benefit from an SEH placement in the school district.

*Maria J. P. Cardle Ph.D.*

Maria J.P. Cardle, Ph.D.  
Board Certified Psychologist  
State of Nevada

MJPC/nm

cc: Michael and Valerie Floyd  
Norton Roitman, M.D.  
Susan Kehne, M.D.

NAME Zane FloydDOB: 9-20-75TEST DATES: 1-25,  
2-3, 20-89AGE 13-8

ZFI0YD006-MISC0254

**Kaufman Assessment Battery for Children (KABC)****Mental Processing Subtests** (X=10; SD=3) **Achievement Subtests** (X=100; SD=15)

Magic Window \_\_\_\_\_  
 Face Recognition \_\_\_\_\_  
 Hand Movements \_\_\_\_\_  
 Gestalt Closure \_\_\_\_\_  
 Number Recall \_\_\_\_\_  
 Triangles \_\_\_\_\_  
 Word Order \_\_\_\_\_  
 Matrix Analogies \_\_\_\_\_  
 Spatial Memory \_\_\_\_\_  
 Photo Series \_\_\_\_\_

Expressive Vocabulary \_\_\_\_\_  
 Faces & Places \_\_\_\_\_  
 Arithmetic \_\_\_\_\_  
 Riddles \_\_\_\_\_  
 Reading/Decoding \_\_\_\_\_  
 Reading/Understanding \_\_\_\_\_

**Global Scales** (X=100; SD=15)

Sequential Processing \_\_\_\_\_  
 Simultaneous Processing \_\_\_\_\_  
 Mental Processing Composite \_\_\_\_\_  
 Achievement \_\_\_\_\_  
 Nonverbal \_\_\_\_\_

**Personality Tests**

Drawings X  
 Roberts Apperception/ \_\_\_\_\_  
 TAT X  
 Rorschach X  
 Child Depressive Inven. X  
 Manifest Anxiety Sur. X  
 Self-Perception X  
 MMPI \_\_\_\_\_  
 Bricklund \_\_\_\_\_  
 PIC \_\_\_\_\_  
 Sentence Comp. X

**Parent Inventory**

Self-Control \_\_\_\_\_  
 Rating Scale \_\_\_\_\_

APPI \_\_\_\_\_

**Woodcock-Johnson Psycho-Educational Battery (Scores are Age & Range)****Part One: Tests of Cognitive Ability**

Picture Vocabulary 18 (5-8; 2-6)  
 Spatial Relations 14-8 (12-10; 19)  
 Memory for Sentences 13-8 (10-8; 17)  
 Visual-Auditory Learning 10-11 (9-4; 16)  
 Blending \_\_\_\_\_  
 Quantitative Concepts 15-4 (13-8; 18)  
 Visual Matching \_\_\_\_\_  
 Antonyms-Synonyms \_\_\_\_\_  
 Analysis-Synthesis 10-0 (9-0; 11-6)  
 Numbers Reversed 9-0 (7-11; 11-0)  
 Concept Formation 9-3 (8-6; 10-1)  
 Analogies 13-8 (12-2; 15-7)

**Part Two: Tests of Achievement**

Letter-Word Identification \_\_\_\_\_  
 Word Attack \_\_\_\_\_  
 Passage Comprehension \_\_\_\_\_  
 Calculation \_\_\_\_\_  
 Applied Problems \_\_\_\_\_  
 Dictation \_\_\_\_\_  
 Proofing: (U) Usage \_\_\_\_\_  
 (S) Spelling \_\_\_\_\_  
 (P) Punct. & Capital \_\_\_\_\_  
 Science \_\_\_\_\_  
 Social Studies \_\_\_\_\_  
 Humanities \_\_\_\_\_

**LURIA-NEBRASKA  
NEUROPSYCH. BATTERY**

Adult X Children's \_\_\_\_\_  
 Critical level \_\_\_\_\_

**Raw Score Scales**

C1 Motor Functions 37  
 C2 Rhythm 39  
 C3 Tactile Functions 46  
 C4 Visual Functions 41  
 C5 Receptive Speech 39  
 C6 Expressive speech 38  
 C7 Writing 50  
 C8 Reading 50  
 C9 Arithmetic 48  
 C10 Memory 42  
 C11 Intellectual Processes 44

**Summary Scales**

S1 Pathognomonic 41  
 S2 Left Hemisphere 46  
 S3 Right Hemisphere 41  
 S4 Profile Elevation 43  
 S5 Impairment 48

**Wechsler Intelligence Scale for Children - Revised (WISC-R)**

Verbal Test	Raw Score	Scale Score	Performance Test	Raw score	Scale Score
Information	21	11	Picture Completion	20	9
Similarities	22	13	Picture Arrangement	28	9
Arithmetic	15	11	Block Design	40	10
Vocabulary	48	13	Object Assembly	23	9
Comprehension	26	11	Coding	43	7
(Digit Span)	(7)	(4)	(Mazes)	(29)	(16)
Verbal I.Q. =	59	111	Performance I.Q. =	44	91
Full Scale I.Q. =		101			

**Visual-Motor Tests**

11-12 years

Bender Age Equiv. = (1 error) Memory = 5 VMI Age Equiv. = \_\_\_\_\_**Other Tests**

WRAT-R: Reading 118, 88%; Spelling 110, 75%; Arithmetic 101, 53%.

Stroop: Word = 23, Color = 24, Color/Word = 44 (t-score)

### **Declaration of Carolyn Smith**

I, Carolyn Smith, hereby declare as follows:

1. My name is Carolyn Smith and I am sixty-four years old. I am married to Herbert Smith and we have one daughter, Brittany. We currently live in Little Rock, Arkansas. We are longtime friends of the Floyd family.
2. I am a retired social worker. I feel that my former professional experience helped me see things in Zane that others did not.
3. Herbert and I met Mike and Valerie Floyd when the Floyds moved into our Las Vegas apartment complex around 1987. The Floyds lived directly across the hall from us for two or three years and we all became very close. Valerie and I were best friends. Zane was around eight or nine years old at the time we met the Floyds.
4. We socialized with the Floyds almost daily, and Zane was at our house quite a lot. I was so close to Zane that he referred to me as his godmother, although I was not officially Zane's godmother. Zane was like a son to me.
5. Zane, who was four to five years older than my daughter, was like a big brother to her. I was so comfortable with Zane that I let him babysit my daughter. Zane was like a big teddy bear with her and very protective.
6. Zane was a good easy-going kid. I never saw him act violently while he was growing up.
7. I often spoke to Zane when he was feeling down, and because he trusted me, he would confide in me.
8. Oftentimes Mike was the source of Zane's bad feelings. Mike was a macho man who thought that Zane was "soft." Mike wanted Zane to be more like him—tough and good at sports. But Zane had a hard time living up to Mike's expectations. This caused Zane to suffer from self-doubt, lack of confidence, and I believe this led to Zane having a poor self-image of himself.
9. After the Floyd's moved to their house on Oakey, we continued to socialize with them, spending a lot of time at their house. At one point our family moved into the Floyd's guest house on Oakey.
10. I saw the Floyd's under the influence of alcohol on many occasions as there was always drinking when we got together.
11. I remember one night, Valerie called our house and said that she and Mike had an

argument. Valerie asked Herbert to come over and speak with Mike. Herbert told me the police were called. I was told that Mike hit Valerie on the head.

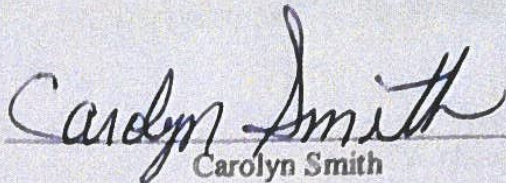
12. Another time Valerie called us during a physical altercation between Mike and Zane. Valerie feared for Zane's safety. Herbert went over to the Floyd's to calm the situation.
13. I believe that Zane went into the military to please Mike. However, it was clear to me that Zane was negatively impacted by his military service. He appeared to be a different person when he returned home.
14. The first thing I noticed was the change in Zane's overall demeanor and emotional affect. Prior to his military service Zane was a happy-go-lucky kid. He was always laughing, smiling, and displaying a joyful spirit. When he came home it seemed like his joy was gone. He no longer laughed or smiled. He was much more of a serious person.
15. Zane also seemed distracted and would silently sit and stare off into the distance. When I asked him what he was thinking about he often talked about his military service. Zane spoke about the stress he felt during his time in Guantanamo Bay, and his weapons training. He spoke frequently about weapons and weapons training. Before entering the military, Zane was not weapons-focused.
16. Zane also frequently talked about different kinds of guns and how they worked and fired. When Zane discussed his military experiences, he often had a strange look on his face as if he were transported back in time and was reliving the experiences at that very moment. Zane also spoke like he longed to return to military service. It was clear to me that Zane needed counseling to help him transition back into civilian life. Instead, when he left the military he was left on his own to figure things out. I was very concerned for his wellbeing. I told Valerie about my concerns, but nothing really came of these discussions.
17. After the military, the only outfit that Zane kept in his closet was his military uniform. He kept it in plastic and idolized it. I found this to be very strange.
18. What happened on June 3 was not the Zane I knew and loved. When I saw the news coverage of his arrest, I had a hard time recognizing him. Zane had an empty look on his face that I had never seen before and it was clear to me that he was not in his right mind. When I spoke with Zane after his arrest, he was deeply remorseful, ashamed, and horrified by his actions. Zane did not have much of a memory of the things that transpired in the Albertson's grocery store and he could not explain what was going through his mind at the time. However, he took responsibility and felt terrible for the harm that he caused to the victims and their families.




19. After his conviction, my daughter wanted to visit Zane at the prison, but Zane would not see her because he could not stand for her to see him incarcerated. It was important for Zane to maintain an image of him, and he felt that he had let her down.

I declare under penalty of perjury that the foregoing is true and correct and that this declaration was executed on \*\*\*\*, 2021 in Little Rock, Arkansas.

*May 5,*

  
Carolyn Smith





**EXH**  
RENE L. VALLADARES  
Federal Public Defender  
Nevada Bar No. 11479  
DAVID ANTHONY  
Assistant Federal Public Defender  
Nevada Bar No. 7978  
David\_Anthony@fd.org  
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(702) 388-5819 (Fax)

Attorneys for Zane Michael Floyd

DISTRICT COURT  
CLARK COUNTY, NEVADA

ZANE MICHAEL FLOYD,

Petitioner,

v.

WILLIAM GITTERE, Warden, Ely State  
Prison; AARON FORD; Attorney General,  
State of Nevada,

Respondents.

Case No. A-21-832952-W  
Dept. No. 17

**EXHIBIT NINE TO SECOND  
AMENDED PETITION IN SUPPORT  
OF CLAIM TWO**

**Exhibit Document**

9 Clemency Video (DVD)



1 DATED this 10th day of August, 2021.

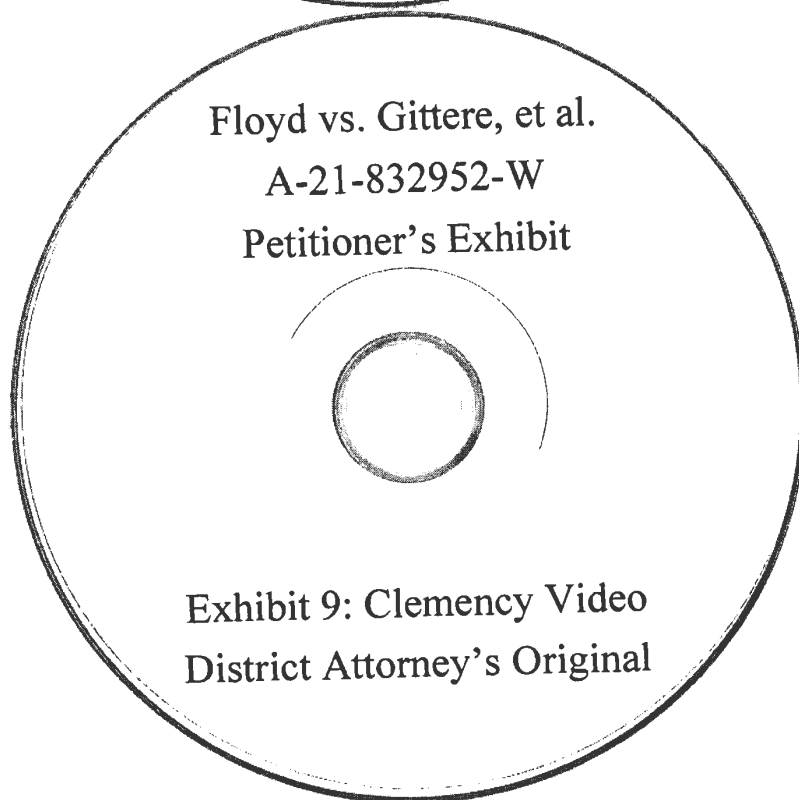
2 Respectfully submitted  
3 RENE L. VALLADARES  
Federal Public Defender

4 /s/ David Anthony  
5 DAVID ANTHONY  
Assistant Federal Public Defender

6 /s/ Brad D. Levenson  
7 BRAD D. LEVENSON  
Assistant Federal Public Defender

# EXHIBIT 9

# EXHIBIT 9



1 **ROC**

2 RENE L. VALLADARES

3 Federal Public Defender

4 Nevada Bar No. 11479

5 DAVID ANTHONY

6 Assistant Federal Public Defender

7 Nevada Bar No. 7978

8 David\_Anthony@fd.org

9 BRAD D. LEVENSON

10 Assistant Federal Public Defender

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12 Brad\_Levenson@fd.org

13 411 E. Bonneville, Ste. 250

14 Las Vegas, Nevada 89101

15 (702) 388-6577

16 (702) 388-5819 (Fax)

17 Attorneys for Zane Michael Floyd

18  
19 DISTRICT COURT  
20 CLARK COUNTY, NEVADA  
21  
22  
23

24 ZANE MICHAEL FLOYD,

25 Petitioner,

26 v.

27 WILLIAM GITTERE, Warden, Ely State  
28 Prison; AARON FORD; Attorney General,  
29 State of Nevada,

30 Respondents.

Case No. A-21-832952-W

Dept. No. 17

**RECEIPT OF COPY**

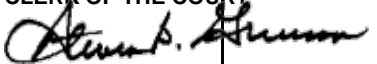
31 RECEIPT OF Exhibit 9 - Clemency Video (DVD) is hereby acknowledged by the  
32 undersigned, on this 10th day of August, 2021.

33 By:

ALEXANDER CHEN

Chief Deputy District Attorney

Clark County District Attorney's Office



1 NEFF

2 **DISTRICT COURT**  
3 **CLARK COUNTY, NEVADA**

4  
5 ZANE FLOYD,

6 Petitioner,

7 vs.

8 WILLIAM GITTERE; ET.AL.,

9 Respondent,

Case No: A-21-832952-W

Dept No: XVII

**NOTICE OF ENTRY OF FINDINGS OF FACT,  
CONCLUSIONS OF LAW AND ORDER**

11 **PLEASE TAKE NOTICE** that on August 16, 2021, the court entered a decision or order in this matter, a  
12 true and correct copy of which is attached to this notice.

13 You may appeal to the Supreme Court from the decision or order of this court. If you wish to appeal, you  
14 must file a notice of appeal with the clerk of this court within thirty-three (33) days after the date this notice is mailed  
to you. This notice was mailed on August 18, 2021.

15 STEVEN D. GRIERSON, CLERK OF THE COURT

16 /s/ Amanda Hampton

17 Amanda Hampton, Deputy Clerk

18 **CERTIFICATE OF E-SERVICE / MAILING**

19 I hereby certify that on this 18 day of August 2021, I served a copy of this Notice of Entry on the  
20 following:

21 ☒ By e-mail:

22 Clark County District Attorney's Office  
Attorney General's Office – Appellate Division-

23 ☒ The United States mail addressed as follows:

24 Zane Floyd # 66514  
P.O. Box 1989  
25 Ely, NV 89301

Rene L. Valladares  
Federal Public Defender  
411 E. Bonneville Ave., #250  
Las Vegas, NV 89101  
david\_anthony@fd.org  
brad\_levenson@fd.org

26 /s/ Amanda Hampton

27 Amanda Hampton, Deputy Clerk

**FFCO**

STEVEN B. WOLFSON  
Clark County District Attorney  
Nevada Bar #001565  
ALEXANDER CHEN  
Chief Deputy District Attorney  
Nevada Bar #010539  
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(702) 671-2500  
Attorney for Plaintiff

DISTRICT COURT  
CLARK COUNTY, NEVADA

ZANE MICHAEL FLOYD,  
Petitioner,

-vs-

WILLIAM GITTERE, Warden, Ely State  
Prison; AARON FORD; Attorney General,  
THE STATE OF NEVADA,

Respondent.

CASE NO: A-21-832952-W

DEPT NO: XVII

**FINDINGS OF FACT, CONCLUSIONS OF  
LAW, AND ORDER**

DATE OF HEARING: JULY 9, 2021  
TIME OF HEARING: 8:30

THIS CAUSE having come on for hearing before the Honorable Michael Villani, District Judge, on the 9th day of July, 2021, and the Court having considered the matter, including briefs, transcripts, arguments of counsel, and documents on file herein, now therefore, the Court makes the following findings of fact and conclusions of law:

**STATEMENT OF THE CASE**

On June 8, 1999, the State charged ZANE MICHAEL FLOYD (hereinafter "Petitioner") by way of Criminal Complaint with four counts of Murder with Use of a Deadly Weapon, three counts of Attempt Murder with Use of a Deadly Weapon, five counts of Sexual Assault with Use of a Deadly Weapon, one count of Burglary While in Possession of a Firearm, and one count of First Degree Kidnapping with Use of a Deadly Weapon. The State also filed

1 a Notice of Reservation to Seek the Death Penalty. On June 25, 1999, the State filed an  
2 Amended Criminal Complaint adding an additional charge of Attempt Murder with Use of a  
3 Deadly Weapon.

4 On June 28, 1999, the State charged Petitioner by way of Information, and two  
5 amendments thereafter, as follows: Count 1 – Burglary While in Possession of a Firearm  
6 (Felony – NRS 205.060); Count 2 – Murder with Use of a Deadly Weapon (Open Murder)  
7 (Felony – NRS 200.010, 200.030, 193.165); Count 3 – Murder with Use of a Deadly Weapon  
8 (Open Murder) (Felony – NRS 200.010, 200.030, 193.165); Count 4 – Murder with Use of a  
9 Deadly Weapon (Open Murder) (Felony – NRS 200.010, 200.030, 193.165); Count 5 – Murder  
10 with Use of a Deadly Weapon (Open Murder) (Felony – NRS 200.010, 200.030, 193.165);  
11 Count 6 – Attempt Murder with Use of a Deadly Weapon (Felony – NRS 200.010, 200.030,  
12 193.165, 193.330); Count 7 – Attempt Murder with Use of a Deadly Weapon (Felony – NRS  
13 200.010, 200.030, 193.165, 193.330); Count 8 – First Degree Kidnapping with Use of a Deadly  
14 Weapon (Felony – NRS 200.310, 200.320, 193.165); Count 9 – Sexual Assault with Use of a  
15 Deadly Weapon (Felony – NRS 200.364, 200.366, 193.165); Count 10 – Sexual Assault with  
16 Use of a Deadly Weapon (Felony – NRS 200.364, 200.366, 193.165); Count 11 – Sexual  
17 Assault with Use of a Deadly Weapon (Felony – NRS 200.364, 200.366, 193.165); and Count  
18 12 – Sexual Assault with Use of a Deadly Weapon (Felony – NRS 200.364, 200.366, 193.165).  
19 On July 6, 1999, the State filed a Notice of Intent to Seek the Death Penalty.

20 Petitioner's jury trial commenced on July 11, 2000. On July 19, 2000, the jury returned  
21 a verdict finding Petitioner guilty on all counts. At the penalty hearing, the State introduced  
22 three aggravating circumstances in support of a death sentence. On July 21, 2000, the same  
23 jury returned a verdict of death.

24 On August 11, 2000, Petitioner filed a Motion for New Trial. The State filed its  
25 Opposition on August 17, 2000. On August 21, 2000, the district court denied the Motion for  
26 New Trial. The Order was filed on August 24, 2000.

1 On August 31, 2000, the district court adjudicated Petitioner guilty, and sentenced him  
2 to death for Counts 2, 3, 4, and 5. The Judgment of Conviction and the Order of Execution  
3 were filed on September 5, 2000.

4 On September 11, 2000, Petitioner filed a direct appeal with the Nevada Supreme  
5 Court. The Nevada Supreme Court affirmed Petitioner's conviction on March 13, 2002. The  
6 Court denied Petitioner's subsequent Motion for Rehearing on May 7, 2002. Appellate counsel  
7 then filed a Petition for Writ of Certiorari to the United States Supreme Court, which was  
8 denied on February 24, 2003. Remittitur issued on March 26, 2003.

9 On June 19, 2003, Petitioner filed his first Petition for Writ of Habeas Corpus (Post-  
10 Conviction). The State filed its Response on July 24, 2003. Petitioner then filed a Supplemental  
11 Petition through counsel, David Schieck, Esq., on October 6, 2004. The State filed its  
12 Supplemental Opposition on December 7, 2004. On January 18, 2005, the district court denied  
13 Petitioner's Petition. The Findings of Fact, Conclusions of Law and Order was filed on  
14 February 4, 2005.

15 Petitioner filed a Notice of Appeal on March 9, 2005, appealing the denial of his post-  
16 conviction Petition. On February 16, 2006, the Nevada Supreme Court affirmed the denial of  
17 Petitioner's Petition for Writ of Habeas Corpus. Remittitur issued on April 14, 2006.

18 On April 14, 2006, Petitioner filed a Petition for Writ of Habeas Corpus in the United  
19 States District Court and requested stay and abeyance. Stay and abeyance was granted on April  
20 25, 2007, for exhaustion of state court remedies.

21 Petitioner then filed his second successive Petition for Writ of Habeas Corpus (Post-  
22 Conviction) on June 8, 2007. The State filed its Opposition on August 18, 2007. Petitioner  
23 filed his Reply on August 28, 2007. Following argument by both parties on December 13,  
24 2007, the district court ordered an evidentiary hearing. Following the hearing on February 22,  
25 2008, where Petitioner's former counsel, David Schieck, Esq. testified, the district court denied  
26 Petitioner's second Petition. The Findings of Fact, Conclusions of Law and Order was filed  
27 on April 2, 2008.  
28



1 On April 7, 2008, Petitioner filed a Notice of Appeal from the denial of his second  
2 Petition for Writ of Habeas Corpus (Post-Conviction). On November 17, 2010, the Nevada  
3 Supreme Court affirmed the district court's denial of the second Petition. Remittitur issued  
4 February 18, 2011. The Nevada Supreme Court also denied Petitioner's request for Rehearing.

5 On September 22, 2014, the United States District Court denied Petitioner's Petition  
6 for Writ of Habeas Corpus (Post-Conviction). Petitioner filed a Notice of Appeal to the United  
7 States Court of Appeals for the Ninth Circuit on October 22, 2014. On October 11, 2019, the  
8 United States Court of Appeals for the Ninth Circuit issued an Order affirming the United  
9 States District Court's denial of Petitioner's Petition for Writ of Habeas Corpus.

10 On November 2, 2020, the United States Supreme Court denied Petitioner's Petition  
11 for Writ of Certiorari. On November 5, 2020, Mandate was filed giving the judgment of the  
12 United States Court of Appeals for the Ninth Circuit full effect.

13 On April 14, 2021, the State filed a Motion Seeking an Execution Warrant. The same  
14 day, Petitioner filed a Motion to Transfer Case Under EDCR 1.60(H) and Motion to Disqualify  
15 the Clark County District Attorney's Office. On April 15, 2021, the State filed a Motion for  
16 the Court to Issue Second Supplemental Order of Execution and Second Supplemental  
17 Warrant of Execution. On April 21, 2021, Petitioner filed an Opposition to Motion for the  
18 Court to Issue Second Supplemental Order of Execution and Second Supplemental Warrant  
19 of Execution. Petitioner filed an Amended Opposition on April 26, 2021.

20 On April 26, 2021, the State filed an Opposition to Petitioner's Motion to Disqualify  
21 the Clark County District Attorney's Office and a Response to his Motion to Transfer Case  
22 Under EDCR 1.60(H). Petitioner filed both his Replies on April 29, 2021. On May 5, 2021,  
23 the State filed its Reply to Petitioner's Opposition to Motion for the Court to Issue Second  
24 Supplemental Order of Execution and Second Supplemental Warrant of Execution. On April  
25 10, 2021, the State filed an Addendum to State's Motion for the Court to Issue Second  
26 Supplemental Order of Execution and Second Supplemental Warrant of Execution.

27 On May 11, 2021, Petitioner filed a Motion to Strike, or Alternatively, Motion to Stay  
28 the Second Supplemental Order of Execution and Second Supplemental Warrant of Execution.

1 The State filed its Opposition to the Motion to Strike on May 13, 2021. Petitioner filed a Reply  
2 on May 20, 2021. On June 4, 2021, this Court denied Petitioner's Motion to Strike.

3 Following a hearing on May 14, 2021, this Court denied both Petitioner's Motion to  
4 Disqualify the Clark County District Attorney's Office and Motion to Transfer Case Under  
5 EDCR 1.60(H). This Court entered the Decision and Order Denying Petitioner's Motion to  
6 Disqualify the Clark County District Attorney's Office on May 18, 2021.

7 On April 15, 2021, Petitioner filed his third Petition for Writ of Habeas Corpus (Post-  
8 Conviction). Following a hearing on May 6, 2021, in the United States District Court, District  
9 of Nevada, Petitioner filed the instant Amended Petition for Writ of Habeas Corpus (Post-  
10 Conviction) (hereinafter "Third Petition") on May 11, 2021. On July 9, 2021, this Court  
11 entertained oral argument and now issues the following conclusions of law.

### 12 ANALYSIS

13 Petitioner makes the claim that he cannot be executed because he suffers from Fetal  
14 Alcohol Spectrum Disorder ("FASD"). In Atkins v. Virginia, 536 U.S. 304 (2002), the United  
15 States Supreme Court held that the execution of a mentally retarded individual constitutes  
16 cruel and unusual punishment prohibited by the Eighth Amendment of the United States  
17 Constitution. Atkins sets forth a bright-line test on IQ. Petitioner has previously had his IQ  
18 tested and was tested for intellectual disability. However, even if Petitioner suffers from the  
19 effects of FASD, his diagnosis does not rise to the level of intellectual disability. Following  
20 the bright-line rule articulated by Atkins, Petitioner is not entitled to relief.

21 Petitioner argues that he has a right to seek clemency before the Pardons Board. In  
22 Nevada, the Pardons Board's constitutional power to grant pardons and commutations of  
23 sentences is exclusive. Nev. Const. art. 5, § 14. There is no due process right for a Petitioner  
24 to clemency. Niergarth v. State, 105 Nev. 26, 28, 768 P.2d 882, 883 (1989). Moreover, the  
25 Nevada Supreme Court has held that parole is not a constitutional right, but a right bestowed  
26 by "legislative grace." Goldsworthy v. Hannifin, 86 Nev. 252, 256, 468 P.2d 350, 353 (1970).  
27 Seeking clemency is not a constitutional right, therefore Petitioner is not entitled to relief.  
28

1 Petitioner argues that he is wrongfully imprisoned because the State intends to perform  
2 his execution at Ely State Prison. At the time NRS 176.355 was enacted, there was only one  
3 State Prison. However, Ely State Prison is a State prison. In interpreting statutes, this Court is  
4 permitted to consider the policy and spirit of the law and will seek to avoid an interpretation  
5 that leads to an absurd result. Smith v. Kisorin USA, Inc., 127 Nev. 444 (2011). Since Ely  
6 State Prison is a lawful Nevada prison, Petitioner is not entitled to relief.

7 Petitioner raises a claim based on a May 6, 2021 federal court hearing regarding the  
8 Director of the Nevada State Prison's ability to perform the execution. This is not an issue for  
9 this Court to decide, therefore the petition is denied.

10 Finally, Petitioner raises an issued based upon the recently issued Order in Petrocelli v.  
11 State, No. 79069, 2021 WL 2073794 (May 21, 2021). This Court does not believe that the  
12 Order in that case applies to this case, therefore the petition is denied.

13 **ORDER**

14 THEREFORE, IT IS HEREBY ORDERED that the Petition for Post-Conviction Relief  
15 shall be, and it is, hereby denied.

16 DATED this \_\_\_\_ day of August, 2021.

Dated this 16th day of August, 2021



18 \_\_\_\_\_  
DISTRICT JUDGE

AA9 791 C42B B20A  
Michael Villani  
District Court Judge

19 STEVEN B. WOLFSON  
20 Clark County District Attorney  
Nevada Bar #001565

21 BY /s/ Alexander Chen  
22 ALEXANDER CHEN  
23 Chief Deputy District Attorney  
Nevada Bar #010539

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**CERTIFICATE OF ELECTRONIC TRANSMISSION**

I hereby certify that service of the above and foregoing Findings of Fact, Conclusions of Law and Order, was made this 6<sup>th</sup> day of August, 2021, by electronic transmission to:

BRAD LEVENSON  
Email: [brad\\_levenson@fd.org](mailto:brad_levenson@fd.org)  
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Email: [david\\_anthony@fd.org](mailto:david_anthony@fd.org)  
[Ecf\\_nvchu@fd.org](mailto:Ecf_nvchu@fd.org)

BY /s/ E. Davis  
Employee for the District Attorney's Office

AC//ed

1 **CSERV**

2  
3 DISTRICT COURT  
4 CLARK COUNTY, NEVADA

5  
6 Zane Floyd, Plaintiff(s)

CASE NO: A-21-832952-W

7 vs.

DEPT. NO. Department 17

8 William Gittere, Defendant(s)

9  
10 **AUTOMATED CERTIFICATE OF SERVICE**

11 This automated certificate of service was generated by the Eighth Judicial District  
12 Court. The foregoing Findings of Fact, Conclusions of Law and Judgment was served via the  
13 court's electronic eFile system to all recipients registered for e-Service on the above entitled  
case as listed below:

14 Service Date: 8/16/2021

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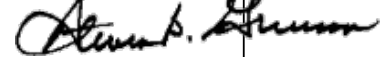
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9 Attorneys for Zane Michael Floyd

11 DISTRICT COURT  
12 CLARK COUNTY, NEVADA

13 Zane Michael Floyd,

14 Petitioner,

15 v.

16 William Gittere, Warden, Ely State  
17 Prison; AARON FORD; Attorney General,  
18 State of Nevada,

19 Respondents.

Case No. A-21-832952-W

Dept. No. 17

**Notice of Appeal**

**DEATH PENALTY CASE.**

1 Notice is hereby given that Petitioner appeals to the Nevada Supreme Court  
2 from the August 16, 2021, Findings of Fact, Conclusions of Law and Order Denying  
3 Petitioner's Petition for Writ of Habeas Corpus (Post-Conviction), as well as all  
4 orders, rulings, or decisions related thereto that are made appealable thereby.

5 Written notice of entry of the order was filed on August 18, 2021.

6 DATED this 26th day of August, 2021.

7 Respectfully submitted  
8 Rene L. Valladares  
Federal Public Defender

9 /s/ David Anthony  
10 David Anthony  
Assistant Federal Public Defender

11 /s/ Brad D. Levenson  
12 Brad D. Levenson  
Assistant Federal Public Defender

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**CERTIFICATE OF SERVICE**

In accordance with EDCR 8.04(c), the undersigned hereby certifies that on this 26th day of August, 2021, a true and correct copy of the foregoing NOTICE OF APPEAL, was filed electronically with the Eighth Judicial District Court. Electronic service of the foregoing document shall be made in accordance with the master service list as follows:

Alexander Chen  
Chief Deputy District Attorney  
motions@clarkcountyda.com  
Eileen.davis@clarkcountyda.com

/s/ Sara Jelinek  
An Employee of the Federal Public Defenders  
Office, District of Nevada



1 OSCC

2  
3  
4 DISTRICT COURT  
5 CLARK COUNTY, NEVADA  
6 \* \* \* \*

7 ZANE FLOYD, PLAINTIFF(S)  
8 VS.

CASE NO.: A-21-832952-W

9 WILLIAM GITTERE, DEFENDANT(S)

DEPARTMENT 6

10 **CIVIL ORDER TO STATISTICALLY CLOSE CASE**

11 Upon review of this matter and good cause appearing,  
12 IT IS HEREBY ORDERED that the Clerk of the Court is hereby directed to  
13 statistically close this case for the following reason:

14 **DISPOSITIONS:**

- 15 ☐ Default Judgment  
16 ☐ Judgment on Arbitration  
17 ☐ Stipulated Judgment  
18 ☒ Summary Judgment  
19 ☐ Involuntary Dismissal  
20 ☐ Motion to Dismiss by Defendant(s)  
21 ☐ Stipulated Dismissal  
22 ☐ Voluntary Dismissal  
23 ☐ Transferred (before trial)  
24 ☐ Non-Jury – Disposed After Trial Starts  
25 ☐ Non-Jury – Judgment Reached  
26 ☐ Jury – Disposed After Trial Starts  
27 ☐ Jury – Verdict Reached  
28 ☐ Other Manner of Disposition

DATED this 8th day of December, 2021.

  
JACQUELINE M. BLUTH  
DISTRICT COURT JUDGE 