

EXHIBIT 1

Psychological Evaluation of: Dylann Roof**Date of Birth:** 04/03/1994**Evaluator:** Rachel Loftin, PhD**Contents of Report:**

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MY BACKGROUND

I am the clinical director at the Autism Assessment, Research, Treatment and Services (AARTS) Center at Rush University Medical Center, where I am also an Assistant Professor in the Department of Psychiatry. The AARTS Center is a clinical-research center that focuses on the lifespan of individuals with autism spectrum disorder (ASD). We see patients from infancy through older adulthood. I have an adjunct faculty appointment in the division of Law and Psychiatry in the Department of Psychiatry at the Yale School of Medicine. This appointment is related to my work with Autism Forensics, a research, consultation and clinical evaluation group I helped found that focuses on legal cases involving people with ASD and other developmental disorders. The mission of Autism Forensics is to prevent behaviors that result in criminal charges against people with ASD.

A member of my family is an adult with autism, which is what sparked my interest in the field. I completed a PhD in school psychology at Indiana University. After my doctoral work, I trained at the Yale Child Study Center as the Developmental Disorders fellow. Dr. Ami Klin and Dr. Fred Volkmar were my primary mentors at Yale. Drs. Volkmar and Klin, a psychiatrist and psychologist respectively, are internationally recognized leaders in ASD. After training I held a faculty position at the University of Illinois at Chicago, where I performed diagnostic evaluations of ASD on national genetic studies and saw clinical patients. I have also worked in private practice.

I have particular training and special expertise in the assessment of ASD and am research-qualified in the administration of the gold standard instrument for autism assessment, the *Autism Diagnostic Observation Schedule, Second Edition (ADOS-2)*. "Research qualified" means that I received a great deal of extra training and achieved a high level of reliability in administration and scoring with the institution where the test was developed. Because

ASD is a developmental disability present from early childhood, it is most often assessed in children. However, I have extensive clinical experience assessing autism in adults who have not previously been diagnosed. I provide national and international training in ASD and regularly present at conferences related to ASD and adult issues.

I have been involved in eight court cases in which there was a question of ASD. However, with the exception of a deposition in 2008, I have not testified.

I was retained by Dylann Roof's defense attorneys in June 2016 to conduct a psychological evaluation of Mr. Roof with a particular focus on whether he met criteria for diagnosis of autism spectrum disorder.

SOURCES OF INFORMATION

Measures Administered

Please see Appendix B for results from the following measures:
Autism Diagnostic Observation Schedule, Second Edition (ADOS2)
Scales of Independent Behavior, Revised (SIB-R)
Comprehensive Assessment of Spoken Language (CASL)
Test Of Problem Solving, Second Edition (TOPS)
Behavior Rating Inventory of Executive Function-Adult (BRIEF)
Wechsler Adult Intelligence Scale-Fourth Edition (WAIS-IV)—Comprehension Subtest

Evaluation

Dylann Roof 6/25/16 for approximately 6 hours; 6/26/16 for approximately 4 hours; 7/16/16 for approximately 3 hours; 7/30/16 for approximately 2 hours; 10/29/16 for approximately 2 hours; 10/30/16 for approximately 2 hours

Interviews Conducted

Mother, Amy Roof 9/8/16; 9/10/16 (by phone)
Father, Benn Roof 7/15/16
Sister, Amber 7/28/16
Paternal Grandparents, Joe, Sr. and Lucy Roof 7/14/16
Paternal Uncle, Joe Roof, Jr. 7/15/16
Paternal Aunt, Erin Roof 7/15/16

Other Materials Informing this Report

Please see Appendix A for a full list of materials informing this report

KEY FINDINGS

This report lays out the psychological profile of Dylann, with particular focus on symptoms of autism spectrum disorder (ASD, also referred to herein as "autism"). The case will be made for the following developmental trajectory:

- Dylann was born with predisposition toward ASD and other psychiatric conditions that frequently co-occur (e.g., anxiety, depression and psychosis).

- He did not receive appropriate psychological and psychiatric treatment.
- A number of environmental factors exacerbated symptoms and/or led to expression of symptoms that might have been suppressed with appropriate treatment.
- Dylann's symptoms of ASD led to failure to develop a typical number of social relationships and those he did develop were superficial and lacked reciprocal quality appropriate to age-based expectations.
- In order to avoid the intense anxiety he experienced in interactions, Dylann cut himself off from the outside world. Due to his isolation, symptoms of anxiety and depression worsened and caused him to become further isolated.
- Unusual thinking, including delusions and paranoia, thrived in this isolation.
- Without input from competing viewpoints, Dylann went online, read and believed misinformation about African Americans, and developed a strong preoccupation with racism.
- Dylann's unusual thinking, coupled with an autistic intensity of focus on these interests, and the absence of meaningful connection to anything other than what he read on the Internet, gave rise to an irrational belief that he *had to* commit these crimes.

Because I am a specialist in autism, the primary focus of my report is on the ASD component. However, I address all aspects of Dylann's presentation that arose as part of my evaluation and that, in my opinion, have relevance for his case.

BACKGROUND INFORMATION

Educational History

Dylann was at home as a young child and did not attend daycare or preschool. He attended kindergarten through fourth grade at White Knoll Elementary School in Lexington County, South Carolina. His grades from White Knoll Elementary are not part of the record. The Elementary School Records from Richland County School District One show that Dylann enrolled at Rosewood Elementary School on 8/11/2004. He then attended 173 days of school and was absent 7 days during that year. Grades from Rosewood are not part of the record, but Dylann's standardized achievement tests from this time suggest strong academic skills. For sixth and seventh grade, Dylann attended Hand Middle School in Columbia and earned passing grades (As, Bs, Cs) and was placed in advanced placement classes. For eighth grade he switched to Carolina Springs Middle School, and, as detailed later in this report, his grades and behavior at school steeply declined. He attended White Knoll High School in ninth grade but failed several courses his first year there. He repeated ninth grade at Dreher High School but failed that as well. He was frequently absent and did poorly in courses. Dylann then attended an internet-based program through SC Provost Academy. He earned passing grades in his first semester classes. In the second grading period, he failed math and British Literature. In his final grading period at SC Provost Academy, Dylann earned a 33 in math but passed his other courses. He withdrew from the school after that and did not earn a diploma. He later earned a GED in 2015. The decline in educational performance is discussed in greater detail in the Co-Occurring Psychiatric Conditions and Deterioration section of this report.

Employment History

Dylann's employment history is quite limited. For approximately two months in 2014, he worked at Clark's, a lawn care company owned by a friend of his father's. He returned to Clark's in 2015 but again worked for less than two months. According to the owner, he was dismissed when he stopped showing up for work. His parents and other family pressured him to find work.

Medical History

A more thorough medical history can be found in Dylann's medical records and in social historian Dr. Arlene Andrews's social history chronology. However, a few findings that are relevant to his psychological presentation are discussed here.

Dylann was largely healthy as a child. He had a "tongue tie" in early development, which is a condition in which additional tissue is present in the mouth and can interfere with eating and talking. The condition resolves by itself in some cases, but Dylann required surgery to address it.

Dylann refused vaccinations as a teenager and, according to his pediatrician's report to the social historian, his mother went along with this decision.

Dylann had numerous appointments related to concerns about his lymph nodes and thyroid function beginning in 2013. In April of 2014, he was diagnosed with a thyroid condition (Hashimoto's), but the physician wanted to wait to evaluate his hormone levels over time before prescribing medication. Notes from the endocrinologist, Dr. Robert Brennan, say that he tried to reassure "a very anxious man" that treatment was not required at the time and, if it later were required, the treatment would be clear-cut. Dylann sought more medical care and tests than his physician thought necessary during this period, as discussed in more detail later in this report.

BACKGROUND ON AUTISM SPECTRUM DISORDER

Autism spectrum disorder (ASD) is neurodevelopmental disorder, which means that difficulties associated with ASD are brain-based, present early in life and affect the course of development. ASD is diagnosed based on the presence of symptoms of social-communication challenges and atypical behaviors. The current criteria for diagnosing ASD in the United States are those established in the Diagnostic and Statistical Manual, Fifth Edition (DSM-5), which is published by the American Psychiatric Association. In the DSM-5, the following criteria are listed for diagnosis:

In the social-communication category of ASD, difficulties include persistent challenges in social communication and interaction that include (currently or historically):

- Deficits in social-emotional reciprocity that may present as:
 - Difficulty in back and forth conversation
 - Reduced sharing of affect, interests, or emotions
 - Lack of initiation or response to overtures
- Deficits in reading and using nonverbal communication that may present as:
 - Poorly integrated verbal and nonverbal communication
 - Abnormalities in eye gaze for social purposes
 - Abnormalities in gesture use (from absent to overly frequent and exaggerated)
 - Abnormalities in facial expression

- Difficulty understanding, developing and maintaining appropriate social relationships that may present as:
 - Challenges with adjusting behavior to suit context or audience
 - Difficulties with age appropriate friendships
 - Absence of or reduced interest in peers

The atypical behaviors category includes at least two of the following (currently observed or reported historically):

- Stereotyped or repetitive speech, motor movements, or use of objects, such as:
 - Lining up toys
 - Idiosyncratic speech, such as lines from other sources
 - Repetitive motor mannerisms, such as hand flapping
- Excessive adherence to routines or resistance to change, including:
 - Extreme distress at changes
 - Difficulty transitioning
 - Inflexible, “black and white” thinking
 - Rigid insistence on particular routines
- Intense preoccupation with particular topics, such as:
 - Perseverative interests
 - Strong attachment to or preoccupation with certain objects
- Unusual sensory interests or aversions that include:
 - Apparent indifference to pain or temperature
 - Adverse response to specific sounds or textures
 - Seeking out smell or tactile stimulation
 - Visual inspection/fascination with objects

In order to receive an ASD diagnosis, the symptoms must be present early in life and must cause functional impairment. The observed symptoms cannot be due solely to another difficulty, such as an intellectual disability. People with ASD can have any IQ level from intellectually disabled to genius. Likewise, language ability can range from people who cannot speak or understand language to people with very fluent use of non-social communication.

ASD is diagnosed by collecting a thorough developmental history, structured observations of behavior, assessment of ability, and measurement of adaptive skill (skill at performing daily living routines). In addition, medical evaluation is used to rule out other medical explanations for symptoms. “Gold standard measures” of ASD assessment include the tools used in research studies, where a high standard of accuracy is required to ensure meaningful results. That is, only people who truly meet criteria for diagnosis are included in studies and, thus, studies accurately reflect results for the population under investigation. In ASD, comparing results of a thorough early developmental history focused on ASD symptoms and use of a standardized social-communication assessment (namely, the Autism Diagnostic Observation Schedule, Second Edition) with estimates of intellectual ability and adaptive skill is considered the best means of determining whether a person meets diagnostic criteria for ASD.

In diagnostic evaluation, clinicians are looking for social deficits. IQ and adaptive measures are helpful because they allow us to assess for discrepancy between predicted ability (IQ) and actual performance. One of the most striking findings related to ASD is that someone can have intact or even superior intellectual ability but still experience

substantial functional deficits in certain areas. Some professionals refer to ASD as a **social learning disability** in order to draw an analogy to academic learning disorders. That is, when a student with a reading disability does not receive specialized instruction in early grade school, that student will likely continue to struggle with reading. As the student's academic career progresses, reading difficulties will begin to affect other areas and have a broad impact on academic achievement. During the early school years, a child learns to read. Later, the child must be able to read to learn. Likewise, in ASD intense early intervention may have a big effect by putting social and communication skills in place. Higher-level skills build upon basic skills. As the child who receives appropriate intervention develops, he is able to gain more benefit from his environment because early developmental skills are in place.

Although developmental delays are common in ASD, they are not required for diagnosis. In fact, many adults with intact IQ did not experienced delays in early childhood development.

Delays in Diagnosis of ASD

ASD is generally diagnosed in childhood. For a number of reasons, however, diagnosis is sometimes delayed or missed. Indeed, *for every three known cases of autism, there are two unknown cases.*¹ There are a number of reasons that symptoms may be overlooked:

- First, with individuals with higher IQ and relatively subtle social challenges, primary care providers may not have the awareness or knowledge of ASD that would lead to further assessment.² A lack of awareness of autism spectrum disorder and its symptoms on the part of pediatricians, speech therapists, and teachers can result in delayed or absent referral for additional assessment.³
- Second, if a child demonstrates mild social reciprocity impairment, he is oftentimes cast as a "loner," or "odd"⁴ and not necessarily flagged for possible ASD.
- Third, a child with some social awareness may try to hide his quirks. Individuals like this may experience the same tendency to get "stuck" on a preoccupying interest but may have enough insight to focus on an age-appropriate interest. Or, a child who is apt to say or do socially embarrassing things because he does not understand social expectations may withdraw and become silent as a way of avoiding future gaffes.
- Fourth, the issue of masking comorbidity (co-occurring mental health disorders that can "mask" or conceal the presence of ASD) is another reason that ASD may be overlooked. Given the overlap in symptom profile between major depressive disorder, social phobia, learning disorders, and personality disorders, such diagnoses may reduce the likelihood that ASD will be assessed or detected.⁵
- Fifth, a lack of insight is a defining characteristic of ASD, which means without advocacy from caregivers, difficulties are less likely to be flagged and assessed. That is, it would be rare for a child with autism to approach caregivers to request assistance the way children with some other psychiatric disorders may.
- Sixth, if there are few or subtle symptoms or, even with more pronounced symptoms, a child is not being carefully monitored for challenges, symptoms are often overlooked.
- Seventh, sensory motor symptoms wax and wane over the lifetime, and oftentimes lessen in their severity or go away completely as the child ages.⁶ As Dylann's mother noted with his atypical symptoms (outlined in the restricted and repetitive

behavior sections of this report), expression of these symptoms typically came and went so that by the time she was ready to seek assistance for his atypical behaviors, the symptom that she noted had already resolved. Given that sensory interests or repetitive behaviors may be more easily perceived by non-professionals than other symptoms, the lessening and inconsistency of these symptoms further increase the chances that undiagnosed individuals with autism will remain undiagnosed and identified merely as “being particular” or “quirky”.

It is not surprising, considering his intelligence and lack of family initiative to seek assistance, that Dylann was not identified for special education services for autism. Dr. Wachter, principal at Rosewood Elementary School where Dylann attended 5th grade, informed the social historian that a child who was quiet and did not misbehave would not have given the teachers or administrators much cause for concern. Sometimes the school psychologist would be called if a child was “sitting alone at recess all year,” but students who were just shy, withdrawn and did not demonstrate behavior problems would not usually raise concern among school staff. Regarding ASD, in particular, Dr. Wachter noted that being identified as autistic would “depend on where on the spectrum the kid was.” More able children with subtler autism symptoms might be identified if they had parent advocates who called the school to request a special education plan or accommodations. Parents who were unsophisticated or less knowledgeable would be less likely to pick up signs of autism and, thus, less likely to seek to have their child be identified for special services.

Dr. Laura Carpenter, a clinical psychologist based in Charleston who specializes in autism, confirmed to this evaluator that it is possible for an autistic individual in South Carolina to arrive at adulthood without diagnosis, as they often do in my clinic in Chicago.

In this case, Dylann was identified with social anxiety and symptoms of other anxiety disorders that commonly co-occur with and can mask symptoms of ASD.

FAMILY BACKGROUND

Factors Influencing Dylann’s Early Years

A number of factors influenced Dylann’s development and the family’s view of Dylann’s needs: the family’s awareness of ASD (or lack thereof); lack of supervision; a chaotic home environment, including exposure to domestic disputes and possible violence; instability in his mother’s relationships, residences and school placements; and lack of structure. All of these can exacerbate symptoms of autism and other psychiatric disorders and may have contributed to Dylann’s symptoms.

Social History of Amy Roof

There is evidence that [REDACTED], which likely contributed to the instability Dylann experienced during critical years of his development. Dylann’s parents were not married when he was born, and there was initially some question about his paternity. Shortly after his birth, Dylann’s parents separated again and Dylann spent the majority of his developmental years in the primary custody of his mother, Amy Roof. [REDACTED]

[REDACTED]

[REDACTED] There is no evidence that Dylann overheard such statements.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Adequacy of Supervision

[REDACTED]

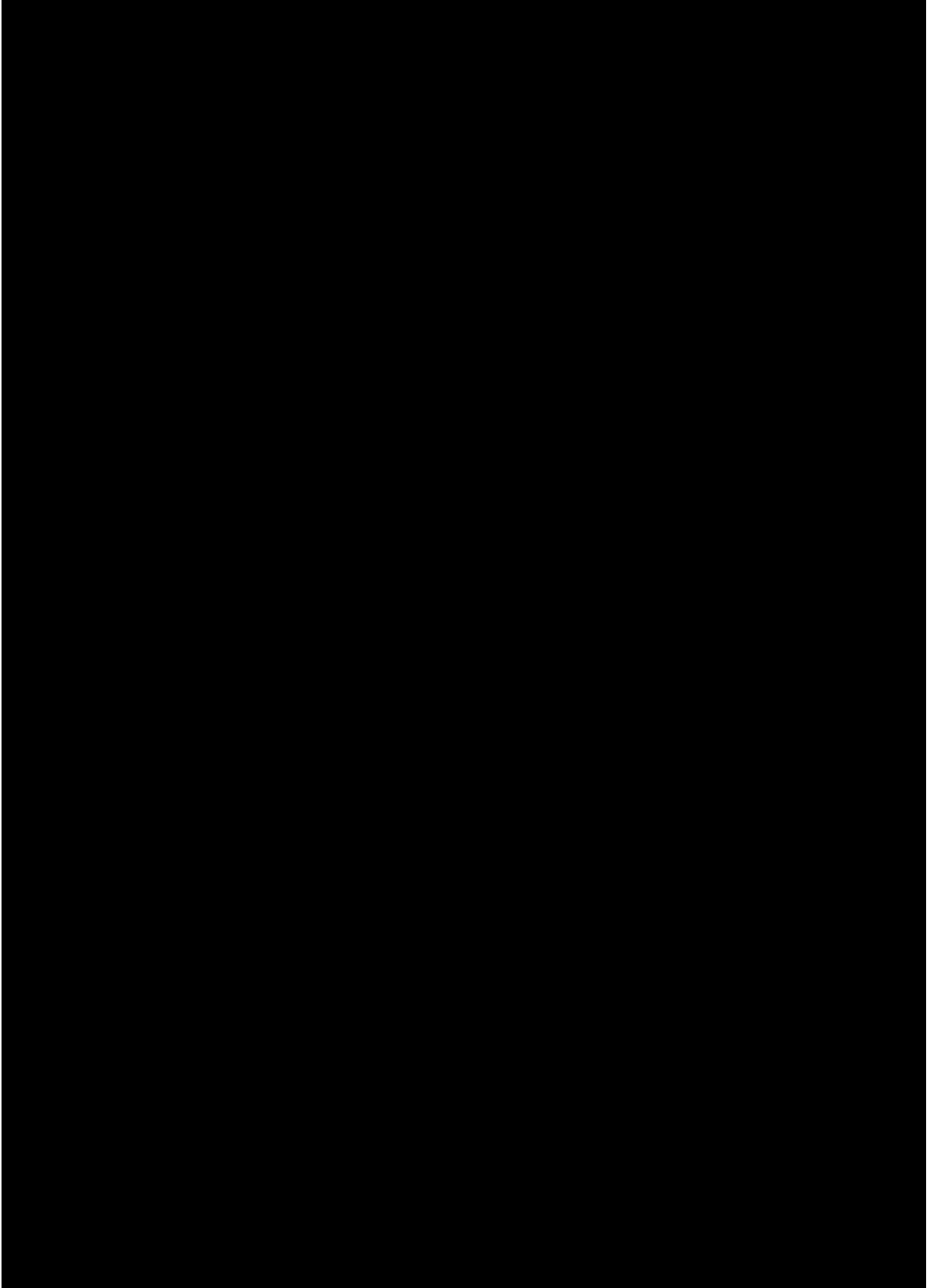
[REDACTED]

[REDACTED] which are described elsewhere in this report, Dylann's mother was a good mother.

Instability in Mother's Intimate Relationships

[REDACTED]

[REDACTED]





Instability in Residence and School

Dylann moved frequently and these moves were sometimes abrupt because of conflicts between Dylann's mother and her boyfriends. Sometimes Dylann was required to change schools. He attended seven different schools during his years as a student. Changing homes and changing schools is stressful for any child, but particularly so for a child with ASD and social anxiety.


Lack of Structure


People with ASD require a structured and organized environment in order to feel safe and to manage their anxiety. Dylann's childhood environment was described as substantially lacking in structure.

Dylann's sister, Amber, described to the social historian a lack of structure and rules in the home. She said they were not disciplined in a consistent manner. She does not recall clear rules but she does recall Dylann receiving occasional spankings. She estimated that she started babysitting him when she was 12-years old, at which point it was her responsibility to care for Dylann every day after school. They got off of the bus together and then she would fix a snack and they watched TV. Amber stated that they probably could have gone out of the house because they did not have any rules at all, but they never really went anywhere.

Amber also described a lack of structure or socialization in the family's eating routines. She recalled that her mother cooked dinner when they were children, and they would each eat their meals in their own rooms. For other meals besides dinner, there was not structure. They ate whatever was around for meals or snacks, but in her recollection her mother did not prepare breakfast or lunch during the day.

Family's Awareness of ASD

Dylann's family seems to have had little awareness of the autism spectrum and range of presentations that can be possible. For instance, in an interview with the social historian, Dylann's mother said that she is "ignorant" about autism and that she thought it had something to do with "kids who are hyper and disruptive." Dylann, in contrast, was usually obedient and compliant. 



[REDACTED] Ms. Roof stated that she had not thought of autism as something for “kids who are smart.”

Summary of Environmental Factors Affecting Early Development

Dylann’s developmental trajectory was negatively affected by instability in the home environment, frequent changes in home and school, and lack of structure and supervision. While these things would affect any child’s development, they are much more stressful for a child with ASD and anxiety.

Quality of Family Interviews

The following behavioral examples from interviews collected with Dylann’s family members are offered to provide information about the modeling and social instruction Dylann may have received as a child. Interviews with his parents were notably challenging and highly unusual.

Mother

Dylann’s mother was interviewed in person on September 9, 2016, and by follow up phone call on September 10, 2016. Over a period of several weeks before the interviews finally happened, several attempts were made to interview her. Dylann’s mother repeatedly canceled appointments, even after she was aware the evaluator had flown to Columbia specifically to meet with her, which she had been advised about in advance. Part of her resistance seemed to stem from confusion. She said she didn’t know many basic facts of the case, such as why he did it. She asked questions about the difference between a psychiatrist and psychologist and, even after the evaluator’s role was explained, asked if this evaluator would be the one asking questions of her in court when she testified. She explained that another factor in her reluctance to speak with the evaluator was Dylann’s insistence that she not speak with me.

During her in-person interview, Dylann’s mother was often tearful and expressed concern about what would happen to Dylann on death row and in prison. She stated that Dylann requested that she not discuss his “peculiarities” (This was also documented in a videotaped visitation session between Dylann and his mother and mentioned by Dylann to this evaluator.) This hesitancy to go against Dylann’s wishes was mentioned repeatedly by his mother during the initial interview and she caught herself at times, saying she “shouldn’t have told” the examiner about a particular symptom. Her strong inclination appeared to be to follow the directions given to her by her child. She expressed that she felt in an awkward position, stuck between cooperating with the interview on one hand, and trying not to be a “bad mother” by disrespecting Dylann’s wishes on the other. That is, she appeared to believe that being a “good mother” meant doing as she was told by her son.

While exaggeration of symptoms is often a concern in a forensic case, the situation was quite the opposite with Dylann’s mother. It seemed quite painful for her to recall and describe Dylann’s challenges, both because she was violating Dylann’s wishes that she not cooperate with the evaluation and because she experienced enormous guilt for her failure to get mental health assistance when he was a child. In addition, and most

significantly, it was apparent that Dylann's behaviors were normalized within his family and viewed as mere quirks rather than as indicative of more serious underlying problems.

Father

Dylann's father, Bennett Roof, was interviewed on 07/15/2016. He was a poor historian and unable to provide many specific anecdotes from Dylann's childhood. Mr. Roof described himself as "not very empathic." His presentation during the interview was consistent with that observation and notable for very dark humor that struck the evaluator as inappropriate to the circumstance. When asked whether there is anything unusual about Dylann's sensory processing, for instance, he joked that Dylann always "loved the smell of blood." He paused for a moment and then explained that he was joking. At another point in the interview, Mr. Roof joked that Dylann spent his time playing the videogame *Mortal Combat* (apparently choosing this game because it has a violent sounding title). He later clarified that neither of these statements was true but that he thought they were funny. (It does not appear that Dylann played violent videogames. Dylann and several family members reported that he played *Maple Story*, a game for children that is not violent.) Although Mr. Roof declared that he is not racist, he also made racist statements during the brief interview. Specifically, he said that as a young child Dylann asked why another child's "thingy" [penis] was so small. Mr. Roof laughed in the retelling and said that the boy "had Asian in him" so that Dylann was probably correct in his size assessment. Mr. Roof was also observed during videotaped visits with Dylann at the jail to joke about sex change operations, to say "that's so gay" in a derogatory fashion, and to remark that Bill Clinton would be the "First Bitch" if his wife were elected president. In viewing videos of their visits at the jail, Dylann was observed to appear uncomfortable and to sometimes tell his father that jokes with sexual content were not funny.

Other Family Members

The unusual presentation of Dylann's mother and father came in stark contrast to that of Dylann's sister and extended family members, all of whom were polite and helpful, even while expressing anger, sadness and other emotions in the wake of his horrific actions.

DYLANN'S EARLY DEVELOPMENT & ASD

Family Report of Early Development

Parents disagreed about early development. Dylann's father stated that he was not concerned about development in Dylann's early years, while his mother said in her grand jury testimony that she raised concerns to the pediatrician and she said in this evaluation that she was often concerned but when she raised her concerns was told by doctors and by Dylann's father not to worry. This perspective of "wait and see" was common 15-20 years ago and is often the cause of delayed diagnosis of ASD. She noted in interviews with federal investigators that she "should have gotten him help as a baby" because of repetitive behaviors, social anxiety and insistence on particular routines. Dylann's mother, in her own therapy session in the summer of 2015, told her therapist that when she took out Dylann's "baby box" and reviewed its contents, she saw that concerns about his social development went back to early childhood. In this evaluation, his mother also noted first concerns about Dylann's social development at an early age. Although she could not be specific about a precise age, she said in the interview for this evaluation and to federal investigators that he did not have friends and did not want to be around others. Asked for

clarification on the age of onset of these challenges, she said even before preschool he was clearly withdrawn from social interaction. In her grand jury testimony, Dylann's mother said that when she visited the school to check on Dylann when he was a child, he was playing alone.

While Uncle Joe said in grand jury testimony that he and his family were not regularly around Dylann during his childhood, he and his wife, Aunt Erin, were able to provide a number of specific anecdotes from the times they were with him. Dylann's Uncle Joe and Aunt Erin said they were always concerned about Dylann's well being in early childhood because they perceived his development to be much slower than other children they knew, including their own child around Dylann's age, and because they worried that his home life was unstable. They did not share the same concern about his sister, Amber, because her development seemed more typical and she could better manage herself.

Dylann's sister, Amber, explained that he was "unusual even as a young child" in her grand jury testimony.

Milestones

Dylann's father reported that he used single words (e.g., mama, dada) around one year, and his mother explained that she could not recall precise timing of milestones but that she felt his achievement of developmental milestones was normal. In contrast, Uncle Joe recalled a delay in spoken language and recalled that he expected this to resolve after Dylann's procedure to reverse the tongue-tie. However, Uncle Joe and Aunt Erin felt that speech did not seem to improve rapidly after the procedure, and that Dylann continued to display delayed speech. This is consistent with medical records from Dr. Giles, an otorhinolaryngologist (ENT), which indicates language delay at 20 months. ENTs regularly evaluate children with speech delays and tend to be good at spotting lags in speech development because such delays are common with hearing loss. However, this delay is not recorded elsewhere; no records of formal language testing are available, and the amount of delay cannot be confirmed.

Gross motor milestones and toileting were reported to have developed on time or early, but parent report of specific timing seems unreliable. In interview for this evaluation, Dylann was reported by his father to walk around eight to nine months of age (he said ten months in his grand jury testimony) and to toilet train around twelve months. Dylann's mother confirmed that toilet training was early but was not sure of timing. (Twelve months would be exceptionally early for a young toddler to toilet train. The average age for completion of toilet training is closer to 33 months.) He never had any accidents, according to his mother.

Symptoms of ASD

The following discussion of Dylann's ASD symptoms is organized in the following format:

- Early Development
 - Social-communication symptoms of ASD
 - Deficits in emotional reciprocity
 - Deficits in reading and using nonverbal communication

- Difficulty understanding, developing and maintaining appropriate social relationships
 - Restricted and repetitive symptoms of ASD
 - Stereotyped or repetitive speech, motor movements, or use of objects
 - Excessive adherence to routines or resistance to change
 - Intense preoccupation with particular topics
 - Unusual sensory interests or aversions
- Current Presentation (Adolescence – Young Adult) from Reporters and Direct Observation and Evaluation
 - Social-communication symptoms of ASD
 - Deficits in Emotional Reciprocity
 - Deficits in reading and using nonverbal communication
 - Difficulty understanding, developing and maintaining appropriate social relationships
 - Restricted and repetitive symptoms of ASD
 - Stereotyped or repetitive speech, motor movements, or use of objects
 - Excessive adherence to routines or resistance to change
 - Intense preoccupation with particular topics
 - Unusual sensory interests or aversions

Autism Symptoms in Dylann’s Early Development

Social-Communication Symptoms

Deficits in social-emotional reciprocity. Deficits in social-emotional reciprocity in early childhood present as difficulty with conversation, reduced sharing of interests and affect, and lack of social initiation or limited response to social overtures.

First concerns about social development were apparent from an early age. Dylann’s mother explained that she asked the pediatrician about Dylann’s shyness and that she often brought it up to his father, who encouraged her not to worry. This is common in both clinical and educational settings. As noted, ASD without intellectual disability is often only diagnosed when a parent advocates for appropriate evaluations. When asked when his challenges first started, his sister, Amber, described Dylann as “always awkward.” As mentioned above, Dylann’s mother also noted in her grand jury testimony, that he was playing alone when she would stop by to observe him in school.

Indeed, social withdrawal and social awkwardness were raised as descriptors in nearly every interview and grand jury testimony. In interview with the social historian, Dylann’s mother’s boyfriend who help raised him as an infant and knew him throughout his early years, Jeff Wyatt, explained that he thought Dylann had cognitive problems because if you tried to get him to focus, he would look the other way and attend to something else. While this may indicate an attention deficit, other reporters do not describe inattentive symptoms. It is likely that Mr. Wyatt was describing poor social attention characteristic of ASD.

Dylann’s father, who recalled very little from Dylann’s childhood, did remember that it was difficult to engage Dylann in conversation and that “you had to pull it out of him.” He also noted that Dylann would not inquire about others.

Cheryl Sauls, a former friend of Dylann's mother, who was interviewed by the social historian, also noted a lack of reciprocity. Ms. Sauls spent a lot of time with Dylann before he was 5 or 6 years old. Ms. Sauls said Dylann was quiet at that time. At first, she said she had the impression that Dylann did not talk at all, but it then became clear that he responded only with very short answers if asked a question. She could not recall him ever starting a conversation. Ms. Sauls remembered asking questions about what he liked to do, such as if he would like to go on the lake. He said "yes" or "no", but not much else. She described Dylann as more like an observer than a participant in social interactions. Likewise, David Clark, a friend of Dylann's father, is another person who knew Dylann in early childhood. Mr. Clark told the social historian that Dylann was always different from his own children. He was not rambunctious but rather "kept to himself."

Linda Brown was also around Dylann when he was young. Ms. Brown is the mother of Caleb, a biracial (African American and Caucasian) friend of Dylann's from early childhood. Ms. Brown told the social historian that Dylann was very quiet as a child. Others "really had to push and pull" to engage him in conversation. Both lack of reciprocity and anxiety may have been factors, as Ms. Brown also explained that adults had to make Dylann feel comfortable before he would speak. Dylann's Uncle Paul described him as very quiet. In fact, he said that "Dylann would not talk" and that the defense team might have talked with Dylann more than anyone, ever.

Even when he was comfortable, social communication was limited. Dylann's sister, Amber, explained that while Dylann often asked discrete, fact-based and sometimes odd questions, he has never been conversational. That is, he would never ask "how are you?" or inquire about others.

Dylann was described by all of the family members this evaluator interviewed as being uncomfortable in social situations, particularly when he was the focus of attention (e.g., birthday parties). From a young age, he did not wish to have birthday parties and celebrated with his immediate family only. Uncle Joe and Aunt Erin commented that as he developed, Dylann seemed to become aware that he was different and his self-consciousness increased. He would only sit alone or speak exclusively to nuclear family members when attending family functions. Dylann's Uncle Joe explained to the social historian that around other children at family holidays or events, Dylann was very quiet, removed and obviously uncomfortable. It was "like he was watching, not engaging."

When Dylann did engage with others, there is evidence that his communication was more literal than is typical. His parents both noted that he insisted on being quoted verbatim and even a slight departure from his original wording was viewed as a lie. This tendency persists and was observed in the evaluation as well.

Deficits in reading and using nonverbal communication. Typical nonverbal communication in early childhood includes use of eye gaze to regulate social interactions, use of gestures to both make requests and to support social communication, and using facial expression to communicate with others.

Dylann's mother said that he did not readily look anyone except her in the eye, and in interviews with this evaluator other family members commented that it was difficult to make eye contact with him. Uncle Joe explained that Dylann would look at him but he had to work to catch his gaze.

His Aunt Erin reported that as a young child, Dylann seemed frustrated when not understood but would not persist with alternative ways of conveying his point. This is often a diagnostic indicator of ASD. When children are just slow to talk, they typically find other ways to communicate, such as gestures, while children with ASD often do not use such compensatory strategies.

Unusual affect was also present in early childhood. His father said that he did not recall ever seeing him sad, angry, or anxious. Grandparents recalled seeing him sad only once in his life and never saw him angry. Jean Sullivan was a woman who used Dylann's mother as a childcare provider and saw Dylann almost daily for a period of approximately three months when Dylann was between the ages of 2 and 3. Ms. Sullivan told an investigator she brought her two young children to Dylann's home for childcare while she worked as a school counselor. At this young age, Ms. Sullivan described Dylann as "sullen, not angry, just flat. He wasn't engaged and he didn't have much of an affect." Without prompting, she brought up the question of whether Dylann had autism but noted that her exposure (and, indeed, her professional training) was too limited to venture a diagnosis. Dylann's Uncle Joe also described flat affect. In his grand jury testimony, Uncle Joe remarked that Dylann had "never been a kid full of emotion" and that he was pretty flat. In interviews for this evaluation, Dylann's sister Amber explained that Dylann cried only when he was physically injured.

Difficulty understanding, developing and maintaining appropriate social relationships. In early childhood, typically developing children have begun to learn the social rules of our culture. Children who are having difficulty establishing social skills may have trouble knowing how to adjust their behavior for certain situations, may not demonstrate an interest in playing with peers, and may have impoverished play skills.

At age five, by Dylann's mother's report to this evaluator, he was not approaching other children to join their play at the park, and she recalled asking him, "don't you want friends?" She stated that, in retrospect, his lack of engagement with others "all just seems odd." Dylann's mother also observed him at school when he was very young. As noted previously, in her grand jury testimony, Dylann's mother said that he was always alone during her observations in school and not engaging with his classmates.

Dylann spent time out of school with Linda Brown's son, Caleb. When she spoke with the social historian, Ms. Brown explained how that came to be. She said that Caleb was very popular. Ms. Brown said that Caleb realized that Dylann was not making friends and reached out to Dylann.

Dylann's father explained to the social historian that he does not remember Dylann having many friends growing up. When he compared his own childhood with Dylann's, he noted that he was much more social. Likewise, Dylann's paternal grandfather did not recall Dylann having friends except once, briefly, when Dylann lived at Smokey Joe Court (this was later, in middle school). Similarly, Dylann's sister said that the same boy was "the only friend Dylann ever had" and she also remembered him playing a little with Caleb Brown.

In young children, social relationships with peers are based on play. When children with ASD have deficits in play, it impacts their ability to form friendships with their peers. Some evidence of play deficits was reported in Dylann's early history. At approximately age five during a rare play date in her home, Aunt Erin recalled that Dylann played with the toys "in his own little world" and did not interact with his same age cousin. During this play date,

Aunt Erin explained that Dylann did not seek her out for assistance or to make requests. Rather, he flitted from toy to toy without interacting with others. Family members recalled very few specific examples of Dylann's pretend or imaginative play from childhood. In the only clear example, paternal grandparents reported that he "shaved" with an empty razor next to his grandfather. Dylann's sister said that she "was the boss" when they played and she would set up scenarios where they pretended to be parents, but she did not recall whether he played along much. She did not recall Dylann initiating imaginative or pretend play. Rather, she dictated what they did. Amber's childhood diary mentions play but does not specify whether Dylann was engaged in pretend, imaginative or repetitive types of play.

Dylann was said to have action figures, stuffed animals, cars, and Legos but no instances of imaginative play using these toys were identified. His family shared that he would move from toy to toy without imaginative play or engage in trading games with his sister. His mother remembered that he both pushed and lined up his toy cars, and one photo from childhood depicts Dylann standing next to carefully arranged cars. Melissa Chandler, mother of Jack, told the social historian that Dylann and Jack played cards and threw a football in the yard. She said Dylann and Jack did not play imaginative games.

As a young child, Dylann engaged in some solitary play that did not include interactive or pretend play. His paternal grandmother recalled to this evaluator that as a child, Dylann drew, played with clay or play dough, watched television, and played Gameboy. Per several reporters, Dylann was not interested in sports. His grandmother also recalled, when speaking to the social historian, that Dylann liked puzzles, games, Lincoln logs, and Nerf football.

A long-time friend of Dylann's mother, Ms. Renee Neese, said that Dylann did not have friends when he was little. She recalled recommending to Dylann's mother that he get involved in a playgroup. Ms. Neese suggested that Dylann had too much time alone. She recalled that as he got older, he played with his sisters but did not want to play with other children and did not want to go to anyone's house. Dylann mostly engaged in solitary, passive activities, such as watching TV.

Restricted-Repetitive Behaviors and Interests in Early Development

When talking to the social historian and with this evaluator, Dylann's mother said that Dylann has always been "funny" and "peculiar" about certain things. She calls these his "quirks." She stated that Dylann is very private and he would be embarrassed for other people to know these things about him. She explained that she noticed things about Dylann that were "odd" from a very early age, but she always hoped they would go away. She stated that often these things did go away because they would be like different phases he went through.

It is important to note that a number of the behaviors described in the categories below appear similar to symptoms of Obsessive Compulsive Disorder (OCD). People with OCD experience obsessive, intrusive thoughts and take action to help themselves feel better. Behaviors such as doing things a certain number of times or until it feels "just right" are common forms of compulsion in OCD. The onset of OCD, however, is usually later than the behaviors described below (mean age of onset is about 10-years of age⁷).

It should be noted that ASD diagnosis does not require that an individual demonstrate all symptoms of restricted and repetitive behaviors and interests.

Stereotyped or repetitive speech, motor movements, or use of objects. This category of symptoms includes behaviors like repetitive play or behaviors.

Ms. Neese told the social historian noted that around age 3 Dylann had a number of routines that he completed three times. When he woke up in the morning, he went directly to his mother and kissed her precisely three times. He told her he loved her three times, and she said it back. Dylann insisted it had to be three times and not just once. In interview with the social historian, Dylann's mother said that he would tell her "good night, I love you." Ms. Roof would then answer, "good night, I love you," and then Dylann would repeat this process over and over. Dylann told her that he could not stop saying "good night, I love you," and he did not know why he could not stop doing it.

Ms. Neese said that when Dylann met someone he would shake his or her hand precisely three times.

Dylann's mother reported in interview for this evaluation that he sometimes lined up his cars rather than playing with them more functionally (although he sometimes did that as well). A picture from Dylann's childhood shows him standing next to a line of carefully arranged cars. Dylann's mother also noted in interview with federal investigators that at school he "was obsessed" with putting crayons of the same color together. In her grand jury testimony, she explained that Dylann would sit in a specific area of the room and insist that he had all of the same color of blue crayons and would then put them all together.

Excessive adherence to routines or resistance to change. This category includes rigidity about routines or ways of thinking.

Dylann himself reported during this evaluation that there was a period when he was very young during which he watched clips from the same video every day after school (*Alice in Wonderland*). His sister also noted fixed routines in this evaluation, including eating the same snack every day. While preferring a particular movie is not atypical for a child, watching particular clips while eating specific snacks at the same time each day is more routinized than is typical.

A number of other behaviors that can be described as "insistence on sameness" were described. In interview with this evaluator, Dylann's mother shared that he was always the last one out the door because he "was so particular" and things had to look precisely the way he wanted. As she also noted in interview with federal investigators, he insisted on coordinating his clothing to be the same color. She said that he insisted on having underwear that was very white. In interview with this evaluator and with the social historian, Dylann's mother described him as being very particular about his clothes from a very early age. He was "fixated" on his pants and how they fit around the waist. He wanted his pants to fit just so. His sister elaborated that in kindergarten, Dylann's shoe laces had to be tied "just so" and he would insist that she tie and retie his laces until they looked like a perfect image of shoes with even laces lined up.

There was some restricted range in food choices, as well, although this is not always atypical in young children and does not necessarily suggest ASD. His paternal grandparents said that they could predict what he would order in restaurants and would

always fix spaghetti for him. His sister said that he had the same snack each day after school for a period (e.g., tuna with mayo and crackers).

Dylann was very concerned about cleanliness, according to Ms. Neese. He cried if he had dirt on him, which could indicate either a sensory sensitivity (i.e., extreme discomfort with the sensory experience of something on one's hands) or insistence on presenting a certain way (i.e., perfectly clean). Ms. Neese explained that when Dylann was bathed, he insisted that every part of him be cleaned and reminded the adult washing him if she had missed a spot. Dylann also insisted on being washed in a specific sequence, from head to toe. He would not allow his head to be washed with a cloth that had touched his feet first.

Dylann's mother described some repetitive hand washing in her grand jury testimony, when speaking with the social historian, and in interview for this evaluation. It is not clear why Dylann engaged in this behavior, how many times Dylann would wash his hands or under what circumstances. People with OCD, for instance, may wash their hands a certain number of times in order to curb an obsessive thought.

Intense preoccupation with particular topics. As is often the case in ASD, tendency toward preoccupation with topics was less apparent in early childhood and increased with age. In early childhood, according to his sister Amber, he demonstrated sequential phases of consuming interest in dinosaurs, Dalmatians, and other topics. She explained that Dylann demonstrated little interest in activities outside of his current interest area of the moment.

Unusual sensory interests or aversions. Dylann's sensory interests and aversions were unclear. Certainly, several reporters said that he did not like the feel of dirt on hands, which is sometimes associated with sensory sensitivity in ASD. A number of family members, most notably his parents, mentioned that Dylann was not physically affectionate. Some people with ASD who are hypersensitive to sensory input avoid hugging and other affectionate touch. As he aged, Dylann's sensory behaviors became more apparent, as discussed in the adolescent and adult section below.

Implications of Symptoms on Early Development

Dylann's early development was remarkable for challenges that included difficulty using eye gaze for communication purposes, limited engagement in social interactions with peers, and insistence on particular routines. He received no special instruction or therapies to address these areas of concern. Thus, he did not develop the early childhood level social skills on which elementary and middle school-level skills are built.

It is difficult to predict how he would have developed if he received early intervention services. Studies of the benefits of early intervention for children with ASD suggest that his outcome may have been much more positive.

ASD: ADOLESCENT & ADULT DEVELOPMENT

Dylann's adolescent and adult presentation was assessed using a number of measures: interviews with those who knew him, observation of his clinical presentation in unstructured interviews, direct observations of social skills in standardized and naturalistic but contrived social situations (the ADOS-2), formal assessment of social problem solving

(the TOPS-2), formal assessment of social aspects of language use (the CASL), and formal assessment of social adaptive behaviors (the SIB-R).

Social Communication in Adolescence/Young Adulthood

The social-communication challenges reported in childhood worsened in adolescence and young adulthood. Concurrently, beginning in ninth grade, Dylann's other psychiatric symptoms (social anxiety, delusional beliefs, disordered thinking, paranoia) worsened. This section is specific to ASD symptoms in adolescence and adulthood, and the other psychiatric symptoms are in the following section.

Among reporters and across interview formats (e.g., grand jury testimony, interviews with federal agents, social historian interviews, and diagnostic interviews), there was consensus in describing Dylann as polite, sweet and quiet. Despite that, it was also clear that he struggled in many areas of social-communication.

Deficits in social-reciprocity. As noted previously in the early childhood section of this report, deficits in social-reciprocity refers to difficulty with conversation, reduced sharing of interests and affect, and lack of social initiation or limited response to social overtures.

Bonnylin Henry, a Sunday school teacher who knew Dylann from ages 11 to 16 informed the social historian that Dylann did not want to attend confirmation camp. Ms. Henry hypothesized that he did not want to be with people that he did not know. Ms. Henry met with Dylann's father and urged that he attend because it was required for confirmation and because she believed Dylann needed the interaction. She found him to be quiet and withdrawn and thought it would be good for him to go and meet some people and build some friendships. Dylann did not want to play games like other young people did. He was adult-like and reserved. Ms. Henry stated that Dylann participated in the activities in class, but he was withdrawn and did not interact with the other children. Rather, he participated when called on or when instructed to complete a specific activity.

Jacob Meek, in interview with federal investigators, said that he believed he and his brothers were Dylann's only friends. He described Dylann as "awkward" and "soft as a cookie," in part, because Dylann liked to watch chick flicks like *Titanic* and *Stand by Me*. Jacob's brother, Joey Meek, referred to Dylann as "quiet, introverted and odd" in his interviews.

The social historian spoke with a minister who knew Dylann from a church youth group and catechism classes in 2007, when he would have been approximately 14-years old. Reverend Metze described Dylann as socially immature and naïve; he also described Dylann as robotic.

Direct observations of Dylann's presentation indicated that the basic elements of speech were intact. He demonstrated adequate vocabulary and grammar. The sound of his speech was mildly atypical (this was apparent in his videotaped interrogation as well as in evaluation). He sounded a bit flat at times, but this tendency was rather subtle and less apparent when talking about topics of interest. Choice of words was somewhat repetitive but not strikingly unusual. For instance, he said "you see what I am saying?" ten times during the approximately 45 minutes of the social communication evaluation. This phrase

was also used more than 35 times during his FBI interview on 6/18/2015. While this phrase is not atypical, its use was oddly repetitive.

In interviews for this evaluation, as well as interviews with federal agents and with the social historian, Dylann's mother said that he has always been extremely quiet and socially withdrawn. She stated that she believed it has always been his preference to be alone. She specified that when Dylann spent time with other people, she felt it was generally because he had to and not because he wanted to socialize.

When he was about 13 years old, Dylann attended church camp with Rev. Metze. In Rev. Metze's witness interview with federal agents, he described Dylann as "not normal," withdrawn and reclusive and possibly struggling with his sexuality. Also when interviewed by federal agents, Jacob Meek said he met Dylann when Dylann was an adolescent and remembered him as a "weird kid who did not like to talk." When Mr. Meek met him again when Dylann was 21, he found him "even quieter than before." Likewise, in interviews with federal agents, coworkers from Clark's described Dylann as an extremely quiet person who kept to himself. He spoke only when spoken to and did not socialize outside of work.

Across reporters, Dylann was noted to be difficult to engage in conversation. His paternal grandfather told this evaluator, "He did not have the societal skills to let him be in a conversation." His mother explained to the social historian "He would always answer when he was spoken to, but he never initiated any conversations. If you asked him a specific question, he could answer, but he didn't ask other people anything about themselves. He just answered their questions politely." She emphasized that Dylann never really told her anything unless she basically forced him to talk to her. She had to ask him a lot of questions to get any information from him. She said "getting Dylann to talk to you is like pulling teeth." (The same phrase was used in interviews by Dylann's mother, his paternal grandfather and his coworkers to describe his conversational style.) Apart from interactions she initiated, they rarely spoke. His sister described him talking at length about topics of interest but said he did not seek out interactions with others unless they were related to an interest or question of his. In the recent past when he did speak with others, he often asked very specific odd questions (e.g., do you have Black friends? Do you have Jewish friends?), or he focused in on one issue and primarily asked specific questions relating to that topic. He did not frequently ask questions about other people and their perspectives, except in relation to his own interests. Both paternal grandparents and his Uncle Joe said that in recent years Dylann sounded as if he were quoting somebody when he was talking. His grandfather described it as sounding like a political talk radio show, such as Rush Limbaugh.

Formal measures of language revealed largely intact language skills, with pockets of deficit. On a measure assessing pragmatic or social use of language, Dylann scored at the level of a typical 14-year old (CASL, Pragmatic Judgment). This subtest requires an individual to listen to a series of vignettes and judge the appropriateness of language used in each social situation. Dylann demonstrated understanding of language that should be used in situations including making requests or extending an invitation to a friend. However, he was not aware of what to do in situations of greater social complexity, such as clarifying a request or introducing two people to each other.

Dylann appears to struggle with real world social situations as well. Direct observation of social awkwardness and lack of reciprocity in conversation is apparent in a video visit with his paternal grandfather on 5/22/16. For example, during their exchange, Dylann asked

very specific questions about history and authors but made no reference to family members or inquiry about how they were doing.

A classmate he knew in adolescence, Vanessa Clifford told the social historian that when Dylann was social in junior high, he demonstrated a tendency to either be quiet and off to himself or, if there was a topic he was particularly interested in, speaking a lot about it. Ms. Clifford said that Dylann was a part of the group and did not sit off by himself when they were all hanging out. However, Ms. Clifford said that Dylann did not usually begin conversations or become very involved in the conversations the group was having unless he was very interested in a particular subject. When the conversation was on a topic of interest to Dylann, he spoke at great length and told the group everything he knew about the topic. For instance, he became very involved in a conversation the group had about stars one night. She said that the group was lying in a driveway looking up at the stars and Dylann began to speak about the stars and said “everything he knew.” This tendency to be pedantic and share facts, rather than to have reciprocal conversations is a diagnostic feature of ASD.

Coworkers from Clark’s were interviewed by federal agents and by the social historian. They described Dylann as difficult to engage. “It was like pulling teeth” to get him to give more than a one or two word answer to a question. Even when he did speak, it would often take a long time for Dylann to answer. He mostly said only yes or no, which made it difficult to have a conversation. Dylann was described as shy and socially awkward by coworkers. A coworker and Dylann’s sister Amber both commented that he seemed immature for his age.

Dylann did not share much affect with others. To the social historian, Dylann’s mother said that he is “not a very emotional person,” and she feels sad because she thinks that maybe her son has no emotions at all; she contradicted that assertion later when recalling how often he felt fear. When asked if Dylann was ever afraid of anything, she said he was always afraid of other people. Expression of emotion seemed limited in range, however. Dylann’s mother could not recall ever seeing him very angry or sad, for instance. Even now, she explained, he does not seem angry when she goes to see him. Although his affective expression is limited, his mother said that she knows he feels empathy for others.

Even once he started to interact with select peers, it was clear that Dylann’s level of social engagement was below expectations for an adolescent. In grand jury testimony, Vanessa Clifford, a classmate from middle school, said that Dylann “did not have interest in people” and she called him a “sarcastic loner.” Ms. Clifford also told the social historian that Dylann did not really try to make friends, although she described him being present when the teens would hang out. In her interview with federal investigators, Ms. Laura Plexico, who met Dylann in 9th grade and reconnected with him shortly before the shooting, described that he has “no friends,” “has not dated anyone.” She said he was “always quiet” and “talked to himself.”

In a federal interview with former coworkers, Dylann was described as someone who did not talk much, gave short answers, and missed work without calling in notice. Coworkers said that, based on their conversations with him, he did not seem to have much social life and tended to “zone out” while working and would be working on the wrong yard and have to get called back. If the crew sat down for lunch before Dylann sat down, Dylann would go sit somewhere else by himself, usually on the other side of the restaurant. This stood out as unusual to the coworkers because the crews usually sit and eat together.

Several reporters described a highly unusual sense of humor, lacking in reciprocal social quality. Dylann's Uncle Joe described in interview for this evaluation Dylann making awkward jokes that made it difficult to discern whether he was serious. In one instance, Dylann acted as if he did not recognize his uncle and grandfather when the pair came to visit him at jail. He persisted with the act for some time, and it was clearly upsetting to his uncle. Dylann was noted to make false, somewhat outrageous statements in an unsuccessful effort at a joke on many occasions during taped visits. Talking to his grandmother, he claimed to have hepatitis C. His father also described this tendency (which is consistent with how the father interacted in interview as well). Dylann's sister explained that she cannot tell when he is joking. She said that both Dylann and his father have a similar way of joking by saying outrageous things but that Dylann "has no joking look" when he does it. Paternal grandparents stated that until he recently started making these types of jokes, that he had demonstrated to them no sense of humor at all. Likewise, his Uncle Joe said that he does not recall any humor before jail. However, Dylann's mother shared that he was using this type of humor with her for some period of time before the shootings. In fact, when he learned that his friend Jack Chandler was dead and went to tell his mother, she initially told him to stop joking. It was only after he repeated it that she believed him.

In interview with the social historian, the coworkers at Clark's said it was very hard to tell when Dylann was joking. Dylann said everything in a monotone, they described, and would not crack a smile or anything to indicate he was joking. One of the coworkers said it was difficult to get a reaction out of Dylann when someone else was joking. The coworker remembered joking with Dylann and the most he would get in response was an odd grin. He never saw Dylann smile or laugh while joking.

This odd sense of humor may be fully explained by lack of social reciprocity. When talking to this evaluator about his humor, Dylann explained that joking does not serve a social function for him. He said that he does not make jokes for other people but to entertain himself.

However, David Sprayberry said that Dylann would laugh at his jokes, and there seems to have been a period in middle school when other students appear to have appreciated Dylann's humor even if they could not always tell when he was intending to be funny. To the social historian, Rico Rodriguez, a friend from middle school, described a dry sense of humor. In grand jury testimony and to the social historian, Vanessa Clifford (they met in 8th grade, per grand jury testimony) found Dylann to be funny. She said that he made them all laugh by making "sarcastic comments." Vanessa said there were times when they could not tell Dylann was joking because his sarcastic comments were made without any change in affect. He simply made outrageous statements and the classmates eventually learned to tell that these were jokes.

Dylann's sister described him as "too literal" in his understanding of language, and Dylann sometimes has difficulty understanding language that is not concrete. This was most clearly illustrated by his response to the book *The Prince* by Machiavelli. When asked about the book, Dylann explained it as "directions for a prince on how to act." I suggested it was written in that fashion but was meant for a broader purpose, perhaps even satire, but Dylann emphatically insisted that it was a guide for a prince and was dismissive of any other nonliteral interpretation. He also once asked this evaluator what "24-h" would mean in conjunction to a restaurant. Apparently, a young woman wrote to him and told a story

about a “24-h Burger King.” Even though he had been puzzling about it for a long time, he had not figured out “24 hours” because, as he said, “h doesn’t mean hours.” Dylann is also very literal in his own speech. As noted in the early childhood section of this report, Dylann insists on verbatim quotes when people repeat things he has said and he objects to any paraphrasing as lying.

A number of reporters who were interviewed for this evaluation explained that Dylann could sound as if he were quoting someone, rather than generating novel statements. His paternal grandfather said he sometimes asked Dylann “where did you hear that?” and Dylann would acknowledge that he acquired information from a radio host. His Uncle Joe also noted that Dylann sounded like he was quoting another source when making statements about Muslims or other minority groups.

Conversation was also notably awkward in video visitation between Dylann and his parents. Dylann was noted to abruptly interrupt his dad midsentence to ask, “Anything important to tell me?” Likewise, he was abrupt with his grandfather when he demanded, “Tell me something worthwhile.” He then asked if his sister’s newborn baby was transgender. It was clear in this conversation, as well as others, that Dylann and his parents have difficulty understanding each other in conversation. His parents often need to seek clarification and he appears frustrated with them. This is particularly true between Dylann and his mother and is best illustrated in phone calls between the two.

In the evaluation, Dylann was talkative but his conversational style was atypical. He offered a lot of information about his beliefs and answered direct questions, although he did not tell personal anecdotes (with the exception of one story detailed in the Disordered Thinking section, below) about experiences before incarceration even when they would have been appropriate to the topic at hand. He asked some questions of the examiner outside of the standardized assessment, but during the standardized observation period (the ADOS2), the only questions posed were related to his interests of white nationalism and classic films. During the evaluation, many of the questions asked of the examiner were questions that others on the defense team reported him previously asking of them as well. Further, these are very similar to the questions he asked a man who wrote to him and later sold a hand-written letter from Dylann on eBay. (This letter is available online. In handwriting that looks like Dylann’s, the writer asks whether the penpal’s city is “second or third largest in Washington” and the origin of his last name.) Both questions are typical of topics Dylann raises in interactions. When asking these questions in conversation, Dylann gave the impression of gathering information rather than participating in a reciprocal conversation. That is, the evaluator’s responses seemed to have little impact on the ultimate flow of conversation. In this way, conversational prompts from the evaluator were sometimes ignored. Dylann was able to offer coherent narratives and to maintain topic once we started a conversation, however.

It is important to note that when Dylann first met this evaluator he immediately began talking about controversial right wing radio programs, specifically about the Jewish hosts of these programs. He said a number of pejorative things about Jewish people (i.e., the hosts of programs he likes are Jewish but “ok because they are far right”) without apparent recognition that he was making statements that might be offensive.

Dylann’s sister said that she believes he wants to be polite but that his behavior is nevertheless often “rude and offensive.” He will say what he is thinking whether or not you want to hear it. For example, Dylann’s sister tried to have conversations with Dylann, and

he would say she was “like a Lifetime movie, sappy and boring to me.” As a videotaped visit displays, when told he was becoming an uncle (his sister was pregnant), he responded with questions about whether it was too late to terminate the pregnancy. Dylann’s sister, when asked about this incident, said, “He did not mean to hurt my feelings” but is often rude and offensive without meaning to be.

In direct evaluation, Dylann also presented as unintentionally rude. Within a short time of meeting the examiner, a professional woman in her 40s, he made a number of strongly worded statements about what he thinks women should and should not do and asked such questions as “Don’t you think women are too emotional to vote?” He did not seem to realize that it would be exceedingly rare for a professional woman to think that women should not have voting rights. On another day, Dylann asked how old the evaluator’s mother was (the question was related to a conversation about her travels and history). When I replied “65,” he said “She must have been a young mother, like 15?” (This estimate would make the evaluator quite a bit older than her actual age.) Dylann did not seem to intend this as an insult, and he did not smile as if teasing. He displayed no awareness that it was not socially appropriate to be commenting on the evaluator’s age.

Dylann also seem genuinely naïve when talking about the aftermath of his crime. For example, he seemed surprised that when President Obama spoke at the memorial service for one of the victims of the shooting, he did not talk about “black on white crime.” He seemed to sincerely believe that topic would have been appropriate for the venue.

Dylann was also naïve in his understanding of how his actions affected others. Several family members noted that he did not seem to understand why they were so upset by the shootings. His grandfather told this evaluator “I don’t think he realizes we’ve been affected.” Indeed, in video visitation, his grandfather commented that his grandmother is upset about the crime and about his incarceration, Dylann appeared incredulous and told his grandfather it has been a year, they “should be over it.” To the evaluator, Dylann’s seemed genuinely puzzled, as if he truly could not imagine such a response. This puzzlement seems to indicate difficulty imagining his grandmother’s perspective, which can reflect difficulty taking another person’s perspective (i.e., a “theory of mind” deficit, described later in this report).

Despite his reported biases about various groups of people, when interacting 1:1 with individuals, Dylann’s presentation is not consistent with his stated beliefs. Dylann complained to this evaluator that one of the defense attorneys had spoken with other inmates, specifically asking African American inmates about their interactions with him. This was concerning to Dylann because he did not want to seem “nice and friendly” toward these men. He explained that he is concerned how it will make him look and how it will reflect on his views. He was concerned because he knew the other men would say kind things about him, that he is not a racist because he has been kind to them. Similarly, Dylann seemed incapable of being intentionally rude to this evaluator. Once he knew she specialized in ASD, he complained that he did not want the diagnosis and argued that he did not think he had it. However, he never refused to a meeting with the evaluator or said anything deliberately rude to her.

In cognitive assessment meant to assess primarily fact-based social knowledge, Dylann performed quite well (WAIS-IV). In contrast, on formal measures of social problem solving ability (TOPS-2), which included scenarios of social situations, specific areas of concern were evident. Overall, Dylann was able to manage the cognitive elements of the tasks that

did not include a social overlay. That is, he was able to identify solutions to problems requiring him to make inferences and determine some possible solutions. However, when social elements of problem solving were assessed, he performed at about the level of a middle school student. In particular, his ability to interpret other's perspectives and transfer insights was impaired. These tasks allow for age equivalents to be calculated. (Because Dylann is out of the age range for the norms of the problem solving assessment (TOPS2), standard scores and percentiles cannot be calculated. It was necessary to use a measure for which he is out of the age range because measures of social problem solving are not commercially available for adult populations.) Age equivalents are generated when a person's performance is compared with the large sample of people on whom the test was originally normed. The age equivalent is the average age of respondents with similar performance to the test taker.

Dylann performed at about the level of a 14-year old when asked to interpret others' perspectives. His difficulty imagining himself in another person's place made it impossible for him to generate appropriate responses. He gave literal, concrete responses to other items and sometimes completely missed the point of a question. For instance, when read a passage about how a single parent may feel when she has to ask her daughter to share a room with a new stepsibling, Dylann replied, "I don't know anything about her" and, when prompted, could not venture a guess. When this test item was later discussed with Dylann in feedback and offered as an example of difficulty with social thinking, Dylann was adamant that there is no way he could possibly know anything about a hypothetical person. Likewise, it was challenging for him to think beyond his own perspective when asked what African American men may have thought when hearing a freed woman slave talk about racial equality in the late 1800s. He could only offer that the men may not like rights for women. These responses highlight the challenge Dylann has in taking another person's point of view, which is a deficit in social thinking found in ASD and other psychiatric disorders.

Dylann's ability to transfer learning from one situation to another was assessed at the level of a 13-year, 3-month old. Challenge transferring information from one situation and applying it in another situation is common in ASD and is often referred to as generalization deficit. After hearing a short paragraph about how raccoons that live near campgrounds have unhealthy diets and get injured, Dylann was asked "What if the raccoons that lived near campgrounds were moved to wilderness areas?" He was not able to imagine this hypothetical and instead replied, "It wouldn't work. They couldn't catch them." He was also read a short paragraph about Sojourner Truth, a freed slave who became an activist for racial equality. When asked what issues facing Truth are analogous to today's society, Dylann could not think of any. Certainly, his own views on race may have made this item difficult to answer, but given his motivation to do well and appear typical, he could have said, "I don't agree with this, but some people may think..." or made another disclaimer if he were able to generate a correct response.

Dylann seemed to enjoy interaction with others. In particular, he smiled in reaction to the examiner when she said things about travel or other topics he considered "cultured" (e.g., speaking French). Notably, he was friendly and talkative even after complaining to his defense team that he did not want to see the examiner again. Even on a day when he argued with the evaluator about his diagnosis and sharply complained about his defense lawyers' strategy, it was surprisingly easy to engage him in conversation about his preferred topics. It was striking to see how easily he switched from arguing that he did not

have any mental health or developmental problems and that he did not want the defense to interfere with him receiving the death penalty to conversation about old movies.

Despite his enjoyment of conversation about certain preferred topics, Dylann's awareness of other people and their feelings is atypical. His sister, Amber, noted to this evaluator that she believed he would not notice if she were upset, sick, or injured.

Deficits in reading and using nonverbal communication. This section is focused on both understanding and using nonverbal forms of communication. This includes gesture, eye gaze, body language, posture, and any other nonverbal means people use to communicate.

In direct observations, Dylann usually had a broad, goofy grin and this smile was present throughout most of the evaluation, regardless of the topic of discussion. Indeed, it was sometimes dramatically incongruous with the topic of discussion. Otherwise, Dylann's expression was flat, he displayed an exaggerated "thinking" expression, or he displayed an expression of exasperated disbelief in response to information the examiner said she did not know. Expression was adequate during discussion of preferred topics (politics, white nationalism, countries of origin of families), when this limited range of expression was all he required, but much flatter during conversation about non-preferred topics. However, Dylann's self-expression was oddly repetitive. Each time he displayed the disbelief expression, for instance, it was precisely the same and included a repetitive motion of rubbing his eyes. Other than noncontingent grinning, "thinking" and disbelief, Dylann's expression was flat and did not change much even when discussing situations that normally elicit emotional responses. The therapist he briefly saw as an adolescent noticed atypical nonverbal communication as well. She commented that he was "difficult to read" and that she could not tell when he was serious.

Dylann has reported concern about smiling at inappropriate times, such as when he is in court. He seems to smile out of nervousness, as well as using smiling as a coping strategy when he is not sure what else to do.

Dylann sometimes maintained appropriately modulated eye gaze during the evaluation, but gaze was sometimes uncomfortably intense. At other points, gaze was absent or avoidant at some key social junctures. A clear example of this was during a task when he was provided with too few pieces to complete a puzzle and was required to request more. He did not look at the examiner or speak in order to request but thrust out his hand expectantly.

Dylann's laughter was noted to lack reciprocal quality. That is, while most people laugh for social reasons, he does not. Inappropriate laughter was common in the videotaped interrogation, as well as in this evaluation. He was observed to laugh about things that he does not appear to find funny. During the interrogation, he appears to laugh under three conditions:

- First, when others say something that he was not expecting to hear as if he is incredulous that he is being asked the question. For example, he laughs when asked whether he disagreed with the ending of *American History X*, in which the lead character is no longer behaving in a racist fashion. This is consistent with a perspective-taking deficit. He is not considering another person's point of view and is surprised that the investigators are even asking about whether he would like someone disavowing racist beliefs.

- Second, Mr. Roof frequently laughs at points when he feels uncomfortable or self-conscious (i.e., at the end of the formal interview, one of the interviewers tells Mr. Roof that he is skinny and he laughs in response. In fact, he is very self-conscious about being so thin).
- Finally, Mr. Roof laughs in the same tone at times when there is no clear reason, such as when he confirms that he received money for his birthday. This may be a repetitive vocalization, which can be a sign of ASD.

Research suggests that people with ASD laugh with more voice tone (that is, a tone that sounds like their speaking voice) more frequently than people without ASD. Typically developing people are much more likely to alternate between voice laughs and a range of other types of laughter sounds (e.g., breathy laughs, snorts, etc.), which are more socially engaging and effective for social purposes. Mr. Roof's laughter exclusively used the vocal tone laugh and demonstrated no other forms of laughter. That is, he laughs in an autistic manner.

Gesture use was common. Dylann used descriptive and emphatic gestures to accompany his oral communication. That said, he relied on the same handful of gestures and completed them in a repetitive fashion (i.e., precisely the same movements each time.) In interview, Dylann described "faking all the time" with his use of eye gaze and gestures because they do not come naturally to him. He did not appear to realize that saying this was an admission of difficulty in social situations. Rather, he sounded pleased that he learned when to look at people and when to use gestures and did not seem to realize that for most people the development of those social skills is innate.

A few reporters described abnormal use of eye contact for communication purposes. David Sprayberry, who lived with Dylann from 2007 - 2009, explained that Dylann would tend not to look another person in the eye unless the person said something he did not like. If someone said something he did not like, Dylann gave a mean look but then he would grin, as if he was kidding. In his interview with federal investigators, Joey Meek also described that when he first met Dylann, he would not make eye contact. When talking with federal investigators, Dylann's former stepmother, Paige Mann, explained that when she first met Dylann she thought he was normal and cute. However, she noted that his coworkers thought "he was autistic" because he would not look people in the eye.

A number of family members described flat affect. Dylann's sister told the social historian that she felt Dylann never had emotional responses to anything, that he only cried when he got physically hurt. Emotional pain did not make him cry, she said, and she doubted whether he even had feelings sometimes. He had the wrong emotional responses to some things.

Dylann was described by several family members as "not animated" and his family shared that he rarely uses facial expressions. His sister said that it is difficult to tell whether his expression reflects his actual emotion. Dylann's mother said that he does not show a lot of emotion; he was described by many as appearing "flat" or "numb." John Mullins, a classmate at White Knolls High School, was interviewed by federal agents and said that Dylann was quiet and had a "resting face" and did not show much emotion. Lack of affect continued into adulthood. Coworkers from Clark's told the social historian that Dylann did not have "too many facial expressions" and mostly demonstrated a "blank stare."

Communication of his own affect was quite inconsistent. He was not able to say much about situations that make him sad or angry. Indeed, he was only able to discuss negative emotions when returning to preferred topics of racism and films. He said that black on white crime angers him and he might cry if watching a film alone. He was not able to link any physiological experiences to his emotions (for instance, “I feel hot when I am angry” or “I get queasy when I’m anxious”), which is unusual.

Difficulty understanding, developing and maintaining appropriate social relationships. This section is focused on the symptom category that includes disruption or delay in the development of age appropriate interpersonal relationships with others. By adolescence, people typically have at least a couple of close friendships; by young adulthood, it is typical to have at least attempted a romantic relationship. This category also includes difficulty understanding social expectations and relationships in different contexts.

In evaluation, Dylann presented as remarkably naïve and childlike. Although now 22, Dylann’s physical appearance is more like that of an adolescent in his mid-teens. His interactions are typical, however, of an even younger child. When the evaluator first met Dylann, his childlike presentation was quite jarring in light of the nature of his charges. His naiveté was illustrated by his response when told that the evaluator had met his father. Dylann said, “He’s cool. He’s pretty cool, but he’s not as cool as me.” Likewise when discussing his evaluation with the prosecution’s mental health expert, Dylann said, “Park Dietz doesn’t think anything is wrong with me. He doesn’t think I have autism. He’s my friend.” Former coworkers and his sister also described him as seeming much younger than his chronological age. His mother’s boyfriend told the social historian that “Dylann is a kid, not a man. He seems so young.”

Certainly, Dylann presents like a young teen who is striving to appear older than he really is. When asked about whether he likes manga, a popular form of Japanese comic art, he insisted that he does not like it because “it’s lame” and “nerdy people” like it. He said, “you should not read it as an adult.” He said the same thing about American comics. “People should not read comic books” because they are “too childish.”

Social insight was limited. In the evaluation, Dylann reported having no friends currently and, despite saying “I’ve had friends in the past” was able to name only one person he truly considered a friend, Jack Chandler. He explained that Joey Meek was “an associate.” Dylann explained that Mr. Meek may face eight years in prison for failing to report what he knew of Dylann’s plan to attack the church. Dylann smiled awkwardly and said “that’s messed up” and “that’s my fault but I don’t think about it.” His views on friendship were immature. He described friends as people who “spend time with you” and “are nice to you.” They “share with you” and “you’ve known them for awhile. You get along and have common interests.” These responses are very immature, particularly for someone with a high verbal IQ. While he appropriately mentioned shared interests, his response reflects little reciprocity and describes only what the other person would do for him. Most people, by adolescence, define friendship in more reciprocal terms (e.g., “You help *each other*. You look out for each other.”) When asked how one can discern between friendship and people with whom you just work with or go to school, he replied, “I don’t know. You have hung out with them? I don’t think people would pretend to be your friend unless to get something.”

In evaluation, Dylann appeared embarrassed (flushed, looked down but without change in affect) when asked about dating and sexual relationships. He declined to answer questions about dating relationships, saying "I can't talk about it." Asked why, he explained "I can't say. It would give a hint at it." When pressed to talk about his dating history, he admitted that he now wishes he could have had a dating relationship, while before incarceration he never thought he would. He did stipulate that everyone who weds should "have a prenup" because someone can steal half of your stuff. Asked why people get married, he explained "because they are in love and don't think they ever won't like each other." Asked what is a nice thing about marriage, he answered, "Seeing it's what you're supposed to do, a social thing. You'd worry it wasn't official if you weren't married." Asked what may be difficult about marriage, he replied, "You're a prisoner."

Insight appeared to be better developed for people other than himself. He understood, for instance, that people may appear on Jerry Springer because "they don't know better." However, his parents reported that he often complains about that show and has likely heard explanations from others about why people would appear on television under such circumstances.

Dylann's sister, Amber, said that she does not think he knows the social rules for how to behave in different situations. She also noted that he was not exposed to many situations as a child and, thus, was not expected to know social rules. Aunt Erin and Uncle Joe described Dylann not understanding when he needed to leave a family party and, even at age 20, suggested that "maybe he didn't learn that social cue." They also noted that he did not say goodbye before leaving functions. On the other hand, grandparents stated that Dylann said goodbye before leaving their house.

In another example of Dylann not understanding social expectations without direct instruction, Melissa Chandler, mother of Dylann's deceased friend Jack, described seeing Dylann for the first time after Jack's death. She said to investigators that Dylann hugged her "very apart" and did not show emotion. In her interviews for this evaluation, Dylann's mother described coaching her son to hug Jack's mother before she came over because she did not believe Dylann would know that a hug was expected.

On an adaptive behavior scale (SIB-R) that provides age equivalent scores to correspond to parent report of observed behaviors, Dylann's social behavior was rated by his mother at the level of someone 9-years, 3-months old. For instance, he was rated as not taking part in social games when younger, not talking about the same things that others in a group are taking about, not planning for and entertaining in the home, and not making social plans. While some aspects of this score may be related to his social anxiety (as discussed later in this report), several items related directly to social *skills*.

Bonnylin Henry, the Sunday school teacher who knew Dylann as an adolescent, said to federal investigators that Dylann would not interact with other students and did not want to be around them, that his only friend in class was his sister. She said that he did not have any friends like the other kids seemed to have. For example, he did not bring friends with him to church like most of the other kids did. He also did not talk about having friends or a "best friend" like you would expect. Similarly, when interviewed by the social historian, Dylann's 8th grade teacher Ms. Biddulph said she did not see much interaction because the other kids in her class seemed indifferent about Dylann or thought he was weird and mostly just ignored him. Reverend Metze, who became pastor at St. Paul's church in 2007, said that he did not know Dylann to have any friends. As an

adolescent, Rev. Metze said that Dylann had a hard time developing relationships with peers because of social awkwardness and that Dylann's father confessed that he could not connect with him. Because Dylann seemed so socially challenged, Metze told the social historian that he wondered if Dylann had autism spectrum disorder.

For a period of time in middle school, Dylann was part of a small group of friends from his neighborhood. Dylann's 8th grade algebra teacher, Ms. Darce Cruera, told the social historian that she knew the boys with whom Dylann was spending time: Joey and Jacob Meek. Ms. Cruera said the boys "were trouble waiting to happen" and that they did not have kindness. Rather, she said they were rude, abrasive, and unsavory with poor hygiene. She said they had no social skills and no idea of appropriate boundaries and she was shocked to see Dylann with these boys.

Even when he had other teens to hang out with, there was a sense that Dylann was not a social person. In her grand jury testimony, Lindsey Fry said that Dylann was not a social person and that his mother forced Dylann to hang out with Joey Meek because she was concerned about his lack of social relationships. Mr. Meek also confirmed this in an interview with federal investigators.

David Sprayberry, a former boyfriend of Dylann's mother, recalled the period in middle school when Dylann sometimes was interacting with other kids, including Joey Meek and an African American young man. Mr. Sprayberry told the social historian Dylann did not want to be around other kids. "He was different, out of place." Despite the fact that he was not often social, Dylann sometimes engaged in unusual interactions. Dylann once went to see a band by himself at a bar in the Vista. When his mother went to pick him up, Dylann asked if the band members could come back and stay with them. The band members were probably in their 20s, significantly older than Dylann, and were going to sleep in their van. Mr. Sprayberry allowed it and said the band (4 or 5 band members) stayed in the basement. Dylann visited with the band members when they were in the basement. David thought this was the most excited he ever saw Dylann. Episodes of sociability were short-lived, however, as a later boyfriend, Danny Beard, told the social historian that "Dylann was different" from other teens and "had no friends." Mr. Beard saw Dylann with Jack but said he did not have other friends. Likewise, his classmate, Mr. Rodriguez said Dylann did not really have any close friends but remembered him hanging out with Joey Meek. Kimberly Konzny, Joey Meek's mother, said in her interview with federal agents that the only friends Dylann had were people her son introduced him to. Dylann's father spoke with the social historian and recalled a single instance of Dylann befriending another child when they were once in Key West. It seems remarkable that Dylann's father could recall only one situation in which Dylann befriended another person during a vacation, visit to a park, or other outing.

Mr. Rodriguez, a former classmate of Dylann's, was interviewed by the social historian. Mr. Rodriguez said that he transferred into Carolina Springs Middle School in 8th grade and that he was likely the one who reached out to befriend Dylann. Dylann would not seek others out in conversation. He said Dylann was "not extroverted, low key and kept to himself."

When Dylann did reach out to make social contact, his actions were sometimes odd and made others uncomfortable. Nolan Byrd, in a witness statement, said he knew Dylann for three years through Laura Plexico and Jack Chandler but only hung out with him once. He went to Dylann's house with the mutual friends and played video games for a couple of

hours. This would have been approximately 2012. In 2014, after about two years of no contact, Dylann called Byrd “out of the blue” and asked if he knew any skinheads and whether he had any black friends. Mr. Byrd described Dylann as “strange and uncomfortable.” Ms. Clifford also described Dylann as “weird and awkward.” She told the social historian that Dylann called her a couple of months before the shooting and asked if she wanted to go sightseeing or to historical places in Charleston. He asked about a specific plantation, churches, and historic churches. She said she “got a weird vibe” from the phone call because he was so focused on Charleston and because the call was out of nowhere. He was overly familiar, as if he and she were good friends, but she had not seen him in years.

According to family members, Dylann had little sense of the dominant culture. This is unusual in adolescence, when most teens strive to look like the peers in their social group. Dylann did not appear to care about popular styles, fashion, or how others were dressed when choosing his own clothes and hairstyle. Dylann’s mother in interview for this evaluation said he had his own fashion sense, did not follow any trends and was not aware of how these outfits looked to others. He did not dress appropriately for the weather; if he wanted to wear sweatpants in the summer he would, despite the heat. Several family members noted that he wore two pair of pants even when working outside on hot summer days. He was very specific about his hairstyle and selected the bowl cut, rather than a more popular style. Family members and friends described clothing and hair trends that did not fit with the style of his classmates.

Family members reported a tendency for Dylann to strive to seem “cultured.” He became somewhat obsessed with the idea of culture and called his sister to try to force her to take a quiz about whether she was cultured. During this phase, Dylann started to refer to his paternal grandfather as “Granddad” instead of “Papa” and asked about changing his own middle name, Storm, to something more classic like Michael or Daniel. Dylann’s paternal grandmother noted that Dylann thinks she and her husband are cultured because they read a lot and listen to classical music. In evaluation, Dylann was eager to discuss travel to Europe, speaking French, and other topics he considered cultured.

Restricted-Repetitive Behaviors and Interests in Adolescence/ Adulthood

Stereotyped or repetitive speech, motor movements, or use of objects. This category of behaviors includes performing the same actions repeatedly or in a highly specific manner. Fewer repetitive movements or stereotyped behaviors were noted in adolescence and adulthood than in childhood. A reduction of such ASD symptoms is common among individuals who move on to fixation on particular topics.

Two possible repetitive motor mannerisms were described, although these are not necessarily indicative of ASD. When he visited his Roof grandparents, they said Dylann did not stay seated. He would pace, “wear out the floors,” if he were talking to his mom or dad on the phone. Mr. Rodriguez, Dylann’s classmate from 8th grade, also described a repetitive way in which Dylann moved his hair out of his face. He demonstrated to the social historian how Dylann swept the bangs across his forehead from left to right. Mr. Rodriguez said that Dylann did this a lot, every couple of minutes even if it did not seem to be out of place. Mr. Rodriguez also described a grimace when he moved his hair to the side.

Excessive adherence to routines or resistance to change. In a number of different ways, Dylann seemed eager to create order and rules for himself where these things did not exist. These behaviors are described in more detail below. Creating routines or insisting on certain behaviors is one way to add structure to chaos or to help organize an environment that does not make sense. In interview, Dylann also described his desire for more rules and structure in social interactions. He said that society needs more rules because “people need order and not chaos.” He lamented the fact that there are few public service (PSA) announcements that tell people how to behave anymore and described PSAs from the 1950s that warn children about homosexuality. Dylann said that there should be more of these because they “provoke morality” and “encourage good things, not bad.” (The topic of discussion quickly veered off into comments about race, with Dylann saying that they do not make PSAs anymore because if they did Obama would have one on “how not to profile Muslims.”) As noted previously, Dylann makes statements about what women should and should not do, which also provide “rules” to understand people’s roles in the world.

From all reports, Dylann clung to the rules that existed. His father described that Dylann was exceedingly rule-bound about expiration dates and sought to throw out food before other family members thought it was reasonable to do so. Another such rigidity is Dylann’s inflexibility with language. Many family members, members of the defense team, and Dylann himself have all stated that when someone repeats something Dylann said, he cannot tolerate any paraphrasing. He views even slight deviations from wording that do not change the meaning as “lying.” As his father told the social historian, if his mother said something to him like “now Dylann, you told me X” he would say, “no mom, that’s a lie; that is not how I said it.” He meant that she had not used precisely the exact words in the exact order that he used them.

There are many routines or tasks that he insisted on performing or having others perform in particular ways. His mother’s boyfriend, in interview with federal investigators, called Dylann “very particular” about things ranging from brands of cleaning products to chicken nuggets. Dylann’s sister and parents said that his clothes had to be washed a certain way. He insisted on certain detergent that was free from dyes and other additional chemicals (All Free and Clear), and he did not like his mother to use much detergent in the washer. When she was speaking to the social historian, Dylann’s mother demonstrated by holding up her fingers how much Dylann wanted her to use, which was approximately half of what she would ordinarily use. Dylann’s mother explained that he was so particular about it that he would follow her into the laundry room and watch to see how much product she used and whether his clothes were washed inside out. When Dylann was arrested a large number of unwashed t-shirts and pairs of underwear were found in his car. Perhaps he was not able to do laundry in his preferred way while living from his car and, rather than use the wrong detergent, he chose to purchase additional pairs.

Dylann’s sister also said that he was particular about his hair and would cut his own in order to get it just right. Dylann’s sister also shared that in high school, he was insistent on wearing skinny jeans to the point that he failed physical education when he stopped going to class because the jeans were too difficult to take on and off. These may also have served a sensory function, as noted with the double pants above. According to his mother, Dylann also insisted on using specific face wash (Clean and Clear), bath soap (Dove), and shampoo (a specific kind of Suave). Dylann’s father said that when Dylann was at his house if he did not have the brand of face wash he used, he would either leave or ask his mother to bring the “correct” face wash to him. His coworkers from Clark’s told the social

historian that Dylann always ordered the same thing for lunch: a 10 piece chicken nuggets, half regular, half spicy.

Other quirks with his clothing were also described. Employees at Clark's explained to the social historian that they do not have to wear a uniform, but everyone generally wears a t-shirt and pants or shorts. In contrast, Dylann always wore long pants rolled up to his calves and his socks up high to where the pants were rolled up. No one else ever wore their pants this way. Dylann often wore two shirts. He wore a Clark's t-shirt with another shirt underneath. It was not clear why he would wear extra clothes in South Carolina in the hot summer.

Dylann's fascination with clothing and insistence on specific articles of clothing is odd. His jumpsuit in jail is an area of obsession. He prefers jumpsuits with distinct striping (i.e., not faded). Although he does not break the jail's rules in any other context, he disclosed keeping an extra jumpsuit in his cell in case he is assigned one in the future on which the striping is too faded to be distinct. His sister told the social historian that on her last visit to see him in jail, Dylann "mostly talked about how much he loves his jumpsuit."

His father and paternal grandparents noted Dylann to be very observant of his environment and sensitive to minor changes. Entering a room, for instance, he noticed if something small around the house had been moved and would inquire about it (e.g., what happened to that [picture]?) or if someone's appearance was altered (e.g., "where are your glasses?"). It was further reported that although he did not appear to be upset by such changes, he might remark on them even before saying hello, rather than following accepted social rules and greeting the person first.

Intense preoccupation with particular topics. Dylann has exhibited intense interests over time. Specific interests during later childhood and adolescence included Star Wars, Maple Story (a computer-based videogame), Bionicles, dogs, history/historical sites, being "cultured," and dinosaurs, and his sister reported that he would be "consumed" by these interests at different points. His father described that it was hard to capture his attention when he was "absorbed" by interests like Maple Story or Bionicles. His sister said that Dylann did not want anything to do with things unless they were specifically about his current interest.

Dylann pursued his preoccupation with racism with an autistic intensity. It pervaded all aspects of his life. According to Jacob Meek's FBI interview, Dylann maintained 88 friends on Facebook, which is a reference to Hitler. Mr. Meek also said that Dylann said his favorite song was *Ice Cream Truck*, a song by Montana of 300. The lyrics of this song are racist and talk about murdering "niggas." Dylann spent his free time visiting confederate museums, reading racist blogs and websites, and talking about topics related to race. His concerns are not limited to African Americans, however, and in his writings he expresses negative views and stereotypes about homosexuality, women, and Jews, as well as other minority groups.

Unusual sensory interests or aversions. Family members were unsure whether Dylann's dislike of chemicals, in part, is related to olfactory sensitivity. His mother was certain that Dylann has a history of being particular about things being clean and his clothes. Shortly before the time of the crime, Dylann started wearing 2 pairs of pants at a time. Dylann's mother does not recall seeing Dylann wearing multiple layers of clothing until around the time he started working at Clark's. Wearing double layers of clothing, as

noted above may have served a sensory function, as doubling pants can increase the feeling of compression, although Dylann's mother hypothesized he may have been trying to appear bigger. Similarly, photos from Dylann's car at the time of arrest showed he had a number of t-shirts that were cut off at the bottom, and he described requiring pants of a specific length. He may have insisted on a certain length because the feel of excess fabric bothered him. Alternately, he may be bothered by the visual aspects of bulky clothes (that is, they do not look "just right").

Several people testified that Dylann is not physically affectionate. As discussed in the early childhood section, this may be related to a sensory abnormality known as tactile sensitivity.

Implications for ASD Symptoms in Young Adulthood

Most people with ASD look typical. Unless there is an underlying genetic syndrome that produces facial anomalies (which is rare), people with ASD look like everyone else. When a person with ASD does not let others know about his disability or when the underlying disability is not identified, people do not make modifications to expectations or accommodate workload or social interaction. Because the individual seems "normal," demands placed on them are consistent with demands faced by same age peers without developmental problems.

People who suffer with real disabilities can present as highly capable and mask their deficits. This is particularly true in people with high verbal ability and intact intelligence. Their speech is likely to cause others to over-estimate their comprehension and ability. For Dylann, the gap between his adequate intellectual ability and poor performance in real-world settings is remarkable. His self-care skills before his arrest were quite limited. His mother rated some of his self-care skills at the level of a grade school student. Social interaction, notably, was rated at the 9-year, 3-month level and was his lowest adaptive score.

CO-OCCURRING PSYCHIATRIC CONDITIONS & DETERIORATION

Dylann's Developmental Trajectory

Dylann demonstrated symptoms of ASD from an early age but did not receive appropriate treatment. While his developmental milestones were attained within normal limits (with the questionable exception of speech), several concerns about the quality of his socialization were apparent from a young age, yet he never received appropriate intervention. He continued to experience social-communication symptoms in isolation without support. Over time without development of appropriate social skills, his stress in social situations amplified with anxiety so severe he rarely left the house. As described below, he turned to drugs and alcohol to self-medicate his social anxiety. Over time while isolated, he became frankly depressed. Alone with the Internet and his psychiatric disorders, Dylann's thinking became increasingly disconnected from reality.

It seems likely that from birth Dylann had a predisposition toward a schizophrenia spectrum disorder, which co-occurs with ASD symptoms at a relatively high rate that may have been either triggered or worsened by drug use.

Without a supportive social network or other protective factors in place, symptoms of anxiety, depression, disordered thinking, and delusions grew. This complex of psychiatric problems, combined with Dylann's immersion in an online world of hate, appears to have provided conditions that gave rise to his crime.

Deteriorating School Performance

Dylann left school after repeating 9th grade three times without successful completion, twice in two different public schools and once in an online program. His failure in school was atypical for the Roof family. As his grandmother reported, his cousins and sister are college graduates or are still successfully attending school. In contrast, Dylann dropped out after the ninth grade. Ms. Roof recalled before that, in middle school, Dylann was on the honor roll.

Dylann's performance in grade school was reported to be good, but grades from 1st – 5th grade were not available. In 6th grade, his grades ranged from a 76 (in Family and Consumer Science) to 100 in French, and he was also successful in 7th grade (ranging from 71 – 94 at Hand Middle School). From there, however, Dylann declined. In 8th grade at Carolina Springs Middle School, he received a 50 in Algebra. By 9th grade, he was failing in other subjects as well. His grades were so poor that he was retained in 9th grade for a second year. (As noted earlier in the report, school changes were often related to moves the family made when Dylann's mother changed boyfriends.)

Some decline is also evident in standardized test scores. Standardized achievement testing scores (PACT) were initially above average but declined over time so that by 8th grade, Dylann's scores were within the average range but lower than the numerical mean. Dylann's 5th grade principal described him as not "overly confident or brimming with self-esteem." The principal, Dr. Wachter told the social historian that the difference between Dylann's high PACT scores and his relatively lower grades indicated a problem. There was a discrepancy between potential/ability and Dylann's actual performance at school. In retrospect, Dr. Wachter said it appears possible "something was going on" that interfered with Dylann's achievement. He further explained that this pattern of performance indicates a problem with work habits or that "something psychological or social is going on."

Consistent with this description, Dylann's 7th grade teacher, Ms. Adams, told the social historian that she saw more potential in Dylann than what he achieved. She described an uneven pattern of performance, in which he would do well for a period and then have points of struggling. Ms. Adams said that Dylann's fluctuating performance was a sign that something was going on, but she did not know what it was.

Certainly, by 9th grade it was evident that Dylann was struggling academically. In addition to the slip in academic performance, it was also in 9th grade that Dylann had behaviors that resulted in in-school suspension. At White Knoll High School, he received an in-school suspension for refusing to follow directions and then failed to report for the in-school suspension. He received several out of school suspensions for failing to report for Saturday detentions in his second year of 9th grade.

It is worth noting that a number of stressors were building for Dylann during this time:

- In October of 2008, queries on one of the family's computers (presumably Dylann's searches) included searches for lethal doses of common over the counter medications, including acetaminophen and ibuprofen.
- In December of 2008, Dylann's stepmother, Paige Mann, and his half-sister moved out of his father's home.
- Ms. Melissa Chandler, mother of Jack Chandler, reported that she did not allow her son to go to Dylann's father's home during this time because the home "looked very run down."
- Dylann's father was divorcing his stepmother, Paige Mann; their divorce continued during 2009-10.

There was an apparently volatile period that followed, and in December of 2009, Dylann and his mother were evicted from David Sprayberry's home.

In March of 2010, Dylann changed high schools and started attending Dreher High School. He failed to earn credit for three of the courses he took that semester and dropped out of high school later that year without completing 9th grade.

Executive Function

Some reporters suggested that Dylann was distracted and inattentive. There is little evidence in the record for a diagnosis of an attention deficit disorder. However, Dylann does report challenges with particular aspects of executive functioning. "Executive functioning" refers to the set of cognitive functions that regulate cognitive control of behavior. On a self-report scale of executive function symptoms (BRIEF), Dylann endorsed clinically significant impairment in shifting and in initiating. This suggests that he has more challenge than most people when expected to move from one topic or activity to the next and that beginning tasks or initiating problem solving behaviors is difficult for him. Dr. Moberg's neuropsychological evaluation found executive functioning deficits as well, in particular marked difficulty with planning and difficulty switching cognitive set. This suggests that it is difficult for Dylann to map out his approach to problems in an efficient fashion and that he has marked challenge shifting his thinking from one approach to another. Deficit in these areas, like most domains of executive function, are associated with learning difficulties and are common in ASD.

Lack of Initiative

Adaptive function, those skills we require to live independently as adults, is impaired in nearly all people with ASD. In individuals with average or higher IQ, these skills deficits may be misunderstood and viewed as being the result of laziness or refusal (which may also be present, of course). It is important to note, however, that adaptive deficits are so common as to be expected among people with ASD. Indeed, best practice for autism assessment always includes administering adaptive behavior measures. In addition to ASD, Dylann seems to have experienced bouts of depression and attenuated psychotic symptoms, both of which can also cause deficits in self-care. However, when adaptive deficits are observed in depression and psychosis, they tend to represent deterioration that follows a more typical course of earlier development. The course for Dylann seems to have involved moderate impairment in adaptive functioning throughout childhood and

early adolescence, followed by a marked decline in adaptive function that coincided with the onset of other psychiatric symptoms.

A number of personality and cognitive factors that are part of Dylann's ASD may be at the root of his adaptive functioning deficits. Research suggests that more inflexible people with ASD, regardless of intelligence, may have even greater difficulty learning daily living skills and becoming independent.⁸ This certainly seems to be the case for Dylann who had difficulty with daily living activities, as described below, insisted on a number of inflexible routines, and rated himself as having significant problems with shifting cognitive set.

Although common in ASD, adaptive function deficits appear to be independent of social skills. One might expect the level of autism severity to be positively related to the level of adaptive skill deficit; but in fact, research on relationships between autism severity and adaptive behavior has produced inconsistent findings.⁹ Rather, it appears that the executive functioning deficits associated with ASD (for Dylann challenges include the executive functions of initiating tasks, planning, and shifting from one topic to another) are more likely at the root of adaptive behavior deficits.¹⁰ That is, people with ASD who have intact intellectual ability but deficits in executive functioning tend to show greater deficits in adaptive function.

Formal measures of Dylann's self-help skills revealed notable deficits. Because Dylann instructed her not to cooperate with this assessment, his mother was reluctant to provide anecdotes that made him stand out as atypical. However, she did complete a rating scale of his adaptive behaviors. The age equivalent scores ranged from 9-years, 3-months to adulthood. An age equivalent is a score calculated to compare a person to other age groups whose average scores are within the same range. Dylann's eating and meal preparation age equivalent, for instance, was 11-years, 1-month, and domestic skills were rated at 13-years, 10-months. He *knows* how to do these tasks. He *can* perform them. He simply does not do them without someone explicitly telling him that he needs to. Further, he often asked his mother to do things for him. His mother explained, for instance, that if Dylann wanted his sheets cleaned, he asked her to wash them (and to wash them in highly specific ways, as discussed elsewhere in this report).

Indeed, even after he was adult, Dylann's mother cleaned his room, and he described no ambition to be on his own in the world. In this evaluation, he said, "I am OK living with my mom" and that he has never really lived away from her. There was a brief period when he sometimes stayed with Joey, but he was never away from home for long. Dylann said that he maintained his own money, when he had money and that he had no bills. Asked if he'd prefer living on his own, he commented "probably not. I'd rather be with my mom and not worry. Even if she tells me what to do." Asked what would be most difficult about living on his own, he answered that his mom "pays for food and everything."

Despite limited independent living skills, Dylann was able to get a job. It is important to note, however, that Dylann was not required to apply or interview for the positions he held. He worked for friends of his father's, and work was arranged by his father. Even once his father intervened to find him work, Dylann was not able to maintain it. It is not known whether he has the capacity to select an appropriate position, apply for it, interview successfully, and obtain employment. When arrested in February of 2015 for asking strange questions at stores in the mall, Dylann told police that his parents were pressuring him to get a job. This odd behavior may have been a misdirected job search.

There is evidence of poor problem solving and psychiatric symptoms interfering with employment. Dylann's father reported to the social historian that Dylann resisted getting a job because he did not want to leave the house. To help Dylann, his father said he purchased a car so that Dylann could travel to work. His father elaborated that he believes Dylann likes the fact that he does not have to work now that he is in jail. According to his father, when Dylann worked at Clark's, his manager said he was a good worker, but Dylann complained to his father that there were chemicals in the straw mulch that they used. The manager told Dylann's father that he just stopped showing up.

Dylann's former coworker told the social historian that he asked Dylann what he would do if his parents did not support him anymore. Most adults do not wish to present themselves as dependent on their parents, but Dylann replied that he would not be able to survive.

Even if Dylann had fruitful employment and an opportunity to live alone, it is not clear that he would be successful. The low ratings on the adaptive behavior scale suggest that his executive functioning deficits and psychiatric symptoms interfere significantly with his ability to take care of himself. Before incarceration, he did not dress himself appropriately for the weather (age equivalent 14-years, 5-months). His mother said she needed to help him with many personal self-care tasks, including making doctors appointments and purchasing personal care items. She also purchased his clothing.

A number of reporters described Dylann's lack of plan for his future. As Danny Beard described it in a witness statement, "I thought it was real strange, being as old as he was and to not want to get out in life, you know?"

Anxiety

There is substantial evidence of anxiety throughout Dylann's life, although some family members and friends seemed unaware of it. His grandfather, for instance, said that he was never aware of Dylann being "anxious," even though Dylann spent the better part of his adolescence alone in his bedroom and only occasionally went out. This could be a difference in terms used to describe behavior because Dylann was described as "painfully shy" or introverted by numerous people interviewed (his mother, his grandparents, Uncle Joe, Susan & Clay Hargis, David Sprayberry, Darce Cruea, Carson Cowles, Ted Wachter, Vanessa Clifford, Rico Rodriguez, Brian Fanning, and Linda Brown.) Many people went a step further and described Dylann's tendency to avoid people and situations (his mother, his father, Carson Cowles, Uncle Joe, Sister Amber, grandfather, Uncle Paul, Tony Metze, Bonnie Henry, and Linda Brown).

Some social avoidance is common in ASD because people with this disorder lack certain social skills, which can make interaction hard. Still, Dylann's anxiety symptoms extend well beyond what would be expected from ASD alone. Self-consciousness and the related social anxiety are the most prominent of Dylann's anxious traits, and symptoms are so severe as to impact vital decision-making processes. Most recently, Dylann said during evaluation that he no longer wanted to cooperate with assessments because he did not want to be embarrassed in court. He said he would be embarrassed if his Wikipedia page said that he had mental illness or seemed uncool. He said, "I am not worried about the death penalty. I am worried about being embarrassed." Notably, Dylann presents this fear

as related to personal embarrassment rather than any personal agenda connected to his racist beliefs.

Dylann's mother said that she could not get Dylann to continue seeing a therapist to treat his social anxiety. She reported asking for help from physicians when he was a child but was not sure what to do when he would not participate in therapy. In childhood, Dylann sometimes spent the night with a boy named Caleb. Caleb's mother, Linda Brown, was interviewed by the social historian. Ms. Brown explained that Dylann would sometimes plan to spend the night but at the last minute would claim he needed to go home because there was something he needed to do the next day (the implication was that he did not have to leave but felt scared and was using this as an excuse). Ms. Brown described Dylann as "skittish and scared." These traits apparently continued, as his mother told the social historian that Dylann did not like for it to be dark in his room and he used a nightlight or left the TV on.

Danny Beard in grand jury testimony said that Dylann did not often leave the house or his room. Mr. Beard explained that Dylann enjoyed the family's pet cats, to which he was kind, but he was shy with Danny's daughters when they visited. Mr. Beard explained that Dylann seemed uncomfortable with him as well. Other family members mentioned the cats as well, noting that Dylann still inquires about the well being of the animals but rarely asks about the well being of family members.

While people close to Dylann were aware of his quirks from a young age, these behaviors became more pronounced and evident to others as he grew older. Dylann's sister explained that the challenges became most apparent in high school. She said that if he had anxiety before that time, it was "on the inside" and not visible. Dylann's cousin Kasey stated to the social historian that she was not aware of Dylann's anxiety until after his sister moved out of his mother's home when he was 11-years old. At that point, he started refusing to go certain places because there were too many people around. Dr. Mubarak, Dylann's pediatrician told the social historian that Dylann was different when he came for his 16-year old check up. He was withdrawn and his mother reported that he was not leaving the house. He said that Dylann was staying home from school for body image issues, secondary to acne. Later, at his 18-year old well check, Dr. Mubarak diagnosed anxiety because Dylann was not leaving the house.

In spring of 2009, Dylann attended the Lexington Mental Health Clinic. At that time, he reported to staff that he was anxious about being around people and people looking at him. He did not like to be around crowds, and he worried "all the time" about it. He was already avoiding groups of people at that point. Additionally, he reported obsessive-compulsive (OC) symptoms of repeated urinating and checking of door locks, as well as panic symptoms. Dylann also reported transient OC symptoms in the past that included repeated hand washing. The therapist suggested that Dylann was using drugs to self-medicate his anxiety symptoms. Despite recommendations for treatment, Dylann refused to continue with sessions and did not take prescribed anti-anxiety medication. According to his mother, he said nothing was wrong with him and treatment would be a waste of time.

In his teen years, Dylann was painfully self-conscious. He thought people were looking at him and he did not want to go anywhere. His mother's ex-boyfriend, David Sprayberry, described a phase in which Dylann wore the same hooded sweatshirt every day to hide his face. Dylann's mother said he insisted that she not stop alongside other cars in traffic

because people would look at him. The ex-boyfriend described this tendency with the hood as “almost like a cocoon that Dylann liked to be in” and elaborated that “Dylann did not like other people to see him.” At times, his self-consciousness was tied to specific aspects of his appearance (haircut too short, afraid he had acne).

The increasing social anxiety culminated in Dylann leaving school. He quit after May 2010 and only pursued online courses and his GED after that.

Coworkers from Clarks told the social historian that just trying to have a conversation appeared to make Dylann embarrassed. If Dylann came to his manager to ask for a day off, he would wring his hands in nervousness. His manager said he felt it was hard for Dylann to talk, and it was painful to watch. Once Dylann asked a coworker to ask the manager for a day off for him, but the coworker declined. The coworker explained that it was as if Dylann was afraid of confrontation. Danny Beard, in his grand jury testimony, described Dylann as jumpy. He said Dylann would leave the room when he entered as if afraid of him “like I’d hurt him or something.” When Dylann and his mother’s boyfriend were in the store together, Dylann moved away and did not stay in the same aisle.

During this evaluation, Dylann was asked about his intense embarrassment. He said he was worried because “it’s lame” to seem embarrassed so he does not want to give signs of feeling that way. Asked what he was worried about embarrassing him at trial, he said “what if someone laughs at me or if I think someone is laughing at me.” He said he would be particularly embarrassed if any grammatical mistakes, misspellings or messy writing were shown in court. He explained that would throw him off. He said he was afraid the prosecution would read his manifesto aloud and that would also embarrass him.

Depression and Isolation

There is also significant evidence for depression during adolescence. Depression commonly co-occurs with ASD¹¹ and with anxiety disorders.¹² People with social difficulties are naturally isolated. Social anxiety and depression lead to further isolation. This is of particular concern because isolation can worsen psychiatric symptoms.¹³

Prior to adolescence, flat affect, which can indicate depressed mood but may be related to the nonverbal communication deficits associated with ASD, was the primary overt symptom of depression reported. Once Dylann was an adolescent, however, other signs emerged. Dylann’s 8th grade teacher, Ms. Biddulph said that she was concerned about Dylann because he always seemed unhappy, but she never had specific information that would have warranted reporting to authorities. She found him to be very withdrawn and apathetic. She further described him as “tired and lethargic.” Fatigue and psychomotor retardation are common symptoms of depression.

Even before trouble started with Dylann’s mother and her ex-boyfriend David Sprayberry, there is evidence that Dylann was withdrawn and isolated. Mr. Sprayberry told the social historian that on a typical day Dylann would come home from school and go into his room, emerging only to get food, which he ate in his room.

Dylann’s mother said that she worried “a lot” about whether Dylann might be depressed, but she did not see signs that he was suicidal. Internet searches in 2008 include both searches for particular models of guns (“how to get a glock”) and for lethal doses of over

the counter medications (these began in October 2008). Approximately 5 months later in March of 2009, Dylann reported suicidal ideation and went to the Lexington Mental Health Center. The record indicates he told his mother he would run away and kill himself. Dylann later reported to the therapist that he made this threat because he did not want to go to school.

Dylann's mother did not recall precisely when Dylann first began to stay in his room all the time but said he has always preferred to be "in his own little world." When she asked if he needed anything, he would typically say "no" and refuse to come down and eat with her. His mother explained that she feels ashamed to admit it, but she really did not know what Dylann was doing in his room because she did not go in there or make him come out. She did not think he was doing anything bad because he never seemed secretive about anything. Dylann's mother said that she tried to talk to Dylann about why he did not want to leave the house and told him that he needed to get out or get a job. She asked him over and over if he was depressed, but he always insisted he was not. He insisted there was nothing wrong with him and he would say that he did not want anyone to "label" him.

Visits to his pediatrician over the next couple of years demonstrate that Dylann lost ten pounds between well checks at ages 16 and 17. Loss of appetite and unplanned weight loss are common symptoms of depression.

This is also the period during which Dylann's isolation worsened. In May of 2010, Dylann completed the last semester of high school that he attended in person and later started an online program. Danny Beard, Dylann's mother's boyfriend, reported to federal investigators that Dylann would not leave his house or his room. The problem worsened. His sister Amber said, based on her visits to Dylann and his mother's home and conversations with family members, that she believed Dylann remained in his room 24 hours a day, 7 days a week, except to go to the bathroom. She said he refused to go out to eat, although his father would force him to attend family gatherings. Even when his sister or her boyfriend went to Dylann's house to visit, he would come out to say hello and then go to his room. She estimated that he had basically been living inside his room on his computer for nearly 5 years before the crime. Dylann's sister recounted an incident when she offered to pay him \$40 in order to get him to go out to dinner on his birthday. In that instance, he was willing to drive to his father's house to meet her, and they went to a nearby restaurant he liked and ate quickly. His sister said that he just looked at her and ate his food without talking.

Dylann's father was more aware of the isolation beginning around the time Dylann dropped out of Dreher High School. He stayed in his room at his mother's house and would not leave. His father told the social historian that "it was so bad" that Dylann would not go to the mailbox on the road in front of his mother's house. His mother reported that Dylann would be up at night and nap during the day. Sleep disturbance is a common symptom of depression.

Uncle Joe described Dylann as reclusive and noted that he stopped regularly attending family events. When his dad pushed him to attend, Dylann looked "miserable and painfully shy." Uncle Paul said he also noticed this tendency and thought it was unusual. Paul described Dylann's appearance at this time as "a vacant, blank look" and referred to Dylann as "despondent."

Dylann's grandmother, even after years of his apparent agoraphobia, said she was not aware Dylann was "troubled" and saw no signs that he might be depressed. This is consistent with other family members' views of the grandmother as overly optimistic when faced with upsetting information.

Evidence of depression is apparent during the period leading up to the crime. Dylann spent most of his day alone in his room. Dr. Thomas Hiers, a retired child psychologist who was interviewed by the social historian, said that in February of 2015 he was on Craigslist trying to sell a kayak. He noticed an ad seeking someone to go accompany the poster to Charleston for a historical tour that read: "No Jews, queers, or niggers." The ad included a photo of the writer in front of a memorial at the statehouse. Dr. Hiers responded with a message that he was surprised by the writer's multiple biases. The poster of the ad, who was later established to be Dylann, wrote back with a lengthy diatribe that stated Black men are rapists, the Holocaust never happened, and homosexuals are sick. Dr. Hiers said that he replied in a naïve manner by suggesting that the writer expose himself to other viewpoints. Dr. Hiers offered to pay the writer to listen to some TED talks. The writer replied by thanking him for the suggestion and said that he seemed like a nice man. The poster of the ad wrote, "I am in bed, so depressed I cannot get out of bed. My life is wasted. I have no friends even though I am cool. I am going back to sleep." Dr. Hiers contacted a professional colleague in Columbia, John Connery, who agreed to help. Dr. Hiers then wrote the poster and said, "My friend would like to take you out to lunch – he will try to help you get your life moving." The writer never responded. Dr. Hiers contacted local police immediately after the crime was reported in the news and told them of his exchange with Dylann.

Unclear Sexual Orientation

Several people who were interviewed stated that they were unclear about Dylann's sexual orientation.

Dylann's sister, Amber, in one interview said she thought he might be gay and, in another interview suggested he might be asexual. Amber noted that their father always "wanted Dylann to be more sporty" and "be a boy." Reverend Metze, who became pastor at St. Paul's church in 2007, said that Dylann was "not normal" and possibly struggling with his sexuality. His former stepmother, Paige Mann, described him as "always different" but said she assumed he seemed odd "because he was gay."

Certainly, Dylann is embarrassed when the topic of dating is raised. In his evaluation, he declined to answer questions about dating relationships, saying "I can't talk about it." Asked why, he explained "I can't say. It would give a hint at it." A coworker told the social historian that Dylann laughed like it was impossible when the topic of getting a girlfriend was mentioned. Dylann gave his "strange grin" and stopped talking as if embarrassed.

According to his mother, Dylann said he was never going to get married and no girl would ever date him. His mother said to the social historian that she does not think that Dylann has ever had sex with anyone. She does not know if he has kissed a girl. She said he was highly embarrassed about the topic and if she even tried to ask him about sex, he would say that a mother should not even say the word "sex" in front of her son. An ex-boyfriend of Dylann's mother, David Sprayberry, also told the social historian that Dylann thought it was inappropriate for a mother to use the word "sex" in front of her son. When his mother

did discuss sex, Dylann “clammed up”, left the room, and said “mom” in an exasperated tone.

While it is not necessarily unusual for a man in his early 20s to decline to talk about sex with his mother, it is odd that someone Dylann’s age had no known romantic partners at all. This may point to asexuality, which is thought to occur in only 0.5-1%¹⁴ of the population, but may also suggest a lack of social skills required for effective dating, or a diffuse sexual identity.

Disordered Thought: Delusions, Paranoia, and Other Unusual Thinking

Over the years, Dylann has displayed a number of highly unusual symptoms that suggest disordered thinking and lack of contact with reality, and a number of people interviewed described Dylann as odd or weird. His behavior was reported to be particularly atypical in the months leading up to the shooting. Atypical behavior is often a sign of mental illness, particularly psychosis.¹⁵

Dylann is young, and, as discussed more fully in Dr. Maddox’s report, he is at the age where symptoms of schizophrenia spectrum disorders are most likely to become apparent. The symptoms displayed at this time, in this evaluator’s opinion, are consistent with what is known as attenuated psychosis syndrome. It appears that Dylann is aware of this, even as he continues to try to conceal symptoms. For instance, as reported in his grandfather’s grand jury testimony, Dylann confessed to his grandfather that based on an online quiz he took, he met criteria for a diagnosis of paranoid schizophrenia. Obviously, an online quiz is not a valid measure of psychopathology, but it is significant that Dylann was motivated to take such a quiz, that the answers scored him within range for this condition, and that he reported it to his grandfather, who referenced it in his testimony. It is not clear what symptoms he endorsed on the quiz, but there is an increasing amount of evidence for a psychotic thought process.

Delusions

During this evaluation, Dylann described a complex somatic delusion that included an imbalance of testosterone, such that one half of his body was less developed than the other. He stated that this resulted from problems with his thyroid. (He does, in fact, have a very minor thyroid dysfunction that does not require medication.) A note from the medical assistant to the physician in Dylann’s endocrinologist’s office from April of 2014 noted: "He called very anxious. You saw him 4/4/14 and have him coming back 6/13/14 after lab work. He is not on thyroid medication and wants to get on thyroid medication immediately. He thinks his thyroid is getting bigger. It may be best if you call the pt, he is extremely anxious. It looks like in your office note there were some anxiety factors as well. "

This is consistent with a pattern of other instances of delusions about medical issues as well. Danny Beard said Dylann was concerned that one shoulder was higher than the other, his mother stated that Dylann’s thyroid issue started because he was convinced he had cancer. Mr. Beard did have a bout of cancer and had his lymph nodes removed. This occurred before Dylann’s mother knew or dated him. Once Dylann knew about Mr. Beard’s cancer, he started checking his own lymph nodes and expressing concern that they were enlarged and saying he had cancer. His mother took him to the doctor, and he became obsessed with the idea that he had a problem with his thyroid. He would go to the doctor by himself and spend his own money to get blood work or whatever tests he could get,

even when the doctors said they were not necessary. The doctors said there really was not anything wrong with him, and this upset Dylann.

Dylann told the evaluator that he does not expect to die if he receives the death penalty. He said that he will be rescued when “the race war breaks out.” At a later date, he advised her to move from Chicago because it is heavily populated with African Americans, while the rest of Illinois is not. When “the race war breaks out,” Dylann said that Illinois’ Whites will flock to Chicago to fight, and the evaluator does not want to be caught up in that. He also said that things were going to “get ugly” at his trial, hinting at violence, but declined to be specific about what would happen. When making these comments, Dylann was not tentative or expressing fears of a worst-case scenario. Rather, his tone was emphatic, as if he were certain about what to expect.

Paranoia

There is substantial evidence for paranoid thinking as well. Beliefs in racist ideas or conspiracy theories are not necessarily associated with psychiatric illness in an individual. However, when an individual feels compelled to act or his choices and behavior are substantially controlled by these ideas, they can cross the line into psychosis.¹⁶

Clearly, Dylann’s belief in the threat posed by race-based conspiracies drove him to action. He also adjusted his daily behaviors because of concerns about contamination from chemicals. Dylann was very “peculiar” about chemicals according to his mother’s report. He did not want anything with chemicals to come into contact with him. For example, he told his mother not to use dusting spray or other cleaners in his room because he did not want the chemicals in there. He would tell her not to dust in his room even if he wasn’t in the room because he was afraid that there would be chemical residue left over from whatever it was that she used to clean. He refused vaccines because of fears of chemicals, told this evaluator that vaccines cause autism, and begged his mother not to allow his cats to receive shots that contain “chemicals.”

Paranoid thinking also extends to other conspiracies. As Dylann’s father explained to the social historian, Dylann does not trust anyone who works for the government. In a video visit on August 21, 2016 with his parents, Dylann talks about chemtrails, the conspiracy theory that the government pumps chemicals into the sky via airplanes. Dylann said that “they” (the government) are spraying lithium (a mood stabilizer used to treat bipolar disorder) in the chemtrails. To this, his mother replies, “I thought you said those were made by aliens.” She uses a sincere tone and gives no indication of joking. In evaluation, Dylann said that “it’s crazy when people believe in the illuminati and chemtrails” but later in the same conversation expressed concern that heavy metals have been found in chemtrails. When asked about the source of his data, he said he did not know.

Dylann sees other conspiracies as well. In this evaluation, Dylann said that he believes that fluoride lowers IQ. He described the Holocaust as a conspiracy. His grandfather reported that Dylann said “writers from the west coast” promote conspiracy theories, and he was very interested in a number of government conspiracy theories, including the assassination of John F. Kennedy and Martin Luther King. When Dylann was about 14-years old, per his mother, he refused to receive vaccinations because he thought it was something that the government could use to control you. Paranoia about the government and media were also apparent when this evaluator went to see Dylann shortly after a man drove a car into a crowd of people in France. Dylann’s South Carolina public defender told

him that the man who crashed car into crowd in France was not a Muslim. Dylann replied that was not true, that “media is trying to distract you.” Although this disbelief of the media, viewed in isolation, could be cast as a political perspective, Dylann’s distrust of the media must be understood in conjunction with his other symptoms of unusual thinking, as indicative of mental illness. .

Besides the larger conspiracy theories, Dylann holds other paranoid beliefs. As described in the Anxiety section above, Dylann’s level of self-consciousness has crossed the line into paranoia. People described a phase in which Dylann wore the same hooded sweatshirt every day and his David Sprayberry described Dylann using the hood to hide his face. His mother said he insisted that she not stop next to other cars in traffic because people would look at him. If she were driving him somewhere, Dylann would tell her to speed up or slow down so that they would never be parallel with another car on the road because he did not want the people in the other car to look at him. If they had to stop at a stoplight, Dylann would turn his head away from the window so that people in the other cars could not see him. David Sprayberry described this tendency to hide from others with the hood as “almost like a cocoon that Dylann liked to be in.” He elaborated that “Dylann did not like other people to see him.”

Dylann told this evaluator that he thought the defense team was manipulating her and said, “I don’t want you to get in trouble” but “These guys [the defense] are tricking you and coaching you on what to say.” He appeared genuinely concerned about me. In fact, Dylann apologized to me for interfering with my evaluation when he asked his family not to speak with me.

Justin Meek when interviewed by investigators said that when using marijuana Dylann claimed to hear voices. Justin also said that Dylann told him that marijuana made him so paranoid that he stopped smoking it.

Unusual Thinking

At times, Dylann’s thinking seems confused In the most striking instance of this during the evaluation, Dylann claimed that he once ran a website and was interviewed by someone from the Daily Stormer (a white nationalist website). He said that the Daily Stormer ran an article and quoted Dylann as saying “white people are responsible for all of the ills in the world.” Dylann said that he does not want people to know that he made that statement in the interview. Dylann then said, “maybe it wasn’t really me, but it sounded like my voice.” Not only is Dylann’s confusion about whether he was interviewed notable, but he also referenced the piece on the Daily Stormer as an “article” and then went on to say “it sounded like my voice” as if he could hear it.

Atypicality

In addition to the numerous instances of people describing Dylann as odd, as described above, a few highly unusual behaviors are worth describing:

On the occasions when Dylann did reach out to make social contact, his actions were sometimes odd and made others uncomfortable. Nolan Byrd, in a witness statement, said he had hung out with Dylann only once and knew him through classmates at school. In 2014, years after they had last spoken and after recently adding him as a friend on Facebook, Dylann called Mr. Byrd “out of the blue” and asked if he “knew any skinheads.”

Mr. Byrd reported that Dylann went on to ask if Byrd had any black friends, talked about drugs (suboxone) and was “strange and uncomfortable.”

The last time Vanessa Clifford heard from Dylann was “weird and awkward,” according to her interview with the social historian. She explained that Dylann called her a couple of months before the shooting and asked if she wanted to go sightseeing or to historical places in Charleston. He asked about a specific plantation, churches, and historic churches. She felt “a weird vibe” from the phone call because he was intensely focused on Charleston and the call was “out of nowhere.” Ms. Clifford explained that Dylann acted like they were good friends, but she had not seen him in years. He also asked if she knew anyone who sold crack (and said he was joking when she said no) and whether there are a lot of black people in Charleston. He seemed to be in a heightened state, as Ms. Clifford described him as sounding “like when he’s really into something, when he’s hyper.”

Certainly, many people with ASD and no other mental health problems can present as odd because they do not adhere to social conventions.

Amber, Dylann’s sister, explained that when she called home, he rarely wanted to speak with her. She stated that in approximately 2013, however, Dylann started initiating weird conversations. He called her and asked odd questions or wanted to talk about strange things. She recounted that he once called her to ask a bunch of questions about how cultured she was, and he concluded that she was not cultured at all. He called her once while she was living in Florence [85 miles from Columbia] and asked her to bring him some chicken, but Amber told him she was not going to bring him chicken from Florence. He would sometimes call her and ask her for money.

Amber said she became engaged to be married in November 2014. Soon after, in early 2015, Dylann texted her from phone numbers she did not recognize and pretended to be two different ex- boyfriends: Grayson and Andrew. Amber said that she was not sure how Dylann had access to phone numbers that she did not recognize. She thought he might have been using a computer program to generate the texts from anonymous numbers. The search history from computers Dylann accessed during this time included terms for “prank call” and lends credence to this hypothesis.

Amber also said Dylann called her at times with weird questions, such as calling and asking her to buy him a laptop. A number of other reporters, including Dylann’s grandparents, report “crazy questions.”

Drug usage

As noted above, there is evidence that Dylann used drugs to self-medicate for anxiety. There is evidence of drinking as well. In her grand jury testimony, for instance, Laura Plexico described seeing Dylann drunk, crying and hitting himself, as a teen. His drug use and drinking are discussed in more detail in Dr. Maddox’s report. For the purposes of this report, it is important to state that drug use can trigger psychosis, but a higher rate of psychosis also occurs among those with ASD, most of whom do not use drugs. It is not possible, at this point, to disentangle the effects drug use may have had on Dylann’s complex psychiatric presentation. It is also important to restate that drug use and drinking are often used to self-medicate for untreated psychiatric disorders, particularly for anxiety.

Preoccupation with Racism

Dylann operated in isolation. He did not join groups, and he had little opportunity to discuss racism and his developing ideas. His internet search history includes searches related to racial content as early as 2008 (search for Aryan Brotherhood), and in evaluation, Dylann explained that he became “racially aware” after Trayvon Martin was shot in 2012 and he Googled “black on white crime.” As Dylann described in his confession, when he made that Google search, he was presented with FBI statistics that purportedly showed staggering rates of White women raped by Black men. He did not question these statistics, and apparently did not discuss them with others who could raise questions about their validity.

While there is no reason to believe that ASD can cause racism, ASD as well as other psychiatric conditions can fuel behavior in people that draws them to fringe political movements.¹⁷ In a case study, Palermo described a teenager with ASD in Italy. The boy read rightwing extremist blogs on the Internet, developed a preoccupation with extremist thought, and published an online manifesto. When the manifesto was published online, a white supremacist and anti-Semitic organization (the Storm Front Italia) was impressed and contacted the boy, and he was asked to lead a new neo-Nazi group.¹⁸

As Palermo explained, the protective factors that stop others from committing violent acts (i.e., protective factors that prevent juvenile delinquency-- normative beliefs such as attachment to significant others, involvement in traditional activities, commitment to traditional types of action, beliefs in the moral value of society¹⁹) may be absent or less salient in a person with ASD, who is socially isolated and “spending most of his time reading, on the Internet or traveling about the city in which he lives...”²⁰

During those critical years between ages of 14 and 18, Dylann was reading information online, but he was not having many in-person conversations with others who could provide additional information or point him toward other sources. Dylann explained that the more extreme views he encountered online were off-putting at first, but he got more and more accustomed to them as he continued reading. He exposed himself to large amounts of racist information online and, in the absence of interpersonal relationships, work, or other hobbies, the interest swelled.

On the Internet, Dylann encountered extreme rightwing ideology. With Dylann’s disordered thinking and autistic focus and concentration, along with lack of exposure to competing points of view, racist thought became the most important thing in his life.

CONCEPTUALIZATION

Dylann presents a complex diagnostic picture. His early development is significant for traits associated with autism spectrum disorder, as he grew older anxiety (resulting from uncertainty about social expectations, what to expect from others, as well as budding psychotic symptoms) increased, in later adolescence symptoms of depression and negative symptoms of psychosis took hold, and more recently psychotic symptoms of disordered thinking and delusions have intensified.

Autism Spectrum Disorder

As outlined in this report, the evidence for Dylann's diagnosis of ASD is clear. The diagnostic criteria presented in the beginning of the report appear again here with the symptoms of ASD displayed by Dylann and reported by multiple informants highlighted.

The social-communication difficulties of ASD include persistent difficulties in social communication and interaction include (currently or historically):

- Deficits in social-emotional reciprocity that may present as:
 - This can be difficulty in back and forth conversation
 - Reduced sharing of affect, interests, or emotions
 - Lack of initiation or response to overtures
- Deficits in reading and using nonverbal communication that may present as:
 - Poorly integrated verbal and nonverbal communication
 - Abnormalities in eye gaze for social purposes
 - Abnormalities in gesture use (from absent to overly frequent and exaggerated)
 - Abnormalities in facial expression
- Difficulty understanding, developing and maintaining appropriate social relationships that may present as:
 - Challenge with adjusting behavior to suit context or audience
 - Difficulties with age appropriate friendships
 - May include absence of or reduced interest in peers

A severity rating from 1-3 is applied to the Social-Communication domain when making a diagnosis. Level 1 is the appropriate rating for Dylann. Level 1 is lowest level of impairment and refers to individuals "Requiring Support." A case for a higher level of impairment can be made but is likely affected by other psychiatric issues that interfere with social-communication. The specific example of behavior listed for an individual who meets level 1 criteria in the DSM-5 is "...May appear to have a decreased interest in social interactions. For example, person who is able to speak full sentences and engages in communication but whose to-and-fro conversation with others fails, and whose attempts to make friends are odd and typically unsuccessful."

The atypical behaviors category must include at least two of the following (currently observed or reported historically) for diagnosis. Those clearly demonstrated and reported are highlighted in yellow. Those that are somewhat questionable are highlighted in light gray:

- Stereotyped or repetitive speech, motor movements, or use of objects, such as:
 - Lining up toys *albeit questionable*
 - Idiosyncratic speech, such as lines from other sources
 - Repetitive motor mannerisms, such as hand flapping *if we include pacing*
- Excessive adherence to routines or resistance to change, including:
 - Extreme distress at changes
 - Difficulty transitioning
 - Inflexible, "black and white" thinking
 - Rigid insistence on particular routines
- Intense preoccupation with particular topics, such as:
 - Perseverative interests
 - Strong attachment to or preoccupation with certain objects
- Unusual sensory interests or aversions that include:

- Apparent indifference to pain or temperature *may be related to tolerance of multiple layers of clothing while working outside during South Carolina summers*
- Adverse response to specific sounds or textures
- Seeking out smell or tactile stimulation
- Visual inspection/fascination with objects

A severity score is also applied to the Restricted and Repetitive Patterns of Behavior domain when making diagnosis. In Dylann's case, Level 2 "Requiring Substantial Support" is the appropriate categorization. This includes inflexible behavior, difficulty coping with change or other atypical behaviors that occur often enough to be apparent to casual observers and interfere with functioning in a variety of contexts.

When making an ASD diagnosis, it is also necessary to note whether any language or intellectual impairment is present. Currently, Dylann demonstrates neither. Therefore, the full DSM-5 ASD diagnosis for Dylann is:

Autism Spectrum Disorder without accompanying language or intellectual impairment, not associated with a known etiology, not associated with another neurodevelopmental, mental or behavioral disorder.

Comorbid Psychiatric Conditions

As noted elsewhere in this report, there is a high rate of psychiatric comorbidity, or co-occurring mental health conditions, in ASD. Among Dylann's comorbid psychiatric symptoms, the psychotic symptoms are the most concerning. He demonstrates evidence of delusions and paranoia, as well as atypicality. These symptoms are consistent with a diagnosis on the schizophrenia spectrum. In his psychotic thought process, Dylann has irrational beliefs. Most notably in this case, psychotic thinking might impact Dylann's behavior by causing him to *feel compelled to act* and by rendering him unable to interpret reality from delusion or fantasy.

IMPACT OF ASD ON BEHAVIOR

The diagnosis of autism spectrum disorder indicates significant social- communication impairments and restricted interests and repetitive behaviors. These deficits affect every aspect of the individual's life, including work, social relationships and activities of daily living. In addition to the core social-communication impairments, individuals with autism are known to have difficulty in several other areas of functioning, including adaptive behavior, problem-solving, and conceptual understanding.

Implications of ASD on case and behavior in court. Dylann's ASD symptoms likely contribute in the following areas that may impact his case and his courtroom presentation:

- **Overestimation of ability:** People who suffer with real disabilities can nevertheless present as highly capable in ways that mask their challenges. This is particularly true in people with high verbal ability and intact intelligence. Others hear their speech and are likely to over-estimate comprehension and ability. For Dylann, the gap between his apparently adequate intelligence and poor performance in real world settings is remarkable. He has minimal employment history (briefly working for a friend of his father's), was not able to complete high school, dropped out of online school (later obtaining his GED), and was not living independently. Such a gap between potential

and actual achievement is common among individuals with ASD, who have difficulty applying their intelligence and skills in real world situations.

- **Isolation and a computer:** Autism specialists are starting to understand that excessive free time, unlimited computer use, and the social cognitive deficits of ASD are a dangerous combination.²¹ Dylann shut himself in his room and almost never worked, rarely socialized, and did not do much to take care of himself with the exception of the medical attention he sought with an intensity that the appropriate medical specialists found unwarranted. As noted elsewhere in this report, this lack of self-care is common in ASD and in psychosis. Humans are meant to engage in actions that fill our lives: working, socializing, and other aspects of adult life. Dylann was not doing these things. His days were open and largely free to be spent on his unhealthy preoccupations.

Dylann read a lot of information online but did not evaluate this information critically. Because of his ASD and related tendency toward literal thinking, Dylann was likely to interpret material he read as true. He did not question statistics or anecdotes he encountered on blogs, for instance.

Certainly, other young people *without* ASD may not want to work and may remain in their parents' homes for much longer than typical. However, a neurotypical person who remains at home will continue friendships, may date and otherwise pursue normal adult life. This was not the case for Dylann, who lacked the skills required to do these things.

- **Comorbid psychiatric conditions:** When a person with ASD presents in the courtroom, he is likely to have other psychiatric disorders that contribute to his situation. There is a high rate of co-occurring psychiatric conditions in ASD. In one study, adults with ASD met criteria for an average of three additional psychiatric diagnoses.²² This same study found that, currently or in history, 56% of participants with ASD also met criteria for social anxiety disorder and 77% met criteria for major depressive disorder. While the precise percentage varies, other studies have also found elevated rates of anxiety and depression among people with ASD.

With regard to psychosis, in particular, studies show higher rates of autism features in individuals with schizophrenia when compared to controls without any psychiatric disorder.²³ The autism and schizophrenia spectrums share biological underpinnings, as well as many diagnostic criteria. In particular, the negative symptoms of schizophrenia (asocial behavior and limited affective expression, in particular) can present the same as social-communication deficits of ASD. Both ASD and schizophrenia are also characterized by impairments in theory of mind, or the understanding that others have differing thoughts, beliefs, and ideas from oneself. Intact theory of mind is not only an important precursor for language and social-communicative development, but is also directly related to the experience of empathy.²⁴

Research also supports the presence of positive symptoms of psychotic disorders in autism (e.g., hallucinations, delusions). For example, Dossetor and colleagues²⁵ described four cases of individuals with pervasive developmental disorder who presented with a range of paranoid ideations and hallucinations. While Dossetor argues that these ideas of grandiosity and paranoia were not comorbid psychotic

disorders, but rather overlapping symptoms, several studies document high rates of co-occurrence of the two disorders. The presence of delusional thinking and paranoia more specifically in autism is evident through both case studies²⁶ and empirical studies showing higher scores on questionnaires assessing paranoia in individuals with autism compared to controls²⁷. The co-occurrence of autism and psychotic disorders is very high²⁸. One study from the National Institutes of Health found that 30% of the sample of youth diagnosed with schizophrenia had ASD as well.²⁹ Epidemiologic and retrospective studies have also found a link between childhood ASD symptoms and later onset of psychotic symptoms³⁰.

- **Communication:** Like many adults with ASD, Dylann's responses to questions are overly specific and literal in his use of language. For instance, in his confession when asked whether he has been to the church before, he says "well, not *in* it," apparently needing to clarify that though he did come to the church and ask someone a question, he had not entered the building. Asked if he is a white supremacist, he starts out by distinguishing between a white "supremacist" and a white "nationalist;" asked if he has "remorse," he responds by talking about "regret." This apparently strong need for very precise language indicates that he may interpret others' speech literally. This tendency is also related to his tendency to focus on irrelevant details as discussed below.

Dylann's literal style of communication is of particular importance when considering his use of false information on the Internet. He read information as literal and took what he read at face value when it was any source that confirmed his beliefs and assumed that commentators were speaking literally when they made any type of racist statement.

- **Nonverbal behavior and presentation:** ASD leads to deficits in nonverbal communication (eye gaze, body language, and gestures to communicate), as well as challenges reading others' nonverbal communication. As researchers in Cardiff presented, when people with ASD are questioned by police, they may present as "aloof, literal, insensitive, or frankly giving the details of what they did."³¹

For Dylann, this manifests in several ways that may cause him to appear unemotional or indifferent, including but not limited to:

- Dylann's affect is often incongruent with the content of what he is saying. Incongruent affect is a common psychiatric symptom observed in both ASD and psychosis. For Dylann, this is most apparent in his facial expression (usually smiling) that is inappropriate to the situation, as well as to laughing that does not serve a social function.
 - Dylann often avoids eye gaze of others and, even if attentive, may look down or stare off. This is related to his ASD but is also exacerbated by his social anxiety.
 - Dylann's use of gestures can be odd. He alternates between almost no movement to repetitive use of a limited range of exaggerated gestures.
 - When others use facial expression and body language to communicate with Dylann, he may perceive only the most extreme reactions or may misperceive the purpose of their communication.
- **Lack of social modeling and teaching:** Dylann has a long history of limited and atypical social engagement, yet he never received intervention to address these

deficits. Lack of engagement with others limited his ability to develop his interaction and relationship skills. As a socially inept and anxious young child, he never developed the skills he required for social engagement and had a very odd course of social development as a result. By the time he entered young adulthood, Dylann did not have the skills he required to establish meaningful friendships and intimate relationships.

- **Lack of relationships:** According to Dylann and family members, he had one true friend, Jack Chandler, who died in a car accident. Other peers were acquaintances but not people with whom he described having a real friendship. There is no evidence that he dated or had an intimate relationship with another person. This level of isolation left Dylann with very little information from the outside world other than what he gleaned from very specific websites he chose to read. He rarely spoke with others in any context. When he did speak with others about race, such as to a few peers in junior high, his acquaintances were racist themselves, found the statements entertaining, and, therefore, attributed the alarming statements he made as jokes. For this reason, his acquaintances did not provide negative feedback for racist comments or seek help to stop him from acting.

Dylann was not exposed to alternative viewpoints from friends, and only heard non-racist viewpoints from others when he chose to talk with his grandfather, a man he respected but saw as old and out of the loop. Thus, Dylann's racist and violent beliefs were allowed to fester and develop largely unchallenged. Just before the crime, when he began speaking with a few peers about his plans while heavily intoxicated, Dylann's thoughts had already spiraled so far out of control and sounded so unbelievable that no one took him seriously as a risk.

- **Theory of mind (perspective-taking) difficulties:** Theory of mind refers to a person's ability to take another's perspective. While there are competing theories of autism and whether theory of mind is the causal underlying deficit, it is clear that taking another person's point of view is a core symptom for individuals with ASD. Naiveté about the likely reaction of the listener was apparent throughout Dylann's evaluation and all materials reviewed. Dylann speaks about his ideas with a degree of ingenuousness that suggests he does not grasp how they will be received by others. For instance, asking the evaluator in a non-provocative manner "do you really think women should be allowed to vote?" Likewise, he does not seem to understand the seriousness of his situation. When confessing to the murders during an FBI interview, he is reluctant to admit to using any drugs. This suggests limited awareness of others' view of the seriousness of those respective crimes.

Theory of mind deficits are brain-based and affect social cognitive function. Thus, Dylann's ability to think about another person's perspective means that he does not fully comprehend how his actions have affected others. This may make him appear unempathic toward:

- Victims
 - Families of victims
 - His own family
 - The public
- **Poor problem solving skills:** Others who feel wronged pursue political advocacy or community organizing. Organizing and problem solving in a way that produces real change requires social skills and the ability to work with others; neither of which Dylann

possesses. As his neuropsychological testing demonstrates, Dylann also has significant difficulty with problem solving, a common deficit in ASD. Further, while he was able to choose a church, choose a weapon, and find out when to show up for the meeting, Dylann's plans were otherwise very poorly developed and executed. He actually arrived at the church long after the Bible study he was targeting would normally have ended. He had no contingency plan for if he did not get stopped by police. He had no alternative ready if he was not able to shoot himself. He did not even know where to drive once he left the church. Certainly problem-solving deficits are implicated. Further, it is exceedingly difficult for people with ASD to imagine hypothetical situations. He likely did not even imagine different scenarios for how things at the church might end. He rigidly held to one idea (suicide) and did not develop any alternate plans.

While his misplaced frustration and anger toward African Americans (and, indeed, many other specific groups of people) is wrong and misplaced, it is unfortunately not uncommon. What is unusual is Dylann's means of coping with his misplaced feelings. Without the capacity to turn to social outlets (e.g., white nationalist groups and organizations, which do exist) or more constructive problem solving, he resorted to violence.

- **Focus on irrelevant details of case:** Dylann, like most people with ASD, displays a tendency to become fixated on individual details and to miss the bigger picture of situations. This is quite apparent in his confession, where Dylann is cooperative in answering questions and willing to provide information. However, his answers, while apparently truthful, reflect no awareness of the "big picture," minimal understanding of the enormity of what he has done, the emotional impact of it on others or the big picture of the situation he is in and its consequences. This missing the forest for the trees is characteristic of individuals with autism, who have the ability to focus intently on small details or parts of the whole but frequently fail to derive the larger meaning in a situation.
- **Need for order and rules:** ASD may provide some explanation as to why racist ideas were appealing to Dylann. Dylann, as part of his ASD and OCD-like symptoms, has a strong need for order. The ideology he absorbed online and adopted offers a clear hierarchy among racial groups. The clarity and rigidity of these racial categories allows Dylann, a person with limited social insight who often does not perceive or understand high level social behaviors, to organize people and make sense of the world. This is a system that simplifies human interaction and renders it comprehensible.
- **Intense focus on area of preoccupation:** The intensity of Dylann's interests and the intensity with which he pursued them are typical in ASD. While the choice of race as an area of focus may not be related to ASD, the intensity of his pursuit is common for this disorder. Dylann spent an inordinate amount of time in obsessive research on "black on white crime" and other race-related topics and when searching, he pursued information that would confirm his racist beliefs. Researchers have suggested that perseverative interests or unusual thought patterns as critical factors leading to criminal behavior³² and that single-minded pursuit of a special interest, which is common when a person with ASD is preoccupied with a topic, can contribute to illegal actions.³³ Criminal behavior being based on a preoccupying interest is indeed recognized as a red flag for diagnosis of ASD in an unidentified adult.³⁴

CONCLUSION


As stated at the beginning of this report:

- Dylann was born with predisposition toward ASD and other psychiatric conditions that frequently co-occur (e.g., anxiety, depression and psychosis).
- He did not receive appropriate psychological and psychiatric treatment.
- A number of environmental factors exacerbated symptoms and/or led to expression of symptoms that might have been suppressed with appropriate treatment.
- Dylann's symptoms of ASD led to failure to develop a typical number of social relationships and those he did develop were superficial and lacked reciprocal quality appropriate to age-based expectations.
- In order to avoid the intense anxiety he experienced in interactions, Dylann cut himself off from the outside world. Due to his isolation, symptoms of anxiety and depression worsened and caused him to become further isolated.
- Unusual thinking, including delusions and paranoia, thrived in this isolation.
- Without input from competing viewpoints, Dylann went online, read and believed misinformation about African Americans, and developed a strong preoccupation with racism.
- Dylann's unusual thinking, coupled with an autistic intensity of focus on these interests, and the absence of meaningful connection to anything other than what he read on the Internet, gave rise to an irrational belief that he *had to* commit these crimes.

In this report, I applied my professional skills to explain the symptoms of autism spectrum disorder that shaped Dylann Roof's life since early childhood and that, in my professional opinion, played a substantial role in the development of his beliefs and behavior, including the violent and tragic crimes to which he confessed and for which he is being tried. I have also, albeit in less detail, noted symptoms of other psychiatric illness and the ways in which mental illness may help to explain Dylann's beliefs and these offenses.

I hold all of these opinions to a reasonable degree of psychological certainty.

Sincerely;



Rachel L. Loftin, Ph.D.
Licensed Clinical Psychologist, Assistant Professor

Appendix A: Materials Informing This Report

Materials from Federal Discovery

Bates Numbers	File Name
US000001-US000004	US000001 ATF Firearms Transaction Record 2015.04.16
US000005-US001577	US000005 Business Record Facebook, Dylann Roof 2015.07.16
US001605	US001605 Guest Register, Museum and Library of Confederate History
US001606-US001607	US001606 Incident Report, Columbia PD, 2015.03.13 (Loitering Earlewood Park)
US001608-US001611	US001608 Incident Report, Columbia PD, Dylann Roof Arrest 2015.02.28 (Possession of Drugs)
US001612	US001612 Incident Report, Columbia PD, Dylann Roof Paraphernalia 2010.05.07
US001613-US001614	US001613 Incident Report, Columbia PD, Dylann Roof Trespassing 2014.04.26
US001615-US001625	US001615 Incident Report, General Growth Properties, Dylann Roof Arrest 2015.02.28
US001626-US001630	US001630 Incident Report, Columbia PD, Roof Drug Arrest 2015.02.28
US001631	US001631 Handwritten Note, List of Church Target
US001632-US001633	US001632 Handwritten Note, Roof to Parents
US001634-US001659	US001634 Journal, Dylann Roof
US001660-US002937	US001660 Photographs, Kodak Camera, Part 1
US002938-US006973	US002938 Photographs, Kodak Camera, Part II
US012310-US012369	US012310 Photographs, lastrhodesian.com
US012370-US012922	US012370 Photographs, Vehicle
US012923-US013473	US012923 Report, Huawei Phone Contents
US016740	US016740 Miranda Waiver, Dylann Roof, 2015.06.18
US16744	US16744 FD302, Michael Myers, 2015.06.18 (FBI Interview Record)
US016747	US016747 FD302, Jeffrey Scott Hamrick, 2015.06.28 (FBI Interview Record)
US016748-US016749	US016748 Statement, Bernat, Dan, 2015.06.18
US016750	US016750 Statement, Burris, Joe 2015.06.15
US016751	US016751 Statement, Ledford, Scott 2015.06.18
US016752-US016837	US016752 Transcript, Dylann Roof, 2015.06.18
US016838-US016839	US016838 Hand-drawn Diagram, Dylann Roof, 2015.06.18
US016840-US016842	US016840 Text Manifesto and Homepage, lastrhodesian.com
US016909-US016911	US016909 Email, SLED Explanation of the CJIS Gun Check for ROOF, 2015.06.26
US016935	US016935 Divorce Record, Franklin Bennett ROOF and Amy COTES, 2015.06.29
US016936	US016936 Marriage Certificate, Eric Matthew MANN, Paige Hastings ROOF, 2011.08.20

US016947	US016947 Checks
US016948-US016959	US016948 Debit Card Statements, Dylann ROOF
US016960-US016966	US016960 Deposit Tickets
US016967-US016974	US016967 Deposited Items
US016975-US016978	US016975 June Statement
US016979	US016979 Sign Card
US016986-US017009	US016986 Statements
US017017-US017021	US017017 Receipt, Market Express, 2015.06.18
US017022	US017022 Invoice, Synovus Bank, 2015.06.24
US017023-US017024	US017023 Receipts, Palmetto State Armory
US017028-US017040	US017028 Records, Richland County Library, Dylann ROOF, 2015.06.23
US017049	US017049 Receipt, Walmart, 2015.06.07
US017058	US017058 DMV Record, Dylann ROOF
US017059	US017059 DMV Record, Franklin Ben ROOF
US017074-US017075	US017074 SCDMV License Records, MEEK Joseph Carlton
US017099	US017099 Insert, Documenting ROOF Employment at Clarks Pest Control, 2015.06.30
US017170-US017172	US017170 SN002 FD302, Christon Tychius SCRIVEN, 2015.06.18
US017173-US017177	US017173 SN004 FD302, Joseph Carlton MEEK Jr, 2015.06.18
US017178-US017179	US017178 SN010 FD302, Laura Ann PLEXICO, 2015.06.18
US017180-US017181	US017180 SN011 FD302, Brock Osteen PACK, John Henry PATTON, 2015.06.19
US017182-US017183	US017182 SN012 FD302, Thomas MILES, and Brian FANNING, 2015.06.19
US017184	US017184 SN013 FD302, Nolan BYRD, 2015.06.18
US017197-US017199	US017197 SN034 FD302, Vanessa Dawn CLIFFORD, 2015.06.18
US017202-US017203	US017202 SN041 FD302, Kay 'Kayse' Louise DRAEWELL, 2015.06.19
US017206-US017207	US017206 SN047 FD302, Kyle Joseph ROGERS, 2015.06.22
US017209	US017209 SN056 FD302, V Michael COUCH, 2015.06.22
US017210	US017210 SN059 FD302, V Michael COUCH RE Guest Register, 2015.06.22
US017215-US017217	US017215 SN064 FD302, Kimberly Ann KONZNY, 2015.06.22
US017218	US017218 SN065 FD302, Gregg Thomas STEWART, 2015.06.23
US017224-US017225	US017224 SN074 FD302, Debbie DILLS, 2015.06.23
US017226	US017226 SN079 FD302, Joseph MEEK, Kimberly KONZNY RE Bottle, 2015.06.23
US017239	US017239 SN092 FD302, Amber ROOF, 2015.06.23

US017243-US017244	US017243 SN098 FD302, Franklin Bennett ROOF, 2015.06.18
US017247	US017247 SN101 FD302, Joey Thomas WHITE, 2015.06.24
US017257-US017258	US017257 SN113 FD302, Brandon Green HICKS, 2015.06.25
US017266-US017269	US017266 SN125 FD302, Christopher Roman SALAS, 2015.06.22
US017270-US017274	US017270 SN126 FD302, Justin Tyler MEEK, 2015.06.22
US017275-US017279	US017275 SN127 FD127, Jacob Hunter MEEK, 2015.06.22
US017280-US017281	US017280 SN130 FD302, Shane ALIMO, Ronni UCCIFERRI, 2015.06.18
US017284-US017287	US017284 SN137 FD302, Dalton Denell TYLER, 2015.06.19
US017294-US017296	US017294 SN147 FD302, Cassie Elizabeth MOSTELLER, 2015.06.22
US017297-US017299	US017297 SN148 FD302, Lindsey Nichole FRY, 2015.06.22
US017300-US017311	US017300 SN149 FD302, Paige Sinclair Hastings MANN, 2015.06.26
US017317-US017319	US017317 SN153 FD302, Tim Edward WRIGHTSON, 2015.06.30
US017320-US017321	US017320 SN154 FD302, Brandon A GANTT, 2015.06.30
US017322-US017323	US017322 SN155 FD302, Amber R WHEELER, 2015.06.30
US017326-US017327	US017326 SN159 FD302, Ben ROOF, 2015.06.18
US017329-US017331	US017329 SN161 FD302, Joseph MEEK Jr, Kimberly KONZNY RE Tablet, 2015.06.24
US017332-US017333	US017332 SN162 FD302, April Lynne HUTTO, 2015.07.01
US017334	US017334 SN163 FD302, Elizabeth Oxford FOLEY, 2015.07.01
US017335-US017336	US017335 SN164 FD302, Joseph Blaine FOLEY, 2015.07.01
US017337-US017340	US017337 SN165 FD302, Eric Matthew MANN, 2015.06.26
US017341-US017342	US017341 SN166 FD302, Katie Abigail CHITTY, 2015.07.01
US017346-US017347	US017346 SN170 FD302, Matthew Ian SHEARER, 2015.07.02
US017372-US017373	US017372 SN199 FD302, Kory MAYO, 2015.06.24
US017377-US017379	US017377 SN202 FD302, Bonnylin Bonnie HENRY, 2015.07.01
US017380	US017380 SN204 FD302, Kathryn M STUTT, 2015.07.01
US017381	US017381 SN205 FD302, David CLARK, 2015.07.01
US017384-US017386	US017384 SN213 FD302, Tony A METZE, 2015.07.01

US017390-US017391	US017390 SN219 FD302, Melanie Joyce DELPIT, 2015.06.23
US017396-US017399	US017396 SN224 FD302, Amber ROOF, 2015.06.18
US017401-US017570	US017401 Photographs, ROOF Home
US017571-US017581	US017571 Photographs, Huawei Phone
US017582	US017582 Photograph, Bottle in MEEK Home, 2015.06.23
US017586	US017586 Photograph, Close-up of Dylann ROOF T-shirt Patch
US017588	US017588 Photograph, ROOF at Walmart, 2015.06.07
US017591-US017618	US017591 Photographs, Dylann ROOF at PD
US017626-US017633	US017626 Arrest Warrant, ROOF Drug Arrest, 2015.03.01
US017634-US017644	US017634 Attachment, Dylann ROOF Criminal History Obtained by SLED
US017886-US017887	US017886 Memorandum of Interview, SLED and Amber ROOF, 2015.06.18
US017888-US017889	US017888 Memorandum of Interview, SLED and Dalton TYLER, 2015.06.18
US017890-US017891	US017890 Memorandum of Interview, SLED LT Bo BARTON RE Ben ROOF, 2015.06.18
US017892-US017893	US017892 Memorandum of Interview, SLED LT Bo BARTON RE FANNING and SCHULER, 2015.06.18
US017894	US017894 Memorandum of Interview, SLED RE BEARD, Danny E, 2015.06.19
US017895-US017896	US017895 Memorandum of Interview, SLED RE ROOF, Amelia H 'Amy,' 2015.06.18
US017910-US017913	US017910 Transcript, CPD Interview of Ben ROOF, 2015.06.18
US017914-US017917	US017914 Transcript, CPD Interview of Dalton TYLER, 2015.06.18
US017918-US017921	US017918 Transcript, CPD Interview of Polly SHEPPARD, 2015.06.17
US017926-US017943	US017926 Transcript, CPD-FBI Interview of Felicia SANDERS, 2015.06.17
US017944-US017954	US017944 Transcript, CPD-FBI Interview of Felicia SANDERS, 2015.06.18
US017955-US017965	US017955 Transcript, CPD-FBI Interview of Paul ROOF, 2015.06.18
US017973-US017980	US017973 Transcript, Kamy MANIGAULT Interview with Felicia SANDERS, undated
US017981	US017981 Hand-written Note, Dylann ROOF Birthday from Ben ROOF
US017986	US017986 Hand-drawn Diagram, Felicia SANDERS, 2015.06.29
US017987	US017987 Hand-drawn Diagram, Polly SHEPPARD, 2015.06.29

US018501-US018508	US018501 Log and Email, Dylann ROOF Jail Calls, 2015.06.24
US018923-US018924	US018923 SCDMV License Record, Paige MANN
US018942-US018988	US018942 FD822 Information Package, Multiple Individuals, 2015.06.17 (Amber Roof)
US018942-US018988	US018942 FD822 Information Package, Multiple Individuals, 2015.06.17 (Benn Roof)
US018942-US018988	US018942 FD822 Information Package, Multiple Individuals, 2015.06.17 (Dalton Tyler)
US018942-US018988	US018942 FD822 Information Package, Multiple Individuals, 2015.06.17 (Felicia Sanders)
US019016-US019017	US019016 SN009 FD71 Complaint Form, Grayson HICKS, 2015.06.19
US019150-US019152	US019150 SN228 FD302, Randy WAINWRIGHT, 2015.07.07
US019153-US019154	US019153 SN229 FD302, Deborah Beard WAINWRIGHT, 2015.07.07
US019157-US019160	US019157 SN231 FD302, David Wayne SPRAYBERRY, 2015.07.09
US019167-US019171	US019167 SN238 FD302, Amy ROOF, 2015.07.07
US019172-US019173	US019172 SN239 FD302, Carson COWLES, 2015.07.07
US019174-US019175	US019175 SN240 FD302, Joseph ROOF, 2015.07.07
US019176-US019178	US019176 SN242 FD302, Franklin Bennett ROOF, 2015.07.07
US019180	US019180 SN244 FD302, Lindsey Nichole FRY, 2015.07.07
US019182-US019187	US019182 SN246 FD302, Jacob H MEEK, 2015.07.15
US019188-US019189	US019188 SN248 FD302, Nolan BYRD, 2015.07.16
US019193-US019194	US019193 SN255 FD302, Kristie LAKIN, 2015.07.16
US019198-US019199	US019198 SN263 FD302, Lucy ROOF, 2015.07.07
US019200-US019201	US019200 SN264 FD302, Danny BEARD, 2015.07.07
US019202	US019202 SN265 FD302, Paige Sinclair Hastings MANN, 2015.06.25
US019203-US019205	US019203 SN266 FD302, Michael, 2015.07.21
US019206	US019206 SN267 FD302, Lindsey Nichole FRY, 2015.07.21
US019207-US019211	US019207 SN268 FD302, Amber ROOF, 2015.07.21
US019212	US019212 SN270 FD302, Dalton TYLER, 2015.07.21
US019214-US019217	US019214 SN275 FD302, Joseph MEEK, 2015.06.20
US019219-US019221	US019219 SN278 FD302, Joseph ROOF Sr, 2015.07.07
US019222-US019224	US019222 SN279 FD302, Paul ROOF, 2015.07.09
US019225-US019228	US019225 SN280 FD302, Christon Tychius SCRIVEN, 2015.07.21
US019229-US019231	US019229 SN281 FD302, Cassie Elizabeth MOSTELLER, 2015.07.15
US019232-US019233	US019232 SN282 FD302, Christopher Roman SALAS, 2015.07.15
US019234-US019235	US019234 SN283 FD302, Samuel WIGGINS, 2015.07.30

US019236-US019239	US019236 SN284 FD302, Melissa L CHANDLER, 2015.07.29
US019241-US019243	US019241 SN286 FD302, Laura Ann PLEXICO, 2015.07.09
US019244-US019245	US019244 SN287 FD302, Vanessa Dawn CLIFFORD, 2015.07.09
US019246	US019246 SN288 FD302, Beverly ANDERSON, 2015.07.30
US019247	US019247 SN289 FD302, Jeanna SIMPSON, 2015.07.29
US019248	US019248 SN290 FD302, Kim FLEMING, 2015.07.29
US019249-US019250	US019249 SN294 FD302, Christopher Roman SALAS, 2015.07.20
US019254-US019255	US019254 SN299 FD299, John Austin MULLINS, 2015.07.31
US019256	US019256 SN300 FD302, Dalton TYLER, 2015.08.01
US019259	US019259 SN304 FD302, Keith JACKSON, 2015.08.03
US019261-US019263	US019261 SN306 FD302, Kevin AREHEART, 2015.08.03
US019448-US019460	US019448 Photographs, Dalton TYLER Facebook Friend Request, 2015.08.01
US019461-US019495	US019461 Arrest Warrant Paperwork for Federal Indictment, Dylann ROOF, 2015.06.17
US019499-US019513	US019499 Federal Indictment, Dylann ROOF, 2015.07.20
US019514-US019518	US019514 Incident Report, Columbia PD, ROOF and CHANDLER RE Public Drunkenness, 2010.12.03
US019519-US019527	US019519 NCIC Record Check, Dylann ROOF, 2015.06.20
US019528-US019558	US019528 Journal, Dylann ROOF, from Jail
US019561-US019562	US019561 Memorandum of Interview, SLED RE Page MANN, 2015.06.23
US019872-US019877	US019872 NCIC, Joseph MEEK, 2015.06.20
US019878-US019913	US019878 Photographs, Stills from Church Surveillance Video
US019914-US019984	US019914 GJ Transcript, Franklin Bennett ROOF, 2015.07.08
US019985-US020017	US019985 GJ Transcript, Amber ROOF, 2015.07.21
US020018-US020084	US020018 GJ Transcript, Amy ROOF, 2015.07.08
US020095-US020115	US020095 GJ Transcript, Carson COWLES, 2015.07.09
US020116-US020147	US020116 GJ Transcript, Cassie MOSTELLER, 2015.07.20
US020148-US020175	US020148 GJ Transcript, Chris SALAS, 2015.07.20
US020176-US020220	US020176 GJ Transcript, Christon Tychius SCRIVEN, 2015.07.21
US020221-US020285	US020221 GJ Transcript, Danny BEARD, 2015.07.08
US020286-US020322	US020286 GJ Transcript, Jacob MEEK, 2015.07.20
US020323-US020420	US020323 GJ Transcript, Joe ROOF Sr, 2015.07.09

US020421-US020476	US020421 GJ Transcript, Joseph Trenholm ROOF, 2015.07.08
US020477-US020497	US020477 GJ Transcript, Laura PLEXICO, 2015.07.09
US020514-US020546	US020514 GJ Transcript, Lindsey FRY, 2015.07.20
US020547-US020588	US020547 GJ Transcript, Lucy Dowdle ROOF, 2015.07.09
US020589-US020612	US020589 GJ Transcript, Michael Dale, 2015.07.21
US020613-US020638	US020613 GJ Transcript, Neil POWER, 2015.07.08
US020639-US020742	US020639 GJ Transcript, Neil POWER, 2015.07.22
US020743-US020763	US020743 GJ Transcript, Nolan BYRD, 2015.07.20
US020764-US020810	US020764 GJ Transcript, Paul ROOF, 2015.07.09
US020824-US020848	US020824 GJ Transcript, Vanessa CLIFFORD, 2015.07.09
US022887-US022093	US020887 Photographs, Crime Scene
US022094-US022216	US022094 Photographs, ROOF Home and Car
US022217-US022369	US022217 Transcript, Joey MEEK, 2015.06.20
***US022299	022299 Arrest Report, Shelby Police Department, 2015.06.18
***US022300-US022369	022300 Case File, Shelby Police Department
***US054113-US054120	US054113 ATF Report of Investigation, Brian SWEAT, 2015.06.18
US054137-US054138	US054137 DMV Record, David SPRAYBERRY
US054171-US054172	US054171 FD302, Andrew DODGE, 2015.08.12
US054176	US054176 FD302, Dylann Storm ROOF, 2015.07.31
US054177-US054180	US054177 FD302, Jennifer PINCKNEY, 2015.08.11
US054181-US054183	US054181 FD302, Joseph MEEK Jr, 2015.06.24
US054184	US054184 FD302, Joseph MEEK Jr, 2015.08.11
US054209-US054212	US054209 FD302, William B SHOCKEY, 2015.08.12
US054220	US054220 Hand-drawn Diagram, Jennifer PINCKNEY, 2015.08.11
US054221-US054235	US054221 Incident Report, CPD RE William SHOCKEY, 2008.03.22
US054239-US054262	US054239 Information, Thompson Funeral Home Page for Jack CHANDLER
US054828	US054828 FD302, Brandi WILLIAMSON, 2015.09.24
US054830-US054831	US054830 FD302, Jacquelin MUNOZ, 2015.11.16
US054840-US054841	US054840 FD302, Lindsey FRY, 2015.10.08
US054846-US054847	US054846 FD302, Robert MORRIS, 2015.09.29
US054850-US054851	US054850 FD302, Susan Cowles HARGIS, 2015.11.13
US055816-US055919	US055816 Photographs, Artwork and Personal Items provided by ROOF Family
US056697-US056700	US056697 SLED Evidence Submission, Drug Analysis, 2015.07.11
US056908-US056911	US056908 Receipt, Multiple Walmart Purchases
US057437-US057575	US056925 Records, ATT Multiple Numbers, 2015.10.03
US057775-US057777	US057775 FD302, Brandon Will SCOGGINS, 2016.02.29
US057789	US057789 FD302, Frederick 'Flynn' STORK, 2016.01.01

US057794-US057795	US057794 FD302, Zachary Vernon CARROLL, 2016.01.05
US058012-US058014	US058012 Receipts, Shooter's Choice, 2015.04.27
US058297	US058297 FD302, Alicia LLOYD, 2016.03.23
US058634	US058634 FD302, Debra DAVIS RE First Citizens Bank Records, 2016.04.07
US060466-US060473	US060466 Timesheets, Dylann ROOF, Clarks Termite and Pest Control
US060474-US060651	US060474 ZRT 3 Report, Kyocera Phone
US062046-US062076	US062046-1B70_photos
US062326-US062328	US062326-Letter-roof to Luff 7-29-16
US062861-US062904	US062861-Dalton Tyler GJ Transcript
US064235	US063235-SN412 FD302-Jacob Carter Interview 8-3-2016 044A-CO-6460937_0000412
US063253-US063255	US063253-SN425 FD 302-Dwayne Stafford Interview 8-29-2016 044A-CO-6460937_0000425
US063258-US063260	US063258-SN426 FD302-Lauren Knapp provided letters written by Roof 8-30-2016 044A-CO-6460937_0000426_1A0000001
US063261-US063263	US063261-SN426 FD302-Lauren Knapp provided letters written by Roof 8-30-2016 044A-CO-6460937_0000426_1A0000002
US063267-US063269	US063267-SN426 FD302-Lauren Knapp provided letters written by Roof 8-30-2016 044A-CO-6460937_0000426_1A0000004
US063270-US063272	US063270-SN426 FD302-Lauren Knapp provided letters written by Roof 8-30-2016 044A-CO-6460937_0000426_1A0000005
US063273-US063275	US063273-SN426 FD302-Lauren Knapp provided letters written by Roof 8-30-2016 044A-CO-6460937_0000426_1A0000006
US063276	US063276-SN426 FD302-Lauren Knapp provided letters written by Roof 8-30-2016 044A-CO-6460937_0000426_1A0000001
US063277	US063277-SN426 FD302 Lauren Knapp provided letters written by Roof 8-30-2016 044A-CO-6460937_0000426_1A0000002
US063281-US063283	US063281-SN431 FD302-Lauren Knapp provides scanned copy of letters 9-7-2016 044A-CO-6460937_0000431_1A0000001
US063448-US063450	US063448-SN440 FD302 Patricia J Hastings Interview 9-14-2016 044A-CO-6460937_0000440
US063700-US063701	US063700-3 Blue Notes from Vehicle-20160930_093853 1
US063702-US063703	US063702-3 Blue Notes from Vehicle-20160930_094633 3
US063704-US063705	US063704-3 Blue Notes from Vehicle-20160930_094724 5

US063717-US063718	US063717-SN458 FD302-Interview_of_Charles_G._Brown-1
US063756-US063760	US063756-SN470 FD302-Interview_of_Joey_Meek 10-12-2016-1
US067319-US067374	US067319-Maps 10-10-16 ppt
US-VID-001	US-VID-0001
US-VID-002	US-VID-002 (100_0491)
US-VID-003	US-VID-003 (100_0495)
US-VID-004	US-VID-004 (100_0497)
US-VID-005	US-VID-005 (100_0505)
US-VID-006	US-VID-006 (100_1835)
US-VID-007	US-VID-007 (100_1890)
US-VID-008	US-VID-008 (100_1942)
US-VID-009	US-VID-009 (100_1943)
US-VID-010	US-VID-010 (100_1944)
US-VID-011	US-VID-011 (100_1945)
US-VID-012	US-VID-012 (VID_20150418_200700)
US-VID-013	US-VID-013(VID_20150418_200815)
US-VID-014	US-VID-014 (VID_20150418_201232)
US-VID-015	US-VID-015 ROOF Arriving in Parking Lot
US-VID-016	US-VID-016 ROOF Parking and Walking
US-VID-017	US-VID-017 ROOF Exiting Church
US-VID-018	US-VID-018 ROOF Leaving Parking Lot
US-VID-020	US-VID-020 Video, Snapchat
US-VID-025	US-VID-025, Officer Scott Hamrick video
US-VID-026	US-VID-026, Sgt Mike Myers video
US-AUDIO-001	US-AUDIO-001 Lexington County Jail Call, 2015.03.01 000949
US-AUDIO-002	US-AUDIO-002 Lexington County Jail Call, 2015.03.01 001218
US-AUDIO-003	US-AUDIO-003 Lexington County Jail Call, 2015.03.01 111248
US-AUDIO-004	US-AUDIO-004 Lexington County Jail Call, 2015.03.01 205218
US-AUDIO-005	US-AUDIO-005 Lexington County Jail Call, 2015.03.01 205615
US-AUDIO-006	US-AUDIO-006 Lexington County Jail Call, 2015.03.01 210046
US-AUDIO-007	US-AUDIO-007 Lexington County Jail Call, 2015.03.01 143535
US-AUDIO-008	US-AUDIO-008 Audio, 911 Call 1
US-AUDIO-009	US-AUDIO-009 Audio 911 Call 2
US-AUDIO-013	US-AUDIO-013 CPD Interview, Ben ROOF, 2015.06.18
US-AUDIO-018	US-AUDIO-018 CPD Interview, Paul ROOF, 2015.06.18
US-AUDIO-030	US-AUDIO-030 FBI Interview, Joey MEEK, 2015.06.20 (bruckd@wlu.edu)
US-AUDIO-036	US-AUDIO-036 Jail Calls-6-18-2015--7-21-2016

US-AUDIO-038

US-AUDIO-038-SN421 FD302-Jeff Osburn Investigative
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Materials Collected by the Defense

Bates Numbers	File Name
D00001-D00003	D00001 SC Dept of Ed (GED Diploma)
D00062-D00167	D00062 Dylann Roof Pediatric Records (Dr. Mubarak)
D00168-D00194	D00168 Clark's Employment Records for Dylann Roof
D00195-D00206	D00195 Jack Chandler Funeral Notice 2013.11.17
D00235-D00238	D00235 Dylann Roof Camper Information Report - Lutheridge
D00239-D00263	D00239 Dylann Roof Richland One School Records
D00264-D00275	D00264 Dylann Roof Lutheridge Health Forms (2006 & 2007)
D00276-D00280	D00276 Central Court Records for Amy & Benn Roof
D00281-D00360	D00281 DR Charleston Detention Center Records (2015.08.27)
D00361-D00381	D00361 Benn & Amy Roof Divorce File (Richland CP)
D00382-D00422	D00382 Benn & Paige Divorce File (2009-DR-40-0533)
D00423-D00657	D00423 Benn & Paige Divorce File (2008-DR-40-4758)
D00658-D00716	D00658 Bennett Roof v. John Helms (97-CP-40-4031)
D00717-D00719	D00717 Lis Pendens Bennett Roof v. John Helms
D00720-D00773	D00720 Heyward Goodson v. Joseph Roof (95-CP-40-4318)
D00774-D00811	D00774 Joseph Roof v. Heyward Goodson (95-CP-40-4032)
D00812-D00827	D00812 Bennett Roof v. John Davis (96-CP-40-2450)
D00828-D00847	D00828 Joseph Roof v. McClary's Auto Service (98-CP-40-3107)
D00848-D00854	D00848 Joseph Roof v. Heyward Goodson (95-CP-40-4033)
D00855-D00874	D00855 Cody Stulley v. Amy Roof (95-CP-40-959)
D00875-D00877	D00875 Atlas Services v. Bennett Roof (215182)
D00878-D00945	D00878 Bennett Roof v. SC (05-CP-40-972)
D00946-D00948	D00946 Lis Pendens Bennett Roof v. SC
D00949-D00969	D00949 Bennett Roof v. Griffin Pools (06-CP-40-4402)
D00970-D00983	D00970 Citibank v. Paige Roof (2011-CP-40-818)
D00984-D01026	D00984 Wells Fargo v. Bennett Construction (2012-CP-40-6288)
D01027-D01029	D01027 Lis Pendens Wells Fargo v. Bennett Construction
D01030-D01047	D01030 Amber Roof v. Louise Livingston (2013-CP-40-6500)
D01048-D01064	D01048 DR Provost Academy Records
D01065-D01083	D01065 Childhood Pictures of DR and Amber with Benn
D01084	D01084 DR Perfect Attendance Hand MS 2005-06
D01085-D01151	D01085 White Knoll Elementary Yearbook 2000-01
D01152-D01217	D01152 White Knoll Elementary Yearbook 2001-02
D01219-D01227	D01219 DR Lexington Court Records, Pending Drug Charge (2015-GS-32-1700)
D01228-D01232	D01228 State v. Sprayberry (1996-GS-32-869) - Drug Charge
D01233-D01240	D01233 State v. Sprayberry (1996-GS-32-868) - Drug Charge
D01241-D01253	D01241 State v. Sprayberry (57270EM) - CDV 1st - Magistrate
D01254-D01255	D01255 Sprayberry v. Roof (2009-CV-32-1081599) - Eviction of Amy
D01256	D01256 Traffic Court - Amelia Roof (violation 11.23.2009)
D01257-D01261	D01257 Central Court file for Benn and Aimelia Roof (Traffic Tickets)
D01283-D01350	D01283 2. Response to Jail Subpoena (Inmate File)
D01351-D01353	D01351 3. and 4. Response to Jail Subpoena (Forms Signed by DR)
D01354-D01403	D01354 5. and 6. Response to Jail Subpoena (Documents Seized from DR Cell)

D01404-D01472	D01404 7(I). Response to Jail Subpoena (Documents Seized from DR Cell Part 1)
D01473-D01545	D01473 7(II). Response to Jail Subpoena (Documents Seized from DR Cell Part 2)
D01546-D01607	D01546 7(III). Response to Jail Subpoena (Documents Seized from DR Cell Part 3)
D01609-D01634	D01609 DR Lexington 1 School Records
D01635-D01642	D01635 Amber Roof Lexington 1 School Records
D01643-D01676	D01643 DR Medical Records - Palmetto Richland
D01677-D01683	[REDACTED]
D01684-D01711	[REDACTED]
D01712-D01719	[REDACTED]
D01720-D01723	D01720 DR Medical Records - Palmetto Baptist Non Medication Orders
D01724-D01732	D01724 DR Medical Records Palmetto Baptist 8.10.1996 Emergency Record - Hit on Mouth
D01733-D01741	D01733 DR Medical Records Palmetto Baptist 12.30.1996 - Chemical in Eyes
D01742-D01776	D01742 DR Birth Records Palmetto Baptist
D01777-D01800	D01777 Photos from Flash Drive from DR's Room
D01801-D01805	D01801 DR Rap Sheet
D01806	D01806 Photo of DR Saluting American Flag
D01807-D01819	D01807 DR Perp Walk Photos
D01825-D01827	D01825 Photos from DR's Room (Amy's House)
D01828-D01832	D01828 Photos of Books in DR's Room (Amy's House)
D01937	D01937 DR Clock Drawing 2015.10.02
D01938-D01955	[REDACTED]
D01956-D02038	D01956 DR Medical Records - Laurel Endocrine & Thyroid
D02039-D02054	D02039 DR School Records (Additional from Lexington)
D02055-D02057	D02055 White Knoll Elementary School Yearbook Pages
D02061-D02106	D02061 DR Outgoing Mail 8-3-2015
D03391-D03393	D03391 2015.09 Card from DR to Amy Roof
D03408-D03419	D03408 Amber Roof Richland One School Records
D03420-D03422	D03420 DR Dental Records (Dr. Karen Park)
D03423-D03424	[REDACTED]
D03425	[REDACTED]
D03426	D03426 1994.5.4 Baptist Medical Center Envelope
D03427	D03427 Picture of 401 Smokey Joe Court
D03470	D03470 1993.10.29 Carson Cowles Open Container Offense
D03471-D03488	D03471 1995.06.03 Bill Shockey DUI Offense
D03489-D03498	D03489 1998.11.22 Carson Cowles DUI Offense
D03499-D03511	D03499 2005.08.09 Sarah Davis (Cowles) v. Ulysses Stanley Salvage
D03512-D03519	D03512 2007.09.07 Jeff Wyatt DUI Offense
D03520-D03531	D03520 2009 2010 2011 Steve Ritter CDV Charges
D03532-D03573	D03532 Danny Beard v. Carol Beard
D03574-D03600	D03574 Sheila Sprayberry v. David Sprayberry

D03601-D03672	D03601 Sidney James III v. David Sprayberry
D03673-D03695	D03673 William B. Shockey v. Karen Beth Shockey
D03696-D03698	D03696 Richland County Assessor 3007 Park St.
D03699	D03699 DR 10 Year Driving Record (2015.11.18)
D03700	D03700 DR Richland Library Overdue Item List
D03701-D03773	[REDACTED]
D03774-D03779	[REDACTED]
D03780-D03813	[REDACTED]
D03814-D03857	D03814 DR Medical Records - Eau Clair Cooperative
D03858	D03858 DR Medical Records - Southeastern ENT
D03859-D03969	D03859 Charleston County Jail Records (received 2015.11.30)
D03970	D03970 DR Birth Certificate - Issued 1994.04.07
D03971-D04012	D03971 DR Medical Records - SC Oncology
D04013-D04116	[REDACTED]
D04117-D04122	D04117 DR Dental Records - Dr. Sassnett
D04123-D04128	[REDACTED]
D04131-D04132	D04131 Pictures of 159 Vermont Road
D04133	D04133 Picture of 323 Howard St., Columbia
D04134	D04134 Picture of 611 Elm Ave., Columbia
D04138-D04159	[REDACTED]
D04160-D04201	D04160 Rosewood Elementary School Yearbook 2004-2005
D04202-D04224	D04202 Rosewood Elementary School Directory 2003-2004
D04225-D04242	D04225 Charleston Detention Center Medical Records (rec'd 2015.12.16)
D04243-D04244	D04243 DNA Parentage Test Report (DR)
D04256-D04257	D04256 Incident Report - D. Sprayberry Drunkenness 2010.05.07
D04258	D04258 Incident Report - D. Sprayberry Assault & Battery 2012.11.08
D04259-D04260	[REDACTED]
D04261	D04261 Incident Report - Paige Roof Report Lost Diamond Ring
D04262-D04378	D04262 David Sprayberry v. Ken Hyatt Jeep
D04379-D04408	D04379 Bankers Trust Company v. David Sprayberry
D04409-D04418	D04409 William Shockey v. Beryl Nalley
D04419-D04420	D04419 Palmetto Health v. Avery Bartlett
D04421-D04447	D04421 Winson v. Danny Beard
D04448-D04453	D04448 South Trust Bank v. David Sprayberry
D04454-D04477	D04454 Smith Lumber Co. v. Peter Sercer
D04478-D04490	D04478 Stacy Dembitsky v. Jeff Wyatt
D04491-D04498	D04491 Austin Meares, DMD v. Avery Bartlett
D04499-D04501	D04499 1 Step Bail Bonds v. Steven Ritter
D04502-D04520	D04502 Charles Buntin v. Susan Cowles Buntin
D04521-D04548	D04521 Wells Fargo v. Lee Bennett
D04549-D04623	D04549 Wells Fargo v. Lee Bennett (2011CP4008420)

D04624-D04632	D04624 Citibank v. Lee Bennett
D04633-D04733	D04633 Midfirst Bank v. Avery Bartlett
D04734-D04765	D04734 Avery Bartlett v. Bojangles
D04766-D04783	D04766 Amber Roof v. Louis Livingston
D04784-D05027	D04784 Peter Sercer v. Elmer Danko
D05028-D05047	D05028 Peter Sercer v. Turner Builders
D05048-D05075	D05048 Providian National Bank v. Peter Sercer
D05076-D05089	D05076 First Select Corp. v. Peter Sercer
D05090-D05247	D05090 PNMAC Mortgage v. Peter Sercer
D05248-D05269	D05248 LVNV Funding v. Peter Sercer
D05270-D05319	D05270 CitiMortgage v. Peter Sercer
D05320-D05321	D05320 PNMAC Mortgage Opportunity Fund v. Peter Sercer
D05322-D05323	D05322 CitiMortgage Inc. v. Peter Sercer
D05324-D05467	D05324 Wells Fargo v. William Shockey
D05468-D05491	D05468 Jeff Wyatt Reckless Driving 2003.08.17
D05492	D05492 Jeff Wyatt DUI Charge 2003.08.17
D05493-D05508	D05493 Jeff Wyatt DUI 2nd Charge 2003.08.17
D05509-D05510	D05509 Bill Shokcey DUI 2nd Offense 2013.11.29
D05511-D05685	D05511 DR Childhood Album (from Lucy Roof)
D05686-D05688	D05688 DR Passport
D05689-D05693	D05689 Lexington Medical Notice of No Records for DR
D05694-D05699	D05694 South Trust Bank v. David Sprayberry
D05700-D05714	[REDACTED]
D05715-D05747	D05715 DR Legal Records - Kenneth Mathews
D05748-D05802	D05748 DR Mental Health Records - Lexington Mental Health
D05803-D05860	[REDACTED]
D05861-D05863	D05861 DR Blood Test - LabCorp 01.06.2016
D05864-D05865	D05864 DR Blood Test - LabCorp 01.06.2016 (Pt. 2)
D05866-D05870	D05866 DR Blood Test - LabCorp 01.06.2016 (Pt. 3)
D05871-D05874	D05871 Benn Roof School Records - USC
D05875-D05883	[REDACTED]
D05884-D05890	D05884 DR Blood Test - LabCorp 01.06.2016 (Pt. 4)
D05891-D05952	[REDACTED]
D05953-D05954	D05953 Amy Roof 10 Year Driver Record
D05955-D06012	D05955 Kenneth Matthews File - Paige & Benn Divorce
D06013-D06028	D06013 Kenneth Matthews File - Benn & Paige Child Support Agreement
D06029-D06059	D06029 Kenneth Matthews File - Benn & Amy Child Support Agreement
D06060-D06074	D06060 DR Blood Tests - Final Results LabCorp 01.06.2016
D06075-D06077	D06075 DR Blood Test - Mayo Clinic 01.06.2016
D06102-D06131	[REDACTED]
D06132-D06172	[REDACTED]
D06173-D06175	D06173 DR St. Andrews Towing Record
D06176-D06185	[REDACTED]
D06186-D06222	D06186 DR School Records - Richland One Responsive to Subpoena

D06223-D07871	D06223 Kenneth Matthews File - Benn Roof
D07872-D07897	[REDACTED]
D07898-D07908	D07898 DR Medical Records - Carolina Occupational Health
D07909-D07934	[REDACTED]
D08137-D08141	D08137 2016.01.30 Facebook Photos Travis Schuler
D08142-D08143	D08142 2016.01.30 Facebook Photos Susan Hargis
D08144-D08145	D08144 2016.01.30 Facebook Photos Kasey Buntin
D08146-D08148	D08146 Benn Roof School Records - Irmo High School
D08149	D08149 159 Vermont Rd.
D08150-D08292	D08150 DR Bank Statements - First Citizens
D08293-D08311	D08293 Joe Roof School Records - University of South Carolina
D08312-D08315	[REDACTED]
D08316-D08565	[REDACTED]
D08566	D08566 DR Signature McLeod Plantation Guestbook 2015.05.09
D08567-D08568	D08567 Benn Roof 10 Year Driving Record
D08569-D08570	D08569 DR Pharmacy Records - CVS
D08571-D08575	D08571 DR Pharmacy Records - Longs Drugs
D08576-D08739	[REDACTED]
D08740-D08741	D08740 Amy Roof - Brett Easton Marriage Records
D08742-D08743	D08742 DR Blood Tests - Final Results Lab Corp 02.24.2016
D08744-D08745	D08744 Joe and Lucy Roof Marriage Records
D08746	D08746 DR Blood Tests - Preliminary Report 02.22.2016
D08747-D08749	D08747 Amelia Brown v. Charles Brown Divorce Record
D08750	D08750 Amelia Brown - Charles Brown Marriage Record
D08751-D08790	D08751 Lucy Roof Medical Records - Providence Hospital
D08791-D08795	D08791 Amy Roof Pharmacy Records - Longs Drugs
D08796	D08796 Benn Roof and Amy Roof Marriage Certificate
D08797-D08833	[REDACTED]
D08864-D08865	D08864 Amy Roof Pharmacy Records - CVS
D08866-D08900	[REDACTED]
D08910-D08913	[REDACTED]
D08914-D08923	[REDACTED]
D09075-D09093	[REDACTED]
D09094-D09118	D09094 Estate of Andrew Cowles - Richland County
D09119-D09127	D09119 Amy Roof Lexington County Sheriff Records
D09128-D09146	D09128 Charleston Detention Center Medical Records (rec'd 2016.04.26)
D09147-D09150	[REDACTED]
D09151-D09156	[REDACTED]
D09157-D09159	D09157 Amy Roof Insurance Records - Bill Sauls Insurance
D09160-D09162	D09160 611 Elm Assessor Record
D09163-D09164	D09163 Benn Roof Traffic Ticket VA
D09165-D09166	D09165 2001.02.16 Lee Bennett Disorderly Conduct Offense
D09167	D09167 Carolina Springs Yearbook - DR Signature (Darce Cruea)
D09168-D09170	[REDACTED]
D09171-D09173	D09171 2016.05.10 DR Jail Hand and Wrist X-Rays

D09174	D09174 2016.05.10 DR Jail Hand and Wrist Radiology Report
D09175-D09247	D09175 Paige Roof Monroe County FL Clerk of Court Records
D09248-D09408	D09248 Benn Roof Monroe County FL Clerk of Court Records
D09409-D09410	D09409 2012.05.25 Jeff Wyatt City of Columbia Incident Report
D09411-D09415	D09411 2006.03.22 Amy Roof v. Bill Shockey City of Columbia Incident Report (Grand Larceny)
D09416-D09417	D09416 2007.04.12 611 Elm City of Columbia Incident Report (Abandon Vehicle)
D09418	D09418 Benn Roof and Paige Mann Marriage License
D09419-D09421	D09419 Tumblr Media of DR through time
D09422-D09425	D09422 Media Instagram Photo of DR
D09426-D09428	D09426 Tumblr Media of DR at White Knoll Elementary School
D09429-D09436	D09429 1990 Musical Program Starring Joe Roof
D09437-D09438	D09437 CV of Joe Roof
D09439	D09439 1959.08.03 Marriage License Application - Oliver Counts and Mary Dowdle
D09440	D09440 Marriage License Inquiry - Susan Cowles to Charles Buntin and Frank Branton
D09441	D09441 2007.09.29 Erika Beard Marriage to Matthew Scott
D09442	D09442 2002.11.23 Clay Hargis Marriage to Susan Schuler
D09443	D09443 1933.08.19 Marriage License Application Wilbur Roof and Helen Davis
D09444	D09444 1960.12.28 Marriage License Application Wilbur Roof and Francis Register
D09445	D09445 1991.11.22 Marriage Application of Joseph Roof and Erin Bozard
D09446	D09446 1994.06.17 Norman Schuler Marriage to Susan Buntin
D09447	D09447 2002.05.18 Marriage License - Paul Roof and Karin Willett
D09448	D09448 2009.11.30 Thanksgiving Facebook Photo of Dylann and Amber Roof
D09449	D09449 2010.01.03 Facebook Photo of "Kids Table" Christmas 2009
D09450	D09450 2010.01.03 Facebook Photo of "Adult Table" Christmas 2009
D09451-D09482	D09451 2016.04.29 Joey Meek Guilty Plea Transcript
D09483-D09486	[REDACTED]
D09487-D09497	D09487 Dylann Roof Medicaid Records
D09498-D09518	[REDACTED]
D09519-D09601	[REDACTED]
D09602-D09605	[REDACTED]
D09606-D09727	D09606 Amy Roof v. Benn Roof Child Support Records
D09728-D09733	[REDACTED]
D09734-D10107	[REDACTED]
D10108-D10384	[REDACTED]
D10385-D10386	D10385 Dylann Roof Medical Records - Richland EMS
D10387-D10388	D10387 Dylann Roof Dental Records - Midlands Oral
D10506	D10506 Photo of DR from Vanessa Clifford
D10507-D10510	D10507 DR Blood Test - LabCorp 07.06.2016 (Prelim and Final)

D10511-D10512	D10511 Benn Roof SLED Report
D10513-D10514	D10513 Amy Roof SLED Report
D10515-D10517	D10515 DR Medical Records - University Pediatrics
D10518-D10519	
D10520-D10528	D10520 Amy Roof Pharmacy Records - CVS
D10529-D10530	
D10531-D10538	D10531 DR Pharmacy Records - CVS
D10539-D10546	D10539 Amy Roof School Records - Richland District One
D10547-D10549	D10547 Carson Cowles SLED Report
D10550-D10556	D10550 Thomas Heirs Memo Re Craigslist 2015.09.12
D10557-D10559	D10557 David Sprayberry SLED Report
D10560-D10564	D10560 Brett Easton SLED Report
D10565	D10565 Jack Chandler Death Certificate
D10566	D10566 Sara Davis Cowles Death Certificate
D10567	D10567 Benn Roof Birth Certificate
D10568	D10568 Amber Roof Birth Certificate
D10569	D10569 Amy Roof Birth Certificate
D10570-D10573	D10570 Bill Shockey SLED Report
D10574-D10576	D10574 Jeff Wyatt SLED Report
D10577	D10577 Amy Roof and Brett Easton Marriage License
D10580-D10597	D10580 DR Car Records - SCDMV
D10598-D10623	D10598 Amy Roof Insurance Records - Travelers
D10624-D10632	D10624 DR Medical Records - CENTA Group
D10633-D10666	D10633 Charleston Detention Center Medical Records (rec'd 2016.07.25)
D10667-D10687	D10667 DR Video Visit Log 2015-06-18 to 2016-07-22
D10688-D10689	D10688 1988.08.13 Carson Cowles DUI - Lexington Sheriff
D10690-D10693	D10690 1991.11.02 Benn Roof Cocaine Charge - Lexington Sheriff
D10695	D10695 1992.01.26 Brett Easton Domestic Abuse - Lexington Sheriff
D10696	D10696 1992.06.22 Brett Easton Domestic Abuse - Lexington Sheriff
D10697-D10698	D10697 1993.11.18 Brett Easton Hit and Run - Lexington Sheriff
D10699-D10703	D10699 1993.11.19 Brett Easton Burglary Complaint - Lexington Sheriff
D10704	D10704 1994.07.04 Karen Shockey v. Bill Shockey Assault - Lexington Sheriff
D10705-D10706	D10705 1998.10.16 Brett Easton Larceny - Lexington Sheriff
D10707-D10713	D10707 2001.05.13 Teresa Walker v. Carson Cowles Simple Assault - Lexington Sheriff
D10714-D10717	D10714 2001.05.16 Shirley Mayer v. Danny Beard Larceny - Lexington Sheriff
D10718	D10718 2001.09.05 Amy Roof and Brett Easton Domestic Incident - Lexington Sheriff
D10719-D10721	D10719 2002.07.07 Teresa Walker v. Carson Cowles Domestic Dispute - Lexington Sheriff
D10722	D10722 2003.05.27 Brett Easton Bench Warrant - Lexington Sheriff
D10723	D10723 2003.07.17 Jeff Wyatt Larceny Complaint - Lexington Sheriff

D10724	D10724 2004.04.18 Amy Roof v. Paige Roof Simple Assault - Lexington Sheriff
D10725	D10725 2004.04.18 Amy Roof v. Paige Roof Threatening Calls - Lexington Sheriff
D10726-D10735	D10726 2004.10.29 Brett Easton Burglary Complaint - Lexington Sheriff
D10736-D10739	D10736 2005.04.13 Teresa Walker v. Carson Cowles CDV - Lexington Sheriff
D10740-D10741	D10740 2005.07.26 Jeff Wyatt Larceny Complaint - Lexington Sheriff
D10742-D10743	D10742 2006.01.08 Jeff Wyatt Theft Complaint - Lexington Sheriff
D10744	D10744 2006.07.03 Bill Shockey Assault Complaint - Lexington Sheriff
D10745	D10745 2008.01.01 Carson Cowles v. Teresa Walker Family Court Violation - Lexington Sheriff
D10746-D10747	D10746 2008.06.01 Bill Shockey Vandalism Complaint - Lexington Sheriff
D10748-D10749	D10748 2008.06.02 Bill Shockey Mental Commitment - Lexington Sheriff
D10750	D10750 2008.06.18 Brett Easton Larceny Complaint - Lexington Sheriff
D10751	D10751 2008.06.25 Carson Cowles v. Teresa Walker Family Court Violation - Lexington Sheriff
D10752	D10752 2008.09.20 Carson Cowles Threat to Harm Complaint - Lexington Sheriff
D10753	D10753 2008.12.27 Carson Cowles v. Teresa Walker Child Custody Dispute - Lexington Sheriff
D10754-D10755	D10754 2009.04.30 Carson Cowles v. Teresa Walker Civil Dispute - Lexington Sheriff
D10756	D10756 2009.04.30 Carson Cowles v. Teresa Walker Harassment - Lexington Sheriff
D10757-D10758	D10757 2009.05.01 Carson Cowles Harassing Calls Complaint - Lexington Sheriff
D10759-D10760	D10759 2009.09.11 David Sprayberry Suspicious Activity Complaint - Lexington Sheriff
D10761-D10766	D10761 2010.01.15 David Sprayberry Burglary Complaint - Lexington Sheriff
D10767-D10769	D10767 2010.01.27 David Sprayberry Larceny Complaint - Lexington Sheriff
D10770-D10839	D10770 2010.12.11 Paige Roof Car Break In - Lexington Sheriff
D10840-D10842	
D10843-D10848	D10843 2014.07.03 Paige Mann Larceny Complaint - Lexington Sheriff
D10849-D10881	D10849 Amber Diary July - September 1999
D10885-D10888	D10885 DR Social Security Earnings Report
D11248-D11250	D11248 2016.05.28 DR Letter to Amy Roof
D11292-D11294	D11292 2016.06 DR Drawing to Amy Roof
D11295-D11297	D11295 2016.06 DR Letter to Benn Roof
D11298-D11300	D11298 2016.06 DR Letter to Stefan Luff

D11599-D11605	D11599 2016.08.26 DR Letters to Stefan Luff
D11606-D11613	[REDACTED]
D11614-D11615	D11614 2000.08.31 Bennett Construction History
D11645-D11690	[REDACTED]
D11691-D11783	[REDACTED]
D11784-D11805	D11784 Roof Family Photos from Paige Scrapbooks
D11806-D12038	D11806 Roof Family Photos of Dylann
D12039-D12052	D12039 Roof Family Photos (Inappropriate)
D12053-D12068	D12053 DR Cards and Awards
D12069-D12088	D12069 DR Drawings and Writings
D12089-D12091	D12089 DR 8th Grade Paper on Civil War (2008.01.31)
D12092-D12111	[REDACTED]
D12174-D12602	D12174 2016.09.21 Evidence Review Photos
D12776-D12778	D12778 2012.10.05 Amber Roof Vandalism Complaint - City of Columbia
D12918-D12919	D12918 2016.07 DR Drawings to Amy Roof
D12920-D12922	D12920 2016.07 DR Letter to Stefan Luff
D12980-D12982	D12980 2016.09 DR Letter to Stefan Luff
D13043-D13046	D13043 Hand Middle School Yearbook 2007
D13072-D13073	D13072 Provost Academy - 2012 DR Persuasive Essay Final
D13074-D13075	D13074 Provost Academy - 2012 DR Ironic Short Story Final
D13076-D13080	D13076 Provost Academy - 2013 DR Final Research Paper
D13081	D01381 DR Medical Bill - Laurel Endocrine
D13262	D13262 Amber Roof Speeding Violation 2009.10.28
D13263-D13265	D13263 Amy Roof Central Court Records
D13266-D13274	D13266 Ashley Sprayberry Central Court Records
D13275-D13276	D13275 Benn Roof Central Court Records
D13277-D13279	D13277 Carson Cowles Disorderly Conduct-Open Container Charge 1995.10.26
D13280	D13280 Danny Beard DUI 2001.06.21
D13281-D13283	D13281 David Sprayberry Central Court Records
D13284-D13286	D13284 Jeff Wyatt Central Court Records
D13287-D13289	D13287 Pete Sercer DUI 2010.10.23
D13290-D13291	D13290 Sara Cowles v. Carson Cowles - Rule to Vacate
D13292-D13301	D13292 William Shockey Central Court Records
D13567-D13573	D13567 Correspondence with Richland One Re Elementary School Records
D-AUDIO-001	D-AUDIO-001 DR City of Columbia Municipal Hearing 2015.05.27
D-AUDIO-002	D-AUDIO-002 2015.07.20 DR Jail Call to Amy Roof
D-AUDIO-003	D-AUDIO-003 2015.07.23 DR Jail Call to Amy Roof
D-AUDIO-004	D-AUDIO-004 2015.07.26 DR Jail Call to Joe Roof
D-AUDIO-005	D-AUDIO-005 2015.07.27 DR Jail Call to Joe Roof
D-AUDIO-006	D-AUDIO-006 2015.07.30 DR Jail Call to Amy Roof
D-AUDIO-007	D-AUDIO-007 2015.07.30 DR Jail Call to Joe Roof
D-AUDIO-008	D-AUDIO-008 2015.08.01 DR Jail Call to Amy Roof
D-AUDIO-009	D-AUDIO-009 2015.08.01 DR Jail Call to Joe Roof

D-AUDIO-010	D-AUDIO-010 2015.08.03 DR Jail Call to Joe Roof
D-AUDIO-011	D-AUDIO-011 2015.08.05 DR Jail Call to Joe Roof
D-AUDIO-012	D-AUDIO-012 2015.08.08 DR Jail Call to Amy Roof
D-AUDIO-013	D-AUDIO-013 2015.08.09 DR Jail Call to Joe and Lucy Roof
D-AUDIO-014	D-AUDIO-014 2015.08.09 DR Jail Call to Amy Roof
D-AUDIO-015	D-AUDIO-015 2015.08.13 DR Jail Call to Joe Roof
D-AUDIO-016	D-AUDIO-016 2015.08.13 DR Jail Call to Amy Roof
D-AUDIO-017	D-AUDIO-017 2015.08.15 DR Jail Call to Amy Roof
D-AUDIO-018	D-AUDIO-018 2015.08.16 DR Jail Call to Joe Roof
D-AUDIO-019	D-AUDIO-019 2015.08.17 DR Jail Call to Joe Roof
D-AUDIO-020	D-AUDIO-020 2015.08.20 DR Jail Call to Joe Roof
D-AUDIO-021	D-AUDIO-021 2015.08.31 DR Jail Call to Amy Roof
D-AUDIO-022	D-AUDIO-022 2015.09.20 DR Jail Call to Joe Roof
D-AUDIO-023	D-AUDIO-023 2015.09.14 DR Jail Call to Joe Roof
D-AUDIO-024	D-AUDIO-024 2015.09.14 DR Jail Call to Amy Roof
D-AUDIO-025	D-AUDIO-025 2015.09.20 DR Jail Call to Joe Roof
D-AUDIO-026	D-AUDIO-026 2015.09.24 DR Jail Call to Joe Roof
D-AUDIO-027	D-AUDIO-027 2015.10.09 DR Jail Call to Joe and Lucy Roof
D-AUDIO-028	D-AUDIO-028 2015.10.09 DR Jail Call to Amy Roof
D-AUDIO-029	D-AUDIO-029 2015.11.24 DR Jail Call to Joe and Lucy Roof
D-AUDIO-030	D-AUDIO-030 2015.12.19 DR Jail Call to Joe Roof
D-AUDIO-031	D-AUDIO-031 2016.02.27 DR Jail Call to Joe Roof
D-AUDIO-032	D-AUDIO-032 2016.03.10 DR Jail Call to Joe Roof
D-AUDIO-033	D-AUDIO-033 2016.03.27 DR Jail Call to Joe and Lucy Roof
D-AUDIO-034	D-AUDIO-034 2016.04.04 DR Jail Call to Amy Roof
D-AUDIO-035	D-AUDIO-035 2016.04.04 DR Jail Call to Amy Roof
D-AUDIO-036	D-AUDIO-036 2016.04.25 DR Jail Call to Joe Roof
D-AUDIO-037	D-AUDIO-037 2016.06.11 DR Jail Call to Joe Roof
D-AUDIO-038	D-AUDIO-038 2016.07.19 DR Jail Call to Amy Roof
D-VID-010	D-VID-010 2015.12.11 Missy Richards
D-VID-011	D-VID-011 2015.12.12 Missy Richards
D-VID-012	D-VID-012 2016.01.24 Amber and Morgan Roof
D-VID-013	D-VID-013 2016.01.25 Benn Roof
D-VID-014	D-VID-014 2016.02.03 Amy Roof
D-VID-015	D-VID-015 2016.02.12 Joe and Lucy Roof
D-VID-016	D-VID-016 2016.02.14 Zaharati K. Morfesis
D-VID-017	D-VID-017 2016.02.24 Roderick K. Webber
D-VID-018	D-VID-018 2016.02.28 Amy and Benn Roof
D-VID-019	D-VID-019 2016.02.28 Amy and Benn Roof
D-VID-020	D-VID-020 2016.03.30 Joe and Lucy Roof
D-VID-021	D-VID-021 2016.04.03 Benn Roof
D-VID-022	D-VID-022 2016.04.14 Amy Roof and Danny Beard
D-VID-023	D-VID-023 2016.05.02 Missy Richards
D-VID-024	D-VID-024 2016.05.22 Joe and Benn Roof
D-VID-025	D-VID-025 2016.06.09 Amy Roof and Danny Beard
D-VID-026	D-VID-026 2016.06.09 Amy Roof and Danny Beard
D-VID-027	D-VID-027 2016.07.02 Amy and Benn Roof

D-VID-028	D-VID-028 2016.07.02 Benn and Morgan Roof
D-VID-029	D-VID-029 2016.07.17 Ani M. Devore
D-VID-030	D-VID-030 2016.07.21 Joe and Lucy Roof
D-VID-031	D-VID-031 2016.08.04 719AM Video of Roof Jail Assault
D-VID-032	D-VID-032 2016.08.04 743AM Video of Roof Jail Assault
D-VID-033	D-VID-033 2016.07.21 Joe and Lucy Roof
D-VID-034	D-VID-034 2016.08.21 Amy and Benn Roof
D-VID-035	D-VID-035 2016.08.24 Joe and Lucy Roof
D-VID-036	D-VID-036 2016.09.25 Joe, Benn, and Amy Roof
D-VID-037	D-VID-037 2016.09.25 Amy Roof

Materials Produced by Other Experts

File Name	Description
Adams, Pamela	Social History Interview Summary
Beard, Danny	Social History Interview Summary
Biddulph, Audrey	Social History Interview Summary
Brown, Linda	Social History Interview Summary
Buntin, Kasey	Social History Interview Summary
Chandler, Melissa	Social History Interview Summary
Clark, David	Social History Interview Summary
Clifford, Vanessa	Social History Interview Summary
Cowles, Calvin	Social History Interview Summary
Cowles, Carson	Social History Interview Summary
Cruea, Darce	Social History Interview Summary
Fanning, Brian; Pack, Brock; Patton, John	Social History Interview Summary
Hargis, Susan	Social History Interview Summary
Henry, Bonnie	Social History Interview Summary
Hiers, Thom	Social History Interview Summary
Metze, Tony	Social History Interview Summary
Mubarak, Philip	Social History Interview Summary
Neese, Renee	Social History Interview Summary
Rodriguez, Rico	Social History Interview Summary
Roof, Amy	Social History Interview Summary
Roof, Benn	Social History Interview Summary
Roof, Joe Sr.	Social History Interview Summary
Roof, Joseph T.	Social History Interview Summary
Roof, Lucy	Social History Interview Summary
Roof, Paul	Social History Interview Summary
Sauls, Cheryl	Social History Interview Summary
Sprayberry, David	Social History Interview Summary
, Amber	Social History Interview Summary
Wachter, Ted	Social History Interview Summary
Wyatt, Jeff	Social History Interview Summary
FDD00001 2016.03.29 Guardian List of Parsed Search Queries	Digital Media Summary
FDD00046 2016.03.29 Guardian List of Google Searches	Digital Media Summary
FDD00743 Benn Gateway Keyword Search Exports	Digital Media Summary
FDD00804 Dell Desktop 1 Keyword Search Exports	Digital Media Summary
FDD00819 Dell Desktop 2 Keyword Search Exports	Digital Media Summary
SocHx Chrono 11-30-16	Andrews Social History Chronology
DR Grades	Andrews Summary of DR School Performance
DSR Genogram - Residential	Andrews Genogram - Residential

DSR Genogram - Extended, Cowles	Andrews Genogram - Cowles Family
DSR Genogram - Extended, Roof	Andrews Genogram - Roof Family
DSR Genogram - Primary	Andrews Genogram - Primary
List of Attributes 12-2-16	Andrews Attribute Summary
Neuropsychological Assessment Summary Sheet (2/2/2016)	Dr. Paul Moberg Neuropsychological Testing Result Summary

Appendix B: Results of Psychological Tests Administered

BRIEF

Dylann completed the adult self-report form of the Behavior Rating Inventory of Executive Function (BRIEF). The BRIEF was developed to provide a window into the everyday behavior associated with specific domains of the executive functions.

Scores on the Indices and Scales of the BRIEF are reported as T-scores. T-scores have an average of 50 and standard deviation of 10. Scores above 65 are considered clinically significant and are shaded in the chart below. On the BRIEF, Dylann obtained the following scores:

Index	Scale	T Score	Percentile
Behavioral Regulation Index		50	53
	Inhibit	43	30
	Shift	73	98
	Emotional Control	47	45
	Self-Monitor	42	31
Metacognition Index		65	9
	Initiate	73	98
	Working Memory	56	76
	Plan/Organize	62	86
	Organization of Materials	58	92
	Task-Monitor	63	95
Global Executive Composite		59	79

The composite, both index scores and most scales were within the Average range on the BRIEF. Dylann rated both the Shift and Initiate scales in the clinically significant range.

WAIS-IV

Dylann's understanding of general principles and social situations was assessed using the Comprehension subtest of the Wechsler Adult Intelligence Scale-Fourth Edition (WAIS-IV), a standardized measure of intelligence. Subtest scores are reported as Scaled Scores with an average of 10 and standard deviation of 3. Dylann's score is reported in the table below:

Subtest	Scaled Score/ Standard Score
Comprehension	16

Dylann performed above average on the Comprehension subtest, demonstrating comprehension of general principles. Despite clear knowledge about principles of social behavior when asked hypothetical questions, Dylann had difficulty interpreting nonliteral statements. For example, when asked what the statement "if you fall seven times, get back up eight" means, Dylann expressed confusion as to how it someone could get up eight times if he only fell seven.

TOPS-2 (Adolescent)

The Test of Problem Solving, Second Edition, Adolescent Version was used to assess Dylann's language-based, critical thinking abilities. The TOPS-2 Adolescent focuses on cognitive processes for problem solving through five different subtests: making inferences, determining solutions, problem solving, interpreting perspective, and transferring insight. Dylann is out of the age range for this measure. However, clinical measures of social problem solving are not available for adults. Because he is outside of the age range for this test, standard scores could not be calculated. However, age equivalents are reported below:

Subtest	Age Equivalent
Making Inferences	>17:6
Determining Solutions	>18:4
Problem Solving	18:6
Interpreting Perspective	14:0
Transferring Insight	13:3
Total Test	16:6

Dylann's overall performance was at the level of a 16-year, 6-month old adolescent. His ability to identify solutions to problems requiring him to make inferences was above the 17-year, 6-month age equivalent (Making Inferences). His ability to suggest possible solutions was above 18-year, 4-month level (Determining Solutions), and problem recognition, suggestion of solution alternatives, and selection of solutions was at the 18-year, 6-month level (Problem Solving).

Dylann performed well below age expectations on the subtests of Interpreting Perspective and Transferring Insight (14-years and 13-years, 3-months, respectively). In particular, Dylann had difficulty on items requiring him to understand the social behaviors of others.

Effective social problem solving requires skills in each subtest area.

CASL

The Supralinguistic scale of the Comprehensive Assessment of Spoken Language (CASL) was administered to learn more about Dylann's understanding and use of language. In particular, the Supralinguistic scale was designed to measure comprehension of complex language whose meaning is not directly available from lexical or grammatical information. The Nonliteral Language, Meaning from Context, and Pragmatic Judgment subtests were administered. Dylann is out of the age range for this measure. However, clinical measures of social and pragmatic language are not available for adults. Dylann's scores on the CASL are provided in the table below:

Scale	Subtests	Age Equivalent years-months
	Nonliteral Language	>21:11
	Meaning from Context	>21:11
	Ambiguous Sentences	20:6

Pragmatic Judgment	14:0
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Dylann performed within age expectations on his ability to interpret nonliteral language (Nonliteral Language, >21-years, 11-months) and derive meaning from context (Meaning from Context, >21-years, 11-months), and slightly below expectations on his understanding of ambiguous sentences (Ambiguous Sentences, 20-years, 6-months).

Dylann performed well below expectations based on his adequate intellectual ability (and, in particular, his ability to answer questions about social norms in a standardized testing situation) on a subtest assessing pragmatic or social language (Pragmatic Judgment, 14-year age equivalent). This subtest requires an individual to listen to a series of vignettes and judge the appropriateness of language used in each social situation.

The discrepancy between Dylann's performance at his age level on the Nonliteral Language subtest and his challenge interpreting the sayings in the Comprehension subtest on the WAIS-IV is worth noting. On the Nonliteral Language subtest, known idioms are used (i.e., When 5-year-old Jimmy started pulling his sister's hair, Dad said, "Jim, you're not a puppy anymore."), and a person can do well if he has acquired knowledge of such sayings over time. In contrast, the Comprehension subtest required Dylann to derive meaning from phrases he has not heard before the meaning of which is not apparent and must be derived.

ADOS-2

Dylann's social and communicative style was assessed using the Autism Diagnostic Observation Schedule, Second Edition, Module 4 (ADOS2). The ADOS2 is a semi-structured interview and social session that assesses specific reactions to social, communicative, and emotional presses. Module 4 was designed for use with adults with fluent speech and includes opportunities for conversation with the examiner as well as questions about emotions, friendships and daily activities.

Observations during the ADOS-2 administration are coded and scored using an algorithm. For Dylann, the revised algorithm for Module 4³⁵ was used. This algorithm is the most recent calibration of Module 4 scoring.

Social-Communication: Dylann demonstrated adequate vocabulary and grammar. The sound of his speech was mildly atypical in that he sounded a bit flat at times. The word choice was also largely within normal limits. However, particular choice of words was repetitive. For instance, he said "you see what I am saying?" ten times during the approximately 45 minutes of the social communication evaluation. He offered a lot of information about his beliefs, although he did not offer anecdotes about personal experiences before incarceration. During the ADOS2, the only questions posed were related to his interests of "white nationalism" and classic films. Thus, conversation prompts the evaluator made about other topics were sometimes ignored. Dylann was able to offer coherent narratives.

Nonverbal communication was unevenly developed. A range of descriptive and emphatic gestures was noted, although the range of gestures used was limited. Eye gaze was often appropriate but sometimes too intense and, in other instances, absent or avoidant at key social junctures. A clear example of this was during a task when he is provided with some

pieces to a puzzle and must request more. Dylann did not look at the examiner but just thrust out his hand expectantly. Affect was not typical. Dylann frequently smiled at times when his expression did not match the content of his speech; at other times, his expression looked flat or he displayed a “thinking” expression. The range of affect was limited and did not change much when discussing situations that would elicit emotional responses.

Dylann seemed to find some enjoyment in interaction. Specifically, he smiled in reaction to the examiner when she said things about his topics of interest. Communication of his own affect was quite inconsistent. He was not able to say much about situations that make him sad or angry, outside of referring back to racism or classic films. He was not able to link any emotions to his physiological experiences.

Reciprocal Social Interaction: Social insight was limited. Dylann reported having no friends currently and, despite saying “I’ve had friends in the past” was able to name only one, Jack. He explained that Joey Meeks was not a friend but “an associate.” When asked to define friendship, Dylann described friends as people who “spend time with you” and “are nice to you.” They “share with you” and “you’ve known them for awhile. You get along and have common interests.” This is correct but an immature response. When asked how one can discern between true friendship and collegial relationships at work or school, he replied, “I don’t know. You have hung out with them? I don’t think people would pretend to be your friend unless to get something.” This response demonstrated that he did not understand the question and, even with further elaboration, he had trouble understanding that the evaluator was asking about what makes friendship different from friendly interactions with colleagues. Dylann declined to answer questions about dating relationships, saying “I can’t talk about it.” Asked why, he explained “I can’t say. It would give a hint at it.” When asked, he admitted that he wishes he had a dating relationship before his incarceration but before he was in jail he never thought he date. Dylann demonstrated some insight into why people have long-term intimate relationships, but his understanding of the benefits was primarily focused on the contractual aspect. Asked what is a nice thing about marriage, he answered, “seeing it’s what you’re supposed to do, a social thing. You’d worry it wasn’t official if you weren’t married.” Asked what may be difficult about marriage, he replied, “You’re a prisoner.”

When asked, Dylann described no ambition to be on his own in the world. He said “I am OK living with my mom” and that he has never really lived away from her. There was a period when he sometimes stayed with other people, but he was never away from home for long. Dylann said that he maintained his own money when he was employed but that he was never had bills. Asked if he’d prefer living on his own, he commented “probably not. I’d rather be with my mom and not worry. Even if she tells me what to do.”

Stereotyped Behaviors and Restricted Interests: During the ADOS2, Dylann made frequent reference to preferred topics (racism, movies). Notably, when discussing films, Dylann made specific references to actors and repeatedly asked the evaluator “Have you heard of [actor’s name]?” in a manner that appeared routinized. No motor stereotypies, repetitive mannerisms, or compulsive behaviors were observed.

Scoring: Dylann’s score on the algorithm met the cutoff score for instrument classification of Autism.

SIB-R

To better understand Dylann’s presentation and the impact of his symptoms on his everyday function, the Scales of Independent Behavior, Revised (SIB-R) were administered to his mother, Amy Roof. The SIB-R is an individual assessment of adaptive behavior, which can be defined as day-to-day activities necessary to take care of oneself and get along with others. Adaptive behavior reflects what a person *actually* does in an independent manner (i.e., without prompts or supports) as opposed to what the person is *capable* of doing. This is in contrast to standardized cognitive or language measures that assess capabilities or potential under highly structured and supportive conditions. *Age Equivalent Scores* are the ages corresponding to the average score in the standardization sample. Dylann’s scores on the SIB-R, as rated by his mother, Amy Roof, are provided in the table below:

Domains	Age Equivalent Years-Months
Gross Motor	11-1
Fine Motor	13-8
Social Interaction	9-3
Language Comprehension	16-1
Language Expression	14-0
Eating & Meal Prep	11-1
Toileting	56
Dressing	14-5
Personal Self-Care	16-8
Domestic Skills	13-10
Time & Punctuality	14-6
Money & Value	16-6
Work Skills	NOT COMPLETE
Home/Community Orientation	14-9

Dylann’s self-help behaviors were reported to be below age-based expectations in all domains assessed, with the exception of toileting. The toileting age equivalent of 56-years may seem exceptionally high because Dylann’s mother reported that he does all items on the scale, which gave him the highest possible age equivalent score.

Dylann’s social interaction skills were rated the most delayed, at the 9-year, 3-month old level. The age equivalent for Work Skills is not reported because his mother replied “I don’t know; I didn’t go to work with him” to most questions and, thus, it could not be scored.

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