

STATE OF SOUTH CAROLINA
IN THE COURT OF APPEALS

Appeal from Charleston County

Honorable R. Markley Dennis, Circuit Court Judge

THE STATE,

RESPONDENT,

V.

DEVANTE ANTONIO GRANT,

APPELLANT

RECEIVED
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SC Court of Appeals

APPELLATE CASE NO. 2017-002158

RECORD ON APPEAL

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THE FOLLOWING EXHIBITS ARE ON FILE WITH THIS COURT:

**State's Exhibit #27 (Jail Call Audio Clips); State's Exhibit #32 (Jail Video Visitation Clips),
State's Exhibit #55 (Letter to Chisholm), State's Exhibit #56 (Envelope) and State's Exhibit
#63 (DVD of Interview)**

1 A detective who thinks he has a suspect shouldn't be the
2 one in charge of showing a lineup to a victim.

3 And the lineup itself shouldn't have any bias in it.
4 No one picture should stand out. No one person on here
5 should be standing out for any reason over the other.

6 If you look at one, two, three, five, six, they are
7 all numbers and followed by .jpg in lower case letters.
8 If you look at Number 4 and what do you see: 4.PNG, all
9 caps. That is how they labeled their suspect. It sure
10 stands out if you label them differently than everybody
11 else.

12 When Detective Jarrell testified he provided you
13 some background and information on how he investigated
14 the case. And it is clear he sees Number 4, .PNG, as the
15 guy, even though he testified he had information about
16 other suspects including Michael Allen who he chose not
17 to talk to until May of 2017, who he chose not to charge
18 or fully investigate even though he matches the
19 description better than Devante Grant.

20 He is the one who chooses to do a non-blind
21 administration of the lineup. And the excuse is, well,
22 nobody else was around.

23 He has got an entire police department and nobody
24 can help you out with this? This is an important case.
25 Got a woman who was robbed at gunpoint and her car was

1 taken and there is no detective that can just take a
2 second to do an administration of a lineup, to review it
3 and see if there is any bias, to make sure that this
4 lineup is good for court.

5 And he never did a lineup with Chisolm. He never
6 showed Chisolm's photograph to Ms. Hooks. He never
7 showed Michael Allen's photograph to Ms. Hooks.

8 He sees what he wants to see, that Devante Grant is
9 the guy, despite evidence pointing to somebody else.

10 The State has provided you with the letter and says
11 consciousness of guilt, you can consider this to be
12 guilt, he is threatening Mr. Chisolm. That is an
13 interpretation. That is how they chose to see this.

14 You will have an opportunity to look at the letter
15 for yourself and read it and interpret it how you choose
16 to do so; not how an investigator reads it, not how a
17 detective tells you you should understand it, and not
18 how either I or Mr. Waring tell you you should understand
19 it.

20 But read this letter and tell me where there is a
21 threat. Read the letter and tell me where there is
22 anything about this case. Tell me in that letter that
23 you see something about an armed robbery, hydrocodone
24 pills, guns, cars. It is not in there.

25 They see it as he is admitting guilt. Maybe it is a

1 17-year-old writing somebody who had called his name,
2 falsely accused him, asking him why are you putting me in
3 this; you got caught, why are you putting me in this; why
4 are you bringing me into it when this is what you did.

5 And there is this whole handwriting thing. And
6 whether or not you choose to believe he wrote the letter
7 or not, that is up to you. Whether or not you choose to
8 believe that in an intense moment with Mr. Eckerd that he
9 claimed he wrote the letter, that is up to you.

10 But I know on cross-examination after testifying
11 that he said it is his statement and he will fucking
12 write it how he wants; but on cross-examination when I
13 asked him, well, didn't you say he was muttering, Mr.
14 Eckerd said, well, I think it is what I heard.

15 The State has also brought in jail calls. And it is
16 entered in jail call logs. These are calls made through
17 a pin tied to Devante Grant. And they have also entered
18 in logs of video visits, people who went to see him or
19 people who saw him through video. A lot of pages there.
20 A lot of visits and a lot of calls.

21 But they only give you five short clips to watch, to
22 listen to. And they see it one way and in their way of
23 looking at it through their lens, through their blinders.

24 Mr. Waring discussed a call between Devante and
25 allegedly his mother about the letter and maybe he was

1 working at McDonald's.

2 Okay. Do you hear the words I did this? Do you
3 hear the words I robbed this lady, I have got to cover
4 myself up? Do you hear any of that in that? No. He is
5 talking to his mom on the phone. A 17-year-old.

6 And then you have got this call that they say is
7 between Devante and Michael Allen where he is telling
8 Michael Allen don't you talk to the police.

9 They see it he is telling Michael Allen don't
10 snitch on me. There is another way to see it: Hey,
11 Michael Allen, you did the robbery; you better not
12 implicate yourself because right now you are looking
13 pretty good.

14 There is a call alleged to be between Devante Grant
15 and Michael Allen about deactivating Facebook. How has
16 Facebook been relevant in this case at all? It hasn't.

17 Some videos of between Michael Allen and Devante
18 where they are talking about, man, talking to a
19 prosecutor but he is not worried. The State sees, oh,
20 they are trying to intimidate this guy. Or another way
21 of thinking about it is maybe hoping Chisolm will come to
22 court and tell the truth, stop the lying.

23 The last visit between Michael Allen and Devante
24 Grant where they are talking about names that maybe the
25 State has implicating Michael Allen, not Devante Grant.

1 There is no any -- no sort of admission.

2 And if you think about all of those calls, all of
3 those visits, that is what they have to show you as his
4 admission of guilt? There is nothing on there, a
5 confession or provides any evidence related to the case.
6 You just see a 17-year-old acting, quite frankly, pretty
7 immature. But doing nothing to implicate himself in this
8 case.

9 You know, the elephant in the room is kind of the
10 Savon Chisolm issue. He testified for all of two minutes
11 before he is not going to answer any questions.

12 The State says, oh, he is intimidated; he is
13 covering for his friends. Maybe he just doesn't want to
14 testify. Maybe he doesn't feel the need to get up there
15 and lie. Maybe he feels like games are being played with
16 his life. He has already been sentenced. He already
17 tried to help the State and they didn't like what he
18 said, according to his attorney.

19 But why Savon Chisolm didn't testify, we probably
20 will really never know. It is not a letter from March of
21 2016.

22 And he doesn't appear to be somebody easily
23 intimidated. He is older than Devante Grant, more mature
24 than Devante Grant. He didn't care when the judge was
25 telling him he was going to be held in contempt. And his

1 words are leaning into a microphone with much confidence,
2 I choose not to answer your question. He's not
3 intimidated. He is not covering for anybody. He is
4 protecting himself.

5 There's also lack of physical evidence in the case.
6 Where is the DNA tying Devante Grant to the car, to the
7 gun, to the pills? Where are the fingerprints tying him
8 to the gun, the car, the pills? We know Chisolm's prints
9 were on the car.

10 And I made a big deal with the detective about the
11 BOLO that he issued, that, hey, you put the wrong date on
12 there.

13 Not because that is necessarily this huge deal that
14 he put the wrong date on the BOLO and they had already --
15 you know, it was issued and arrests were already made.
16 It is because even a seasoned detective makes mistakes.
17 He put the wrong date down. And if he can make a mistake
18 somebody who is in the system all the time, well-trained,
19 how do we know Christina Hooks didn't make a mistake when
20 she made her identification?

21 Now the State has the burden of proof in this case.
22 They have to prove to you beyond a reasonable doubt that
23 this happened the way they said it happened and that they
24 have the right person.

25 This is a very important decision. And the court is

1 going to define for you what reasonable doubt means.
2 When you are thinking about this case and making a
3 decision, think about the importance and the significance
4 of your decision. Think about how you approach any
5 significant or important decision in your life, any
6 decision that has consequences.

7 If you are putting a family member in a nursing
8 home, which one; is it going to be safe and is this
9 something you can live with. What childcare should you
10 send your child to, will they be save and is this
11 decision a safe and good one.

12 Because wrong decisions in life can have drastic
13 consequences. And if you doubt what the State has
14 presented, then Devante deserves the benefit of your
15 doubt. If you only think it is probable that he
16 committed this crime, that is not enough. You have to
17 find him not guilty. If you think things look
18 suspicious, that is not enough. You have to find him not
19 guilty.

20 People see what they want to see. You are affected
21 by your own experiences, your own bias, motives. And the
22 State sees this case as all of these connections that
23 just lead to one conclusion.

24 But when you look at the evidence it is your duty to
25 fully consider what they presented, to determine if the

1 17-year-old Devante Grant weighing in at only 120 pounds
2 is the 150 or 160 pound, 20 to 25-year-old man who
3 pointed a gun at her face or is she wrong, is there a
4 true possibility it was somebody else, somebody else like
5 Michael Allen.

6 Could you tell the difference between those two in a
7 dark parking lot, 8:30 at night, hoodies drawn, in the
8 most stressful time of your life?

9 People see what they want to see. But in this case
10 the State has failed to meet their burden and Devante
11 Grant has been falsely accused, and we would ask that you
12 find him not guilty. Thank you.

13 THE COURT: Thank you, Ms. Ehrlich.

14 Solicitor, you may reply.

15 MR. WARING: Thank you, Your Honor.

16 THE COURT: Sure.

17 **REPLY BY MR. OSBORNE:**

18 Ms. Hooks is a racist. All right. I mean that is
19 what we just heard. Ms. Hooks didn't ask to get robbed.
20 And she was simply trying to go home. Okay.

21 She didn't even ask to come in here today. We
22 subpoenaed her. We asked her to get here -- to come
23 here. We asked her to testify.

24 She simply came up here and told you the truth.
25 Okay. She got attacked while she was on the stand, and

1 now she is being called a racist. And I will talk more
2 about that in a second.

3 Let's take a look at this letter. Look at the way
4 it is addressed. Informant. Informant. Now I think you
5 all know what that means. It is a person who is
6 informing the police. It is a person who is giving
7 information to the police. It is not a person who is
8 lying. That would be Savon Chisolm is a liar. He is
9 calling him Savon Chisolm, the informant.

10 And she can say whatever she wants, but when that is
11 being distributed through the mail and at the jail, that
12 is sending a clear-cut message of shut your mouth.

13 Now we showed you some photographs that were taken
14 out there. And I am not going to go back through all of
15 them again. The State did not put this light pole there.
16 The light pole is there. That just happens to be where
17 she parked her car. The light is there.

18 Now Ms. Ehrlich spoke a lot about the lineup
19 presentation, the manner in which Detective Jarrell
20 presented the lineup.

21 She suggested that -- well, she suggested two
22 things. One, she suggested that he unwittingly or
23 unknowingly suggested to Ms. Hooks who she should
24 identify. Then, she outright suggested that he suggested
25 who she should identify.

1 You heard testimony that that process was audio
2 recording. If at any point he made any suggestion of who
3 Ms. Hooks should identify don't you think she would have
4 brought it up? She didn't.

5 And you have heard from their own expert, the
6 Department of Justice makes recommendations concerning
7 lineup presentations and the manner in which they should
8 be presented. Some of those recommendations were
9 followed by Charleston Police Department. Some weren't.
10 Some of those recommendations were followed by the FBI.
11 Some weren't. The FBI is a division of the Department of
12 Justice. He didn't do anything wrong.

13 All right. So the fingerprints. I do want to talk
14 about that for a second. It is not that they didn't
15 process the vehicle. They did. They processed the
16 vehicle. They processed the gun.

17 They only found Savon Chisolm's fingerprints in the
18 car. Which kind of makes a little bit of sense because
19 they just pulled him out of the car. Why wouldn't he
20 know about that or remember that? What significance is
21 that? He was found in the car. It is Ms. Hook's car.

22 The police didn't even find any fingerprints from
23 her in the car. So it is that big of a stretch to say
24 that there is more than one person that ever was in that
25 car other than Savon Chisolm? The police just didn't

1 find the prints.

2 And it wasn't for lack of effort. You heard from
3 Ms. Hooks there was fingerprint powder everywhere. They
4 tried. They just didn't find it.

5 They didn't find anything on the gun either. So
6 there was a lot that was made about the fact that his
7 fingerprints weren't found in the car. His fingerprints
8 weren't found on the gun. There were no fingerprints
9 found on the car with the exception of Savon Chisolm.
10 And no fingerprints were found on the gun.

11 They didn't have tunnel vision. They tried to get
12 evidence. It just wasn't there in that case.

13 THE COURT: Okay. Now I asked myself when Ms.
14 Hooks - and I am sure you did too - when Ms. Hooks was
15 testifying why was Ms. Birt so adversarial towards her?
16 She is the victim of a crime, and it doesn't appear as
17 though she is lying about anything. Why the badgering?
18 Why you are under oath, not me?

19 You heard why. And she just told it to you. She is
20 trying to sell to you that Ms. Hooks identified that man
21 because of letters that were underneath this -- his
22 photograph. Letters that Detective Jarrell didn't see,
23 letters that his supervisor didn't see, and letters that
24 Ms. Hooks didn't see. But somehow subconsciously those
25 letters led her unwittingly to identify an innocent man,

1 right?

2 Well, this is why Ms. Birt was so upset. And she
3 told you, Ms. Hooks, when she viewed the lineup she did
4 so like this (motioning). And why did she do that?
5 Because the guy had a hoodie on. And she did that with
6 every photograph in the lineup. And her expert explained
7 to you why she did that.

8 Remember the word attention. When you are in a
9 stressful environment your attention will be drawn to a
10 certain thing, and that attention will then help you
11 recall. In this case her attention was drawn to his face
12 because he had a hoodie on. And that is what he said.

13 Ms. Ehrlich made a lot about the fact that Detective
14 Jarrell never said that she did that cupping motion.
15 Well, she never asked. All she had to do was ask.

16 Ms. Hooks didn't think to mention it because it was
17 insignificant to her. The expert made it significant.
18 She explained to you how she was able to make a positive
19 ID.

20 Ms. Hooks didn't identify this man by mistake. She
21 identified this man because he is the one that robbed her
22 at gun point. Find him guilty.

23 THE COURT: Thank you, Solicitor.

24 **LAW BY THE COURT:**

25 THE COURT: All right, ladies and gentlemen, we have

1 reached the point now where it becomes my responsibility
2 as a trial
3 judge to give you the law in which you of course have
4 committed at the onset to accept and apply favorably and
5 fairly and impartially to the evidence in this case.

6 And both the State, Mr. Grant, and their attorneys
7 expect that you will very shortly evaluate and consider
8 all of the evidence in this case and decide what you find
9 to be true facts, apply the law and reach a verdict. And
10 when you have done that you will have honored the
11 commitment that you make.

12 During this instruction you -- I will make from time
13 to time use a term defendant. And defendant is just a
14 term of art. In this forum and in the legal profession
15 it is simply to designate the party against whom a claim
16 is made. That is the sole significant. It is just
17 another way of identifying Mr. Grant. But don't infer
18 anything from that term or that alone; because as I said,
19 it is just how the caption is made.

20 As I mentioned to you, the defendant has been
21 accused in two indictments. The documents that I am
22 holding in my hand they won't accompany you to your jury
23 room because they are not evidence. They are just
24 merely -- contain the accusations against Mr. Grant. And
25 they accuse him of committing the offense of armed

1 robbery and possession of a weapon during the commission
2 of a violent crime.

3 Now Mr. Grant has rendered a plea of not guilty
4 which then places - to both of these indictments - which
5 places upon the State the burden of proving him guilty
6 beyond a reasonable doubt.

7 As I told you when we started it is the law of this
8 state, and as far as I know every state in the United
9 States, that when persons are accused of committing a
10 criminal offense they are never required to come in and
11 prove or disprove anything. In fact, the law says that
12 any such person, including Mr. Grant, is presumed to be
13 innocent.

14 And I would tell you that this presumption of
15 innocence is not just -- are not just words. It is an
16 act of presumption. And each of you is expected to
17 contain -- to maintain this presumption of innocence at
18 all times throughout this case and at all times
19 throughout your deliberations until you reach a point in
20 your deliberations, if you reach that point, that you are
21 satisfied beyond a reasonable doubt that the State has
22 established by the evidence and persuaded you beyond a
23 reasonable doubt that each element of each crime has been
24 established. And only then may that presumption of
25 innocence be set aside.

1 So obviously, ladies and gentlemen, the fact that a
2 person accused of committing a criminal offense, such as
3 Mr. Grant, does not testify in his or her own behalf
4 that cannot be considered against that defendant in any
5 circumstances or in any manner whatsoever.

6 A defendant has the absolute right to remain silent
7 and the assertion of that constitutional right cannot
8 be considered against that person in a jury's
9 deliberations.

10 Under your oath you are therefore instructed not to
11 reach any inference and draw no conclusion whatsoever
12 from the fact that Mr. Grant did not testify in this
13 case. And his failure to testify should not even be
14 considered and should not even be discussed in your
15 deliberations.

16 It is incumbent upon the State to prove Mr. Grant
17 guilty beyond a reasonable doubt. What is a reasonable
18 doubt? A reasonable doubt is a doubt that would make an
19 honest, conscientious, sincere juror searching for the
20 truth in a case to hesitate to act or take some action.
21 Proof beyond a reasonable doubt is proof that would leave
22 you firmly convinced of the defendant's guilt.

23 Now I will tell you that there are very few things
24 in this world and in this life that we know with absolute
25 certainty. And in criminal disputes such as this the law

1 does not require the State to overcome every possible
2 doubt.

3 If based on your evidence -- consideration of the
4 evidence you are firmly convinced that the defendant is
5 guilty of the crime or crimes charged then you must
6 return a verdict of guilty.

7 If on the other hand you think there is a real
8 possibility that he is not guilty then you must give him
9 the benefit of that doubt and return a verdict of not
10 guilty.

11 A reasonable doubt, ladies and gentlemen, may arise
12 from the evidence in the case or from the lack or absence
13 of the evidence in the case.

14 And it is up to you to determine whether or not a
15 reasonable doubt exists as to the guilt of Mr. Grant. I
16 would instruct you that he is entitled to every
17 reasonable doubt arising in the whole case.

18 And what does that mean? Simply this: If upon any
19 issue of fact which would be essential to a conviction,
20 essential to your returning a verdict of guilty, you
21 should have a reasonable doubt as to how that issue
22 should be resolved it would be your duty to resolve it in
23 his favor.

24 Now the evidence which you are to consider consists
25 of the testimony of the witnesses and exhibits that have

1 been offered and introduced through their testimony
2 during the trial.

3 Please remember something. The objections -- any
4 objections that were made during the introduction of
5 evidence - and there were some - that shouldn't be
6 considered at all by you.

7 Why? Because that is probably one of the greatest
8 examples I think I can give you of how we work together.
9 That became my responsibility to determine whether or not
10 that evidence was admissible under our rules of evidence.

11 And I would generally -- and you heard me say I
12 sustained the objection or I overruled an objection. If
13 I sustained the objection it meant that you didn't hear
14 that testimony.

15 You are not to infer anything from that. You are
16 not to consider that. You are not to even consider why
17 would the lawyer make the objection, what would the
18 witness have said.

19 If you do, you have kind of stepped over into my
20 area of responsibility. That was my responsibility. And
21 you are to accept that because that is my job.

22 However, if I overruled the objection I said under
23 our rules that I was going to permit that. But don't put
24 any greater weight on that because I overruled it. That
25 doesn't mean that -- because if you did then you let me

1 step into your area of responsibility.

2 Quite honestly that is the moment it shifts. When I
3 overruled it, now it goes to you. You decide whether you
4 believe it or not and if so how strongly you believe it.

5 So that is how we work together.

6 Now please remember that the arguments of the
7 attorneys as I have told you in their opening statements
8 while extremely helpful, very beneficial, as officers of
9 this court and they have that very important
10 responsibility, but those remarks should never be
11 considered evidence at any point.

12 The evidence of course, again, comes through the
13 testimony of the witnesses. And neither should my
14 remarks ever be considered evidence or suggestive of how
15 you are to resolve an issue in this case.

16 I would also tell you that any remarks by the
17 attorneys concerning what a witness said or didn't say,
18 if that differs from your collective recollection of what
19 the witness said or didn't say then you are instructed to
20 disregard their remarks in their entirety.

21 Likewise, if any of their remarks about the law
22 differs from the law as I give it to you, again you must
23 take the law as I give it to you and disregard the
24 attorney's remarks as to what the law is or what they
25 believe the law to be.

1 Now, ladies and gentlemen, when a party has the
2 burden of proof such as the State in this case, that
3 party can present evidence in basically two ways. One is
4 direct evidence, and the other is indirect evidence.

5 Direct evidence is basically ones sensory
6 perception - I saw something; I heard something; I felt
7 something or the like - if you are firmly convinced as to
8 the creditability or believability of that testimony that
9 it would -- that would prove that particular fact or
10 circumstances.

11 The other method is indirect. But it is more
12 commonly called circumstantial evidence. And that is
13 simply this: When you prove something by circumstantial
14 evidence they prove certain facts which you firmly can --
15 that you firmly are convinced of the credibility of those
16 facts and when you link them either by inductive or
17 deductive reasoning you reach a logical conclusion which
18 you are firmly convinced of that conclusion, then it
19 would establish that particular fact through
20 circumstantial evidence.

21 I would tell you that the law makes absolutely no
22 distinction between the weight or the value to be given
23 to either direct or circumstantial evidence. Nor is any
24 greater degree of certainty required of circumstantial
25 evidence or direct evidence. You are instructed to

1 weight all of the evidence in this case.

2 But the law does say to the extent that the State
3 relies on any circumstantial evidence they must -- there
4 has to meet certain tests.

5 First, these facts upon which they rely, those facts
6 that you would be linking or reasoning, considering, and
7 leading you to a logical conclusion, those facts must
8 point conclusively to the guilt of the defendant. They
9 must be wholly consistent with each other; and they must
10 be established, as I have stated, beyond a reasonable
11 doubt.

12 I further instruct you that the mere fact that the
13 circumstances brought out on a case are strongly
14 suspicious of guilt or the circumstances are such that
15 the defendant's guilt is probable that that would not be
16 enough to sustain a verdict of guilty in either of these
17 charges.

18 Because proof offered by the State has to be more
19 than mere suspicion. It has to be more than someone
20 being probably guilty. It has to be proof that satisfies
21 you beyond a reasonable doubt.

22 Now an issue in this case as it is in any criminal
23 dispute is identification of the defendant as a person
24 who committed the crime charged.

25 The State has the burden of proving identity beyond

1 a reasonable doubt. You must be satisfied beyond a
2 reasonable doubt of the accuracy of the identification of
3 the defendant before you may convict him.

4 Identification testimony is an expression of belief
5 or impression by a witness. You must determine the
6 accuracy of the identification of the defendant. And you
7 must -- and you must consider the believability of each
8 identification witness in the same way as any other
9 witness.

10 You may consider whether the witness had the
11 adequate opportunity to observe the offender at the time
12 of the offense.

13 This will be affected by things such as how long or
14 short a time was available, how far or close was the
15 witness, what were the lighting conditions, whether the
16 witness had a chance to see or know the person in the
17 past.

18 I instruct you the burden of proof on the State
19 extends to every element of the crime charged and
20 specifically includes proving identity beyond a
21 reasonable doubt.

22 Also there has been a statement to have been alleged
23 to have been made by the defendant. And I have permitted
24 it to be admitted into evidence in this case; but I would
25 instruct you that while I have accepted or approved the

1 admissibility, you must make the ultimate decision as to
2 whether or not the statement made by the defendant is his
3 statement.

4 If the defendant did make the statement you must
5 determine whether the statement was made by the defendant
6 voluntarily and of his own free will.

7 This means that the statement was not caused by
8 pressure, force, fear, threats, coercion, or intimidation
9 or by hope or promise of leniency or reward of any kind.

10 And in determining whether the statement was
11 voluntary you should consider both the characteristics of
12 the defendant and the details of the question.

13 Some of the factors that you may want to consider
14 are the age of the defendant, the defendant's education
15 or lack of education, the defendant's mental ability or
16 capacity, his IQ or intelligence, his background and
17 environment, and the place and length of detention, the
18 nature of the questioning, and the advice or lack thereof
19 to the defendant of his constitutional rights including
20 but not limited to the right to remain silent, that any
21 statement could be used against him in a court, that if
22 he could not afford a lawyer that -- that he -- that he
23 had a right to have a lawyer and if he couldn't afford a
24 lawyer a lawyer would be appointed to represent him at
25 any -- without any cost, and that he could stop making

1 the statement at any time.

2 You must carefully consider all of the surrounding
3 circumstances before you give any weight to the alleged
4 statement.

5 And I would instruct you further the State has the
6 burden of proving beyond a reasonable doubt that the
7 statement was voluntary and you must have determined that
8 it has met its burden of proof beyond a reasonable doubt.

9 But if you find that it was not then you are
10 instructed to disregard the statement in its entirety.

11 Now how do you decide all of these facts in this
12 case? I would tell you that it is really nothing foreign
13 to any of you. We do it every day. And you use those
14 same tools and techniques that you have employed in your
15 life for deciding what you find to be credible and
16 believable.

17 It is a common sense exercise. It is an exercise in
18 and an application of your sense of logic and reason in
19 applying your life's experiences.

20 You in doing so there are a number of factors that
21 you may want to consider. I am going to list some of
22 them for you. But if I don't mention a factor or a
23 method that you have employed in your life and you have
24 found it to be reliable, please use it when you begin
25 your deliberations.

1 But some of the factors that you may want to
2 consider would be: The demeanor of the witness, how did
3 they appear to you, straightforward or hesitant in
4 answering questions. Was the testimony of a witness
5 consistent or was it inconsistent. Was it strengthened
6 or weakened by other evidence in the case. How did that
7 witness know the particular facts that he or she
8 testified to. What was the ability of that witness to
9 know those particular facts or circumstances. Is there a
10 reason for a witness to give testimony which may be
11 helpful or detrimental to one side or the other; in other
12 words, was the witness biased or prejudiced in any
13 fashion.

14 In determining the questions of credibility and
15 believability, ladies and gentlemen, you have very broad
16 discretions. You may believe many witnesses against one.
17 You may believe one witness against many. You have the
18 right to believe all of a witness's testimony, parts
19 of a witness's testimony, or none of a witness's
20 testimony.

21 Now you don't make these decisions arbitrarily. But
22 if there is a reason in the record for taking that
23 position of not believing a witness you have that
24 prerogative. Because your objective, your mission, so to
25 speak, has been to determine the truth regardless of the

1 source of the evidence.

2 Now while you have very broad discretions when it
3 comes to the evidence, please remember you don't enjoy
4 the same when it comes to the law. In fact, that is one
5 of those separations of our jobs and responsibilities.

6 And we live in an information society. And we all
7 probably have greater familiarity to the law than we --
8 than many of us did 30 or 40 years ago. And that is
9 good.

10 But for purposes of this if you had an understanding
11 of what any of these legal principals means or what you
12 believe the law to be, I respect your right to believe
13 that; but for the purposes of this proceeding you have
14 promised to set that aside and take the law as I give it
15 to you.

16 And if you think a law needs to be changed I respect
17 your right on that as well. But this isn't the time or
18 place. That will be done at a later date by another --
19 another body, another branch of government, not by you or
20 me today.

21 We have to take the law and apply the law that
22 exists today, and that is what you are instructed to do.
23 Also please remember that the fact that I give you an
24 instruction on a particular issue is not to be taken by
25 you as a suggestion of how you are to resolve a factual

1 issue; because that is your sole job.

2 The order of my instruction means nothing. I had to
3 put it in some order. And don't put any greater weight
4 on any one aspect, but rather consider and apply the
5 charge as a whole.

6 Now as I mentioned to you, the defendant has been
7 charged -- has two charges. One is armed robbery. And
8 the other is possession of a weapon during the commission
9 of a violent crime.

10 First, I would like to instruct you as to the armed
11 robbery. In order to prove this offense the State must
12 prove beyond a reasonable doubt that first that the
13 defendant took personal property from the person or
14 presence of another.

15 That property is in the presence of a person if it
16 is within that person's reach, inspection, observation,
17 or control so that the person could if not overcome with
18 violence or prevented by fear from keeping possession
19 maintain possession of the property.

20 The State must also prove beyond a reasonable doubt
21 that the defendant carried the property away intending to
22 permanently deprive the owner of that property and to
23 keep the property for the defendant's own use.

24 The slightest removal of the property or the
25 complete possession of the property even for an instance

1 by the defendant is sufficient to show a taking and
2 carrying away of the property.

3 Furthermore, the taking and carrying away of the
4 property must have been done with violence or by putting
5 the owner of the property in fear of violence.

6 And finally, the State must prove beyond a
7 reasonable doubt that the defendant was armed with a
8 deadly weapon during the robbery.

9 A deadly weapon is any article, instrument, or
10 substance which is likely to cause death or great bodily
11 harm.

12 Whether an instrument has been used as a deadly
13 weapon depends on the facts and circumstances of each
14 case. I would instruct you that a pistol is considered a
15 deadly weapon.

16 Now let's look at the charge of possession of a
17 weapon during the commission of a violent crime. The
18 State must prove beyond a reasonable doubt that in order
19 to obtain a conviction on this offense that the defendant
20 was in possession of a firearm or visibly displayed what
21 appeared to be a firearm during the commission of a
22 violent crime.

23 A firearm means any revolver, pistol, or any weapon
24 which is designed to or may be readily converted to expel
25 a projectile.

1 In order to find the defendant guilty of a weapon
2 during the commission of a violent crime you must find
3 the defendant guilty of course of committing a violent
4 crime. I would instruct you that armed robbery is
5 considered a violent crime.

6 Now criminal intent is also a necessary element of
7 the crime, and that must be established as any fact or
8 any element beyond a reasonable doubt.

9 Criminal intent is always a matter that is
10 determined by you from considering the circumstances
11 surrounding the situation. And the law says that the
12 criminal intent may be inferred from the circumstances
13 that have been shown to have existed.

14 Criminal intent is a state of mind that operates
15 jointly with an act in the commission of a crime. Intent
16 would include those consequences which represent the very
17 purpose for which an act is done or known to be
18 substantially certain to result regardless of one's
19 desire.

20 Criminal intent is a mental state of conscious
21 wrongdoing. So it is up to you to determine whether or
22 not the -- what the defendant intended to do.

23 Of course you must have first determined that it was
24 the defendant who committed the offense based on the
25 circumstances which have shown to have existed.

1 I tell you as again that criminal intent has to be
2 established beyond a reasonable doubt.

3 Ladies and gentlemen, you have been sworn to be a
4 judge with me. And I will tell you that as judges we are
5 not advocates of either side. We don't have any friends
6 to reward, and we certainly don't have any enemies to
7 punish.

8 We are expected to do something that I will confess
9 to you -- maybe this isn't something you have done many
10 times in your life. I have had the honor and privilege
11 of doing this now for 23 years. And I constantly remind
12 myself of this responsibility that goes with being a
13 judge, and that is that we have to set aside all human
14 emotion.

15 And I will admit that is not easy sometimes. And I
16 am sure it might not be easy for you. But it has no
17 place in this process of deciding a criminal dispute.

18 And each one of you has promised the defendants, has
19 promised the State, promised the court and their
20 attorneys that you will in just shortly make your
21 decision by carefully and methodically applying your
22 common sense, your sense of logic and reason in analyzing
23 the evidence and deciding what you believe to be the true
24 facts and then once making that decision taking the law
25 as I have given it to you and apply it fairly and

1 impartially to those facts in reaching a decision. And I
2 am very confident you will honor that in every respect.

3 To assist you, Mr. Presiding Juror, in recording
4 your verdict I have prepared two verdict forms which
5 I would like to discuss with you and the other jurors
6 now.

7 You will note that each of them is captioned. One
8 deals with the possession of a weapon during the
9 commission of a violent crime. And the other is armed
10 robbery.

11 The two choices, they are the same. The order in
12 which they appear means absolutely nothing. I have to
13 put them in some order. And your two choices are either
14 guilty or not guilty.

15 What will you be saying if your verdict if you
16 check -- and how you complete that, Mr. Presiding Juror,
17 is simply put a check or a cross, "x". And either --
18 which -- whichever the jurors' choice is. Circle it.
19 And then sign it where it says presiding juror, and date
20 it for me.

21 What will you be saying if guilty? You will be
22 saying that you have analyzed it and as to the element
23 of that particular crime, be it armed robbery or
24 commission -- or possession of a weapon during the
25 commission of a violent crime, you are satisfied beyond a

1 reasonable doubt from the evidence that the State has met
2 its burden therefore you have returned a verdict of
3 guilty.

4 Not guilty. You have analyzed it and you have
5 determined the State has failed on one or more and
6 therefore as instructed you must return a verdict of not
7 guilty.

8 In order for it to be your choice it has to be
9 unanimous. That means twelve to zero. Some states have
10 a plurality. We do not in this state. So it has to be
11 twelve to zero. You will all have to agree for it to be
12 the decision of the jurors.

13 Now once you have filled out the forms if you will
14 knock on the door and we will be happy to return you to
15 the courtroom to receive your verdict.

16 Let me ask now of the first 12 who were selected do
17 any of you believe that you will not be able to continue.
18 If so, raise your right hand.

19 (WHEREUPON, no one raised their hand.)

20 THE COURT: Thank you. There are none. At this
21 point it appears that the jury was capable of going
22 forward. So when I -- in just a moment I am going to
23 excuse you all to return to your jury room.

24 I would ask that you not rejoin the jury. They will
25 take you to another room and I will be in shortly to

1 discuss how much longer you need to remain with us.

2 But and you all are very close. You, the first 12,
3 are close to reaching the point when you may begin to
4 change that position and talk about what you believe to
5 be true and what you believe to be the true facts. But
6 you are not there yet.

7 I have to excuse you. I need to talk with the
8 attorneys and discuss my charge. It may be necessary
9 that I return you to the courtroom to give you some
10 clarification or further instruction. If that be the
11 case we will return all of you including the alternate
12 and we will give that clarification.

13 But if there are no exceptions or additions to the
14 charge then we will gather the exhibits and deliver them
15 to you. When you receive your exhibits then you may
16 commence your deliberations.

17 The only restriction, Mr. Presiding Juror, on the
18 deliberations that I place, is this: If any juror has to
19 leave the table for any reason, you must stop
20 deliberating until all 12 of you are together.

21 Other than that you proceed as you deem fit and
22 proper in doing this.

23 Remember there will be -- obviously we talked about
24 some things. Some of the videos if you need to rehear
25 those or if you need to hear -- rehear testimony, if you

1 will make a note just as you -- we have already done.
2 Just tell us what it is you need. Sign it and date it,
3 and then we can -- we will try to address those concerns.

4 And unless I hear from you we will assume you are
5 not needing any assistance and you do not need to hear --
6 rehear any of the video.

7 So those will have to -- that will have to be done
8 in the courtroom obviously because you won't have them
9 back in your jury room. You will not have the capability
10 of hearing those on your own or viewing those on your
11 own.

12 Thank you very much for your attention. Please
13 retire to your jury room and await the exhibits before
14 commencing your deliberation.

15 (WHEREUPON, jurors exits the courtroom 8/9/7, 10:54 a.m.)

16 THE COURT: Exceptions or additions from the State?

17 MR. OSBORNE: Your Honor, I just wanted to bring up
18 one thing. You denied our request for hand of one
19 charge. And the State certainly respects that. I feel
20 as though that then opened the door for the defense to
21 argue third-party guilt. And she argued that Michael
22 Allen did it.

23 And I just -- I fear that first question coming back
24 is going to be if we find Michael Allen did it along with
25 the defendant is he guilty.

1 And I mean perhaps we should have objected once she
2 argued third-party guilt. I understand that. We were
3 kind of, you know, caught a little bit off guard that she
4 would argue that.

5 THE COURT: Well, there is no evidence that he did.

6 MR. OSBORNE: And that is what I was going to defer
7 to you, Your Honor. There is no evidence that Michael
8 Allen did it, but she did argue that in her closing that
9 Michael Allen did ---

10 THE COURT: Her statement is not evidence.

11 MR. OSBORNE: Yes, Your Honor.

12 THE COURT: Because I instructed the jury that
13 y'all's remarks are not considered evidence. I hear you.
14 I understand that.

15 If they have the question -- I tried to accomplish
16 that and was reversed on one, so I won't be dealing with
17 that. We will just have to deal with it the best we can.

18 But I appreciate it. And I wrestle with that.
19 And I was thinking about this last -- if the question
20 had been asked, because I assume there was a statement
21 taken -- given by Mr. Chisholm that implicated him.

22 MR. OSBORNE: Yes, Your Honor.

23 THE COURT: And if it had been asked that question
24 then I would probably charge that. But I can't because
25 it is not. Okay.

1 But I don't fault you for not because it is a -- it
2 is a close call. I mean it really is. It is -- does it
3 come in, it is really sufficient to be getting into that
4 the unavailable witness against one's interest. Because
5 then you have got all of the fringe benefits such as,
6 well, was it really against his interest to do that
7 because he got a benefit from it. So it is a close call.

8 But anyway that is -- I appreciate your position.
9 But I cannot do that.

10 MR. OSBORNE: Thank you, Your Honor.

11 THE COURT: Thank you very much, Mr. Osborne. Any
12 exceptions or additions from the defendant?

13 MS. EHRLICH: No, Your Honor.

14 THE COURT: Thank you very much. We will be at ease
15 and ---

16 MS. EHRLICH: I think we have a housekeeping matter.

17 THE COURT: What have we got?

18 MS. EHRLICH: The CD.

19 THE COURT: All right.

20 MS. EHRLICH: I think they chose not to play one of
21 the videos or admit one of the videos. So we were going
22 to substitute the CD that has the five calls, the videos
23 that they wanted admitted rather than the CD with all.

24 THE COURT: If you don't have -- do you have an
25 objection?

1 MS. EHRLICH: I don't have an objection to that. I
2 think that is cleaner, Your Honor.

3 THE COURT: And we will just -- we will just, what,
4 change the exhibit number?

5 MR. OSBORNE: It is the same number, Your Honor.

6 THE COURT: Same number. All right.

7 THE COURT REPORTER: Number 32?

8 MR. OSBORNE: Yes, ma'am.

9 THE COURT REPORTER: Thank you.

10 THE COURT: That will be fine. By agreement we are
11 substituting a new 32.

12 MR. OSBORNE: Yes, sir.

13 (WHEREUPON, a substitution was made for State's Exhibit
14 32.)

15 (WHEREUPON, recess awaiting verdict 8/9/17, 10:58 a.m.)

16 (WHEREUPON, Court's Exhibit 3, jury note, was marked for
17 identification.)

18 (WHEREUPON, jurors entered courtroom 8/9/17, 11:53 a.m.)

19 THE COURT: Thank you, ladies and gentlemen, thank
20 you for your patience. I have now what is now Court's
21 Exhibit Number 2 (sic-3), and there are two requests.

22 One is can we hear -- can we hear or see the
23 transcript. It is a legitimate request. And I think
24 there have been some experiments I think in Arizona where
25 they produce the transcript immediately and give it to

1 the jury. That would be most helpful. As we all know
2 some people are visual. That creates a problem when you
3 have to listen to it. We do not have that capability,
4 but we will replay the testimony for you.

5 And you said a transcript of Detective Jarrell's
6 testimony regarding Mr. Chisolm's comments at his arrest.

7 What I am going to do is this. I am going to start
8 with Detective Jarrell's testimony from the time he is
9 sworn. I will play it until you raise your hand
10 indicating that the jury has heard what they need to
11 hear. And I don't want to decide what it is. I will let
12 you all decide that. And so we will play that until
13 y'all have heard what it is you are looking for.

14 With respect to the jail house videos you want to
15 see those again, as I understand it. And that is just
16 the videos. There were telephone calls, but what you are
17 requesting is videos; is that correct?

18 MR. PRESIDING JUROR: Correct.

19 THE COURT: Very well. Okay. Let's -- we will do
20 the testimony first and then you will have the videos
21 ready to play for them?

22 MR. WARING: Yes, Your Honor.

23 THE COURT: Very good. We will play that. Thank
24 you so much.

25 (WHEREUPON, the court reporter played testimony to begin

1 at the swearing of Detective Jarrell, August 8th, 2017,
2 Page 306, Line 3, through Page 308, Line 22, ending with
3 the words "804" when presiding juror raised his hand.)

4 THE COURT: You have heard what you need?

5 PRESIDING JUROR: (Nods.)

6 THE COURT: Very well. We will play the videos.

7 MR. WARING: Yes, Your Honor.

8 (WHEREUPON, jail video was replayed for the jury.)

9 THE COURT: Okay. Thank you very much. If there is
10 anything else you need just let us know. Thank you. You
11 may retire and resume your deliberations.

12 (WHEREUPON, jury exits courtroom to resume
13 deliberations.)

14 THE COURT: Exceptions or additions from the State?

15 MR. WARING: None, Your Honor.

16 THE COURT: Exceptions or additions from the
17 Defendant?

18 MS. EHRLICH: No, Your Honor.

19 THE COURT: Thank you. We will be at ease.

20 (WHEREUPON, break was had awaiting verdict.)

21 (WHEREUPON, resume proceedings 8/9/17, 12:36 p.m.)

22 THE COURT: I thank everybody for the courtesies in
23 observing the proper decorum. The jury has reached a
24 verdict. And when we publish the verdict I don't want
25 any reaction to the jury verdict, please.

1 And I understand it can be emotional sometimes. And
2 if you feel you might have some difficulty maintaining
3 that then I would ask you to please exit. Otherwise, I
4 will assume that you are going to honor that request.

5 And I thank you. And I appreciate both sides, and I
6 appreciate the concerns on both sides.

7 All right. Let's bring in our jury, please.

8 BAILIFF: All jurors are present, Your Honor.

9 THE COURT: Thank you very much, Mr. Williams.

10 (WHEREUPON, jury enters courtroom 8/9/17, 12:38 p.m.)

11 THE COURT: Thank you, ladies and gentlemen. Mr.
12 Presiding Juror, as I understand the jury has reached a
13 verdict, sir?

14 PRESIDING JUROR: We have.

15 THE COURT: If you would pass the jury form, please,
16 Mr. Williams.

17 (WHEREUPON, the verdict form was passed to the Court.)

18 THE COURT: The verdict forms have been properly
19 completed. If you would please publish the verdicts. I
20 would ask the defendant to please rise.

21 (WHEREUPON, defendant complied.)

22 THE CLERK: The State of South Carolina, County of
23 Charleston, The State of South Carolina versus Devante
24 Grant, we the jurors -- jury by unanimous consent find
25 the defendant Devante Grant on the charge of armed

1 robbery guilty.

2 We the jury by unanimous consent find the defendant
3 Devante Grant on the charge of possession of a weapon
4 during the commission of a violent crime guilty.

5 Signed by presiding juror August 9th, 2017.

6 THE COURT: Thank you, sir.

7 Ladies and gentlemen, if the clerk has published
8 your verdict as you voted please raise your right hand.
9 (WHEREUPON, all jurors complied.)

10 THE COURT: Thank you. You may put them down. Let
11 the record reflect that each juror raised his or her
12 right hand in response to the court's inquiry.

13 Anything further from the jury from the defendant?

14 MS. EHRLICH: No, Your Honor.

15 THE COURT: Anything further from the State?

16 MR. WARING: Nothing, Your Honor.

17 THE COURT: Ladies and gentlemen, I am going to ask
18 you to return to your jury room for just a moment. I
19 will be with you momentarily. Thank you very much.

20 (WHEREUPON, jurors exits the courtroom 8/9/17, 12:40
21 p.m.)

22 THE COURT: Anything from the State regarding the
23 verdict?

24 MR. WARING: No, Your Honor.

25 THE COURT: Anything from the defendant?

1 MS. EHRLICH: Your Honor, I would just move for a
2 new trial based on all our prior objections and
3 specifically that issue related to Detective Jarrell's
4 communications with my client.

5 The questioning implicating -- or inferring to the
6 jury that based on the conversation with Mr. Chisolm they
7 learned that Devante Grant was a suspect. And I objected
8 at that point. Your Honor said that they could get into
9 that under 804.

10 THE COURT: Which you withdrew that objection.

11 MS. EHRLICH: Yes, sir.

12 THE COURT: Because they didn't proceed any further.

13 MS. EHRLICH: Correct.

14 THE COURT: But -- and I appreciate your position.
15 The inference and one of the things that -- again, I --
16 that is why I am not a solicitor. I probably would have
17 followed up with a question of tell me what -- did he
18 admit his guilt, did he implicate your client. But the
19 State elected not to do that.

20 But the question was - and framed very properly
21 which as you have acknowledged was not hearsay - What
22 action did you take as a result of your conversation?

23 That is the way that we I think are instructed to
24 deal with that so ---

25 MS. EHRLICH: Yes, sir. And I think what makes

1 it -- where I am going with that is then later his
2 statement was admitted through the detective and I had
3 raised the issue about possible hearsay there where the
4 detective was questioning him and indicating to him that
5 Chisolm has implicated him.

6 THE COURT: I understand.

7 MS. EHRLICH: And just based on those reasons, Your
8 Honor, I move for a new trial at this time.

9 THE COURT: And I appreciate that. And I note
10 those. And certainly that is one of the issues
11 concerning statements, period.

12 And we -- and I -- of course we -- you preserved
13 your objection as to whether or not his assertion of his
14 right, his fourth amendment rights were -- or fifth
15 amendment rights were preserved.

16 I didn't find it -- I found the first to be
17 statement of you can't talk -- testify to me without my
18 parents here, that is ambiguous to me as to whether or
19 not he is asserting.

20 And then when he clearly during the middle of the
21 interrogation says I don't want to talk anymore about
22 this until I have my lawyer, he unequivocally no question
23 unambiguously asserted his right and his constitutional
24 privilege which clearly indicated to me that he was well
25 aware of what he was doing and decided he had talked as

1 much as he wanted to talk. But he voluntarily talked
2 after that.

3 Because all he had to say, the follow-up question
4 after he said I don't want to talk, was I just said I
5 don't want to talk to you. But he didn't do that. And
6 if he had persisted after that, maybe. But he didn't.
7 He talked.

8 So for those reasons I -- and those are the reasons
9 that I ruled as I did during the trial and pre- -- prior
10 to the trial.

11 And I appreciate your -- you preserved that issue
12 and very properly so. And I thank you for that. But I
13 would respectfully deny your motion for a new trial.

14 MS. EHRLICH: Yes, sir.

15 THE COURT: Okay. We are going to be sentencing?
16 All right. I am going to take a moment and excuse the
17 jury. And you don't -- does anybody want the jury to be
18 excused in the courtroom? If so -- thank you. I am
19 going to go tell them they are free to leave. Thank you
20 very much.

21 MR. WARING: Thank you, Your Honor.

22 THE COURT: We will be at ease.

23 (WHEREUPON, pause for Judge R. Markle to excuse jury
24 after verdict 8/9/17, 12:44 p.m.)

25 (WHEREUPON, resumed proceeding 8/9/17, 12:56 p.m.)

1 THE COURT: I have the sentencing sheet.

2 SENTENCING PHASE:

3 THE COURT: Anything further from the State?

4 MR. WARING: Your Honor, if I may briefly.

5 THE COURT: Oh, absolutely. Please take as much
6 time as you need, Mr. Waring. I appreciate it.

7 MR. WARING: Thank you, Your Honor. Just briefly,
8 his record: 2012 possession of marijuana; 2013 receiving
9 stolen goods, armed robbery, petty larceny; 2015
10 possession of a stolen vehicle. He has got a pending
11 strong-armed robbery. And then he got this armed robbery
12 after he was out on bond for that.

13 I have been notified by the jail he was validated as
14 a gang member. And as Your Honor can tell throughout
15 this process he's -- hasn't been the most cooperative
16 defendant.

17 Based on all of the above, Your Honor, prior armed
18 robbery, etc., we are asking for a 25 year ---

19 THE COURT: What happened to his armed robbery?

20 MS. EHRLICH: It was a juvenile charge.

21 THE COURT: Juvenile?

22 MR. WARING: It was juvenile. Yes, Your Honor.

23 THE COURT: Okay.

24 MS. EHRLICH: He got 90 days ---

25 THE COURT: I gotcha. Okay. There it is. Okay.

1 All right. Anything else?

2 MR. WARING: The victim is here. I don't know if
3 she wants to talk or not.

4 (WHEREUPON, Mr. Waring confers with victim.)

5 MR. WARING: She doesn't.

6 THE COURT: I appreciate her being here. One of the
7 things that I just told the jury, and it is something
8 that you learn very quickly at least when you do this
9 job, probably did as a lawyer, but it is more evident
10 because I see things - as I should be, I am not an
11 advocate anymore - murders are horrible but to me armed
12 robbery is more serious than that because you don't know
13 whether you are going to live or die. And those thoughts
14 are just horrific thoughts, and no human being ought to
15 be put through that. So I understand. And I am thankful
16 that you are here.

17 THE VICTIM: Thank you.

18 THE COURT: You bet.

19 Okay. Be happy to hear from you.

20 MS. EHRLICH: Thank you, Your Honor. As far as jail
21 time he has been in since his initial arrest. So I
22 calculated that to be 551 days.

23 THE COURT: Okay.

24 MS. EHRLICH: As you heard throughout the trial he
25 was 17 years old when he was arrested and when this

1 incident would have occurred. I do want to briefly
2 address the record.

3 THE COURT: Certainly.

4 MS. EHRLICH: The State raised that as one of the
5 justifications for the request in sentencing. He did
6 have a juv- -- everything on as far as adjudications was
7 as a juvenile.

8 THE COURT: I understand.

9 MS. EHRLICH: He had a juvenile armed robbery charge
10 when he was only 14 years old, Your Honor. Very, very
11 little consequences in Family Court unfortunately.

12 They have many options. They could have committed
13 him to DJJ. They could have sentenced him to a group
14 home for treatment.

15 Instead, my understanding - and I didn't represent
16 him on that - but I think he only got 90 days. And 90
17 days certainly does not do much as far as teaching
18 somebody about consequences. I think it is unfortunate
19 that that is how things played out.

20 Had I been his juvenile attorney I am sure I would
21 have been thrilled with the 90 days on an armed robbery;
22 but looking in -- at how that could impact somebody
23 moving forward I don't think that that benefited him in
24 any way.

25 He started with barriers in his life when he was

1 only one year old. His father was murdered. So he has
2 grown up without a father. And while he was only one and
3 didn't have to deal with the trauma of going through the
4 loss he certainly had to deal with the trauma of not
5 actually having a father.

6 And his mother Tamika Parker has been here
7 throughout this process and other family members. She is
8 a strong woman. She makes no excuses for her son. But
9 she has spoken to me about the impact not having a father
10 has had on him.

11 THE COURT: Sure.

12 MS. EHRLICH: Clearly he has turned to others --
13 other older male peers in the community who have stepped
14 in and have had probably not the best influence on him.

15 I have had an opportunity to review some of his
16 records. There are some depression issues I think
17 related to home life. And a lot of recognition by those
18 at least in the juvenile process that he lacks coping
19 skills, turns to peers to kind of direct his life moving
20 forward.

21 THE COURT: Absolutely.

22 MS. EHRLICH: Certainly it is not an excuse, but I
23 do think that there has been influence there.

24 I would imagine that the court shares concerns about
25 some of his post-incident behavior. And I do want to

1 address some of those. And while the court may find him
2 to be savvy, I find him to be just so immature and
3 reckless. And ---

4 THE COURT: I think you can be savvy and be immature
5 and reckless. But anyway. I hear you.

6 MS. EHRLICH: He has been such a delight to
7 represent as far as dealing with me and dealing with my
8 co-counsel. And ---

9 THE COURT: That is even more of a concern to me.

10 MS. EHRLICH: Yes, sir. And I ---

11 THE COURT: Because it shows -- he can play the
12 role.

13 MS. EHRLICH: Well, ---

14 THE COURT: When he wants to. See, that is the
15 problem, ---

16 MS. EHRLICH: Yeah, ---

17 THE COURT: --- Ms. Ehrlich. I hear you. And I
18 understand that. And I am delighted he was. But the
19 problem I have with that is it shows there is another
20 side and that he is capable of maintaining that proper
21 decorum when he has to.

22 But when -- but I interrupted you. And forgive me;
23 I am not -- I am not trying to argue with you and not
24 going to.

25 MS. EHRLICH: And when I say delightful in dealing

1 with me I mean not demanding, not coming to court with
2 unrealistic expectations.

3 THE COURT: I understand.

4 MS. EHRLICH: He has been -- he was -- we have been
5 prepared for today. And I don't want the court to think
6 that we weren't prepared for that.

7 And even at his young age I think he saw the writing
8 on the wall as this case was developing, as soon as those
9 calls start coming up and the letters.

10 He has worked with our social worker some while he
11 has been in the jail. And I think that that has been a
12 positive influence on him. And I know Ms. Birt has
13 worked with him not just in the weeks leading up to trial
14 but in the last several months.

15 His family is very supportive. They are too upset
16 to speak out, Your Honor. But ---

17 THE COURT: I appreciate that and understand that.

18 MS. EHRLICH: --- they want you to know that they
19 support him. His mother has been nothing but realistic
20 as far as how the case was looking.

21 And I think in true mother form instead of making
22 excuses for her son is not happy with some of the -- some
23 of the things that came out. But she loves him and
24 supports him.

25 I know that the codefendant received a 16-year

1 sentence suspended on the service of 10. We would,
2 obviously ask the court to consider the minimum or
3 something in the range of that and taking into
4 consideration his age and his lack of adult record, Your
5 Honor.

6 THE COURT: Okay. All right. Anything else?

7 Mr. Grant, is there anything you want to share?

8 MR. GRANT: No, sir.

9 THE COURT: Okay. Ask the defendant to please rise,
10 please.

11 (WHEREUPON, defendant complied.)

12 THE COURT: I hear you, Ms. Ehrlich. And no
13 question you all have been prepared. You did -- both you
14 and Ms. Birt did an incredible job in presenting -- in
15 representing your client.

16 There is no question that as I mentioned to you
17 after viewing the videos -- and frankly, I think it may
18 have had some influence on some of the jurors as well.
19 It sure had an influence on me. Because I saw an
20 absolute disregard for anything that resembles law and
21 order.

22 And consistent -- I didn't know a thing in the world
23 about his record until y'all just told me that. But it
24 shows that, yep, that is where he was.

25 And, frankly, my assessment of him is he is a little

1 thug. That is what he is. And he has embarked on being
2 a thug. And when he wrote the letter that is exactly
3 what and the jury found that he did. There is no
4 question about that. But I think that was clearly his
5 letter. And he even said so. You couldn't understand
6 most of it.

7 Do I think he is a waste, no. Do I think he hasn't
8 had -- -- hasn't been -- broken some hearts in his
9 family, I know that is true.

10 I remember -- I wish my mother was here right now.
11 But I can remember some of the things she told me. She
12 said, son, you don't understand and you will never
13 understand because a man can't appreciate a mother's
14 love.

15 And I have been blessed to have three children and
16 six grandchildren. And I understand that clearly. I
17 love them. But my goodness the depth and breadth of a
18 mother's love is unbelievable.

19 And one day I hope this young man will do something
20 to honor that kind of love and what she has done for him
21 and the sacrifices that she has made for him in her life.

22 And because my mother said, son, if you were -- I
23 love you so much if you were to stab me with a knife and
24 when you pulled the knife out and you cut your hand I
25 would worry about how bad you cut your hand.

1 And that is precisely what that mother feels right
2 now. She didn't cause it. He did.

3 I understand the problems that you have talked
4 about, and I am cognizant of those things. I pray as a
5 society we can find something that when we have them in a
6 juvenile setting we can start doing more positive things
7 than just 90 days in jail.

8 I am not finding fault with the system. It is
9 expensive, and we as a society have to be willing to pony
10 up. What it means, it means I don't want to pay anymore
11 taxes than anybody else; but if that is what we want, we
12 have got to pay for it. And I think he is an example of
13 why we should, to be candid with you. I don't fault that
14 at all.

15 But the problem I have with sentencing in this case
16 especially, especially this case, and this is what I have
17 been wrestling with since I watched the video, what are
18 you going to do. I

19 Part of me wants to do what you are asking me to.
20 But there is something else a part of this sentence. And
21 this one, this one, I already see how much is involved in
22 the community, how much is involved in the street.

23 Well, it is time to let the street know what happens
24 when you do these things. And that is precisely -- so
25 this man is an example. And he is going to be.

1 The good thing about it for you is it is only 85
2 percent. You will miss a good proportion of your life,
3 but if you take advantage of some opportunities - and I
4 hope there are more for you while you are incarcerated -
5 you will be 43 when you get out.

6 You asked for 25. That is precisely what I am going
7 to give him. But in order to fulfill the 25 this is what
8 your sentence is: 30 years.

9 And the only difference is -- and I wrestled with it
10 as to whether to give you a consecutive sentence. But I
11 will take into consideration and give you five, and it is
12 concurrent. You get the credit from 551 days.

13 Good luck to you, sir.

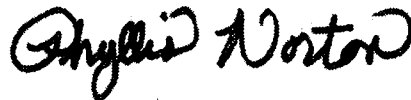
14 (WHEREUPON, the trial concluded 8/9/17, 1:05 p.m.)

(NOTE: Please contact the court reporter for additional copies or certified transcripts.)

CERTIFICATE

I, the undersigned Phyllis Norton, Official Court Reporter for the Ninth Judicial Circuit of the State of South Carolina, do hereby certify that the foregoing is a true, accurate, and complete transcript of record of all proceedings had and evidence introduced in the captioned case, relative to appeal, in the court for South Carolina, on October 12, 2017.

I do further certify that I am neither of kin, counsel, nor interest to any party hereto.



PHYLLIS NORTON, CVR

Date: December 2, 2017

Certified Transcript Provided For: SCCID
Certification Reference #120217-2 Orig

STATE OF SOUTH CAROLINA	)	COURT OF GENERAL SESSIONS
	)	NINTH JUDICIAL CIRCUIT
COUNTY OF CHARLESTON	)	
	)	
State of South Carolina,	)	CASE NO. 2016-GS-10-02116
	)	2016-GS-10-02106
	)	
PLAINTIFF,	)	TRANSCRIPT OF RECORD
	)	
VS.	)	
	)	
Devante Antonio Grant,	)	
	)	
DEFENDANT.	)	
	)	

October 12, 2017

Charleston, South Carolina

B E F O R E:

The Honorable R. Markley Dennis

A P P E A R A N C E S:

T. Richard Waring, II, Assistant Solicitor
For the State

Megan Sara Ehrlich, Esquire
For the Defense

I N D E X

HEARING - Motion for Reconsideration -- 03

EXHIBITS - None Proffered

CERTIFICATION OF TRANSCRIPT -- 14

If you need an additional copy of this transcript or a sealed transcript or if opposing counsel requires a copy of the transcript, you should contact the court reporter.

Certification will satisfy Rule 80, Stenographic Report of Transcript as Evidence.

1 THE COURT: Mr. Grant, you are here on a motion to
2 reconsider the sentencing. I have received an extensive
3 memorandum that has been prepared by your lawyer. It has
4 been filed with all of the pleadings in this file.

5 And, Ms. Ehrlich, you may rely on the submission
6 fully. It is incorporated fully for purposes of review
7 should that become necessary. But please feel free to
8 highlight or emphasize whatever aspects you want to do
9 so, and I will be delighted to hear from you.

10 And, Solicitor, I will allow you an opportunity to
11 respond.

12 MR. WARING: Thank you, Judge.

13 THE COURT: Okay. Thank you so much again for your
14 thoroughness on that.

15 MS. EHRLICH: Thank you, Your Honor. As you have
16 stated we did submit a memorandum. And I don't want to
17 take up court time going through the memorandum ---

18 THE COURT: No.

19 MS. EHRLICH: --- at length. I do want to take the
20 opportunity to respond to some of the solicitor's
21 arguments.

22 THE COURT: Sure.

23 MS. EHRLICH: I think that is time better spent for
24 this hearing.

25 In our memorandum I raised several issues which I

1 felt like I had maybe not properly argued or fully or
2 thoroughly argued in front of the court.

3 THE COURT: Okay.

4 MS. EHRLICH: And I know the solicitor's position
5 was we had our opportunity to argue that. But I do think
6 it is proper for me to raise those issues in a motion to
7 reconsider and in a memo to reconsider the sentence.
8 And had I not had anything I wouldn't have been able to
9 file ---

10 THE COURT: Okay.

11 MS. EHRLICH: --- the motion. So I just I did want
12 to address that.

13 THE COURT: Sure.

14 MS. EHRLICH: And I think that the memorandum more
15 fully covers the case law regarding how adolescent
16 offenders are different than regular adult offenders and
17 potentially how those cases would be relevant to
18 Devante's sentencing, as well as a number of other issues
19 that I didn't argue to the court.

20 In reference to the co-defendant and the argument
21 that Mr. Grant's actions had intimidated Mr. Chisolm into
22 not testifying, I think that that is one way to look at
23 it. I think the other way to look at it was that the
24 letter that was in question was sent within a month or
25 two of the incident, so sometime in 2016, and that Mr.

1 Chisolm had been cooperative with the State for quite a
2 long time, is my understanding, and that that ceased in
3 May of 2017 when the cases were potentially going to be
4 called to trial and Mr. Waring took the position that Mr.
5 Chisolm wasn't really telling the whole truth and not
6 credible, argued for a lengthy sentence at the plea
7 hearing for Mr. Chisolm, and then wanted him to cooperate
8 potentially with no benefit to him. I think that
9 potentially also had an impact on Mr. Chisolm's decision
10 not to testify.

11 I think that you could argue both ways, Your Honor.
12 But I do -- I do want to just point that out.

13 THE COURT: Okay.

14 MS. EHRLICH: The State also addressed the issues
15 with the jail calls and video visits. I think I fully
16 addressed that, Your Honor, ---

17 THE COURT: You did.

18 MS. EHRLICH: --- in our memo.

19 And what I would say about it is the behavior
20 certainly didn't help him. I think it probably convicted
21 him. And so I don't know that I would consider that to
22 be some sort of savvy, mature criminal thinking. I
23 think it is short-term thinking without thinking of the
24 long-term consequences. Which is something that you see,
25 again, in an adolescent offender.

1 The State in their response also puts the blame on
2 Devante for Michael Allen potentially not testifying
3 truthfully during trial.

4 I think that is kind of a different way to look at
5 it. Had he testified he would have implicated himself in
6 an armed robbery and we would have heard more about
7 Facebook posts where Michael Allen was involved with
8 selling drugs, things like that. So I don't think
9 blaming Devante just for Michael Allen not testifying is
10 fair either, Your Honor.

11 In response to their talking about deterrence and
12 the 90-day juvenile sentence, I think my point with the
13 90-day juvenile sentence -- and we don't really know why
14 90 days was found to be appropriate. I can't imagine
15 that.

16 I used to do Family Court. For three years I
17 represented juveniles. And the majority of those
18 juveniles were committed to DJJ with parole guidelines
19 for 36 to 54 months.

20 Why that didn't happen to Devante I do not know. I
21 can't say, oh, well, maybe it was a weak case. Or I
22 don't know.

23 But what I would say about that is not that I don't
24 think the 90 days was a good deterrent. Because I don't
25 know that I think that deterrents really work especially

1 with young offenders.

2 My point in bringing up the 90-day sentence is when
3 they prosecute a juvenile in Family Court and declare
4 them delinquent they talk about this juvenile being in
5 need of the care and custody of the State of South
6 Carolina, and for whatever reason I think the system
7 probably failed him there in not providing appropriate
8 rehabilitative services for him.

9 And so my point isn't that 90 days didn't deter him.
10 My point is that 90 days didn't do enough to intervene in
11 this kid's life and that the jump from 90 days to 30
12 years is severe, Your Honor.

13 We also addressed in our memo the proportionality
14 argument in comparing different sentences at SCDC. And
15 the State talked about their differences in different
16 cases.

17 And I feel like we provided the court with some good
18 examples of cases where the allegations were potentially
19 more violent than this case and where defendants had a
20 worse record and received smaller sentences than Devante.

21 Lastly, from the State's response, Your Honor,
22 regarding the life expectancy study, there are clearly
23 some sort of flaws with that because you can't look at
24 how every single person died and what was going on in
25 somebody's life.

1 The reason that study was commissioned, Your Honor,
2 was to help in sentencing in juvenile life without parole
3 cases, to help provide some sort of information besides
4 just the inherit knowledge that we all have that going to
5 prison is going to shorten somebody's life.

6 And so while I give, you know, some credence to the
7 argument that somebody's lifestyle potentially also would
8 impact life expectancy I think it is clear going to
9 prison is going to shorten somebody's life span.

10 Your Honor, in conclusion, we have raised all of the
11 arguments in our memorandum that I think are relevant for
12 Devante's sentencing.

13 He was only 17 by 20 days when this incident would
14 have occurred. And the research clearly shows that 17,
15 18, they are still in that adolescence period. I think
16 that adolescence is very relevant not only to the
17 incident but his behavior afterwards.

18 And I would ask that the court take that fully into
19 consideration and consider reducing the sentence to
20 something similar to what the co-defendant received or
21 give him some sort of relief as far as a reduction in the
22 sentence, Your Honor.

23 THE COURT: Okay.

24 Happy to hear from you.

25 MR. WARING: Thank you, Judge. I will give the

1 abbreviated response.

2 THE COURT: Go ahead.

3 MR. WARING: The defense has kind of put the court
4 in a little bit of a quandary here because, you know,
5 they referenced the juvenile 90-day sentence but here
6 they are essentially asking for the minimum, which I
7 think would be with a prior armed robbery like that is
8 kind of a slap on the wrist, a 10-year sentence.

9 They are asking for something more consistent with
10 what the co-defendant got. The problem with that is the
11 co-defendant had a completely different situation.

12 He had no prior record. Right off the bat -- I mean
13 initially he did -- wasn't completely forthcoming with
14 the police, but initially he came forward and gave up
15 this defendant and implicated himself and essentially
16 cooperated with the police right off the bat.

17 Showing some form of remorse. You know, at his
18 sentencing I believe he displayed some remorse. He took
19 responsibility. He came in and did the right thing. His
20 situation was not really comparable I think to this
21 defendant's.

22 He wasn't the gunman. Obviously it was his gun, but
23 he wasn't the one who actually had the gun. So I think
24 their circumstances are slightly different, Your Honor.

25 Regarding the actual sentence itself, the court was

1 well within its actual guidelines, within the sentencing
2 guidelines.

3 Thirty years is obviously a tough pill to swallow.
4 It wasn't the maximum allowed. Your Honor could have
5 done 35. And so I think that that is -- that is
6 important. Giving his -- given his circumstances I think
7 that that was appropriate. Again, the court could have
8 gone with a 35-year sentence.

9 Your Honor, the gang affiliation and the jail calls
10 and everything the defense did have an opportunity to
11 bring that up. I think all of that stuff is important.

12 The Bloods are a murderous gang. And I think that
13 that is also kind of indicative that he is a part of that
14 gang.

15 Obviously we didn't go in and present witnesses who
16 corroborated the jail's records that he was validated as
17 a gang member, but I think documentation alone and the
18 jail's observations were sufficient at the sentencing to
19 mention that he was part of a gang.

20 Regarding deterrence, Your Honor. Just briefly. I
21 don't think a multiple convicted armed robber getting a
22 minimum sentence would be a deterrent. I just don't
23 think that that would be a realization.

24 The fear of getting popped with a crime deals in my
25 mind with the actual ramifications and the punishment

1 that a criminal could get. And if a criminal knows that
2 they are going to get the minimum I don't see how that
3 can possibly be a deterrent.

4 Your Honor, that is essentially what I have got.
5 My motion I think addresses all of her enumerated stuff.

6 THE COURT: And that is incorporated as well.

7 MR. WARING: Yes, Your Honor. Thank you.

8 THE COURT: Okay.

9 MS. EHRLICH: Judge ---

10 THE COURT: Any response?

11 MS. EHRLICH: The only response -- and I forgot to
12 mention, Your Honor, that his family was not able to be
13 here today. They had plans on trying to be here on
14 Monday.

15 THE COURT: I understand.

16 MS. EHRLICH: I spoke to his mom. She has to work.
17 She is doing the best she can. And I told her that I
18 felt confident that we could go forward without her here.

19 THE COURT: Absolutely.

20 MS. EHRLICH: And that is all I have, Your Honor.

21 THE COURT: Okay. Well, I appreciate it. And I
22 assure you I don't derive any great pleasure of
23 sentencing someone to a maximum sentence. And so far as
24 the solicitor has alluded to it really wasn't a maximum
25 sentence.

1 But for all the practical purposes -- I mean I
2 don't think I have ever done it. I have thought about
3 it, structured it where you served consecutive the first
4 year -- the five year first and consecutive on the 30.
5 And I think you would have to have -- finish the five
6 before you started accruing any kind of good -- any kind
7 of credit on the other. But I would leave that to the
8 Department of Probation and Parole.

9 But quite frankly -- and I understand your position
10 about the sentencing of juveniles. I really I understand
11 that. But at some point in time with all of the factors
12 I had you have to just make a statement that this is not
13 going to be accepted in our society. And it is the
14 attitude that I saw that was pervasive that, you know,
15 committing the second armed robbery.

16 I mean I understand he was a juvenile, but still it
17 is not rocket science. You just know that you don't do
18 that. And so -- and he is how old today?

19 MS. EHRLICH: He is 18, Your Honor.

20 THE COURT: And he will be out in -- he will be 43.
21 I mean so it really and truly he has got a good portion
22 of his life ahead of him. And that's great.

23 But he deserves to be punished. And I think the
24 punishment was appropriate. So I appreciate it. Thank
25 you very much. Your motion is respectfully denied.

1 And I welcome -- you have briefed this. And I
2 really and truly meant what I say about the thoroughness.
3 And I appreciate that.

4 And if the Supreme Court or Court of Appeals says,
5 no, we are not going to allow that, then I will be happy
6 to comply with that. But right now my reasoning is just
7 what I said.

8 And I mean I watched the trial. I listened to all
9 of the evidence and the things -- and I agree with you --
10 I don't know how damaging those phone calls were. I
11 never assessed that.

12 But from the standpoint -- what -- the fact that
13 they existed really that per se wasn't; it was just as I
14 said the overall atmosphere and attitude, and that gave
15 me great concern. And I think I -- I think the sentence
16 speaks to that. So thank you very much.

17 MS. EHRLICH: Thank you, Judge.

18 MR. WARING: Thank you, Judge.

19 THE COURT: Thank you. Good luck to you, Mr. Grant.

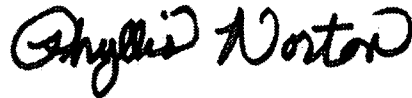
20 (WHEREUPON, the hearing concluded.)

(NOTE: Please contact the court reporter for additional copies or certified transcripts.)

CERTIFICATE

I, the undersigned Phyllis Norton, Official Court Reporter for the Ninth Judicial Circuit of the State of South Carolina, do hereby certify that the foregoing is a true, accurate, and complete transcript of record of all proceedings had and evidence introduced in the captioned case, relative to appeal, in the court for South Carolina, on October 12, 2017.

I do further certify that I am neither of kin, counsel, nor interest to any party hereto.



PHYLLIS NORTON, CVR

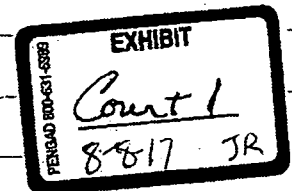
Date: December 3, 2017

Certified Transcript Provided For: SCCID

Certification Reference #120317-3 ORIGINAL

The jury would like to know if we may mark
the transcripts that we are given in places we
feel we cannot understand or disagree with.

Ch 8/8/17

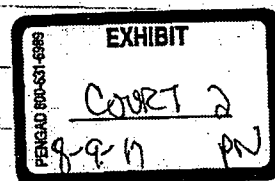


Could we hear or see a transcript of Detective
Gerald's testimony regarding Sharon Christman's
Comments at his Arrest

[Signature]
8/9/17

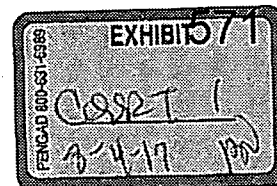
We would like to see the Jailhouse Videos
Again please

[Signature]
8/9/17





Charleston Police Department
Photo Line-up Admonition



OCA: 1601522 Offense: Carjacking Date: 1/26/16 Time: 2035

Name: Kristina Hooks Phone: 843-437-8652

Alt. Phone Number: 843-532-6356

**READ THE FOLLOWING
PARAGRAPH OUT LOUD**

I am going to show you a group of photographs. These photos may or may not contain the picture of the person(s) who committed the above listed offense, which is under investigation at this time. Keep in mind that the photos may show a variance in complexion, hair, eyes, facial hair, etc. If you recognize anyone in any of the photos as a person who committed the crime against you (or you were a witness to), I will ask you to initial and circle the photo.

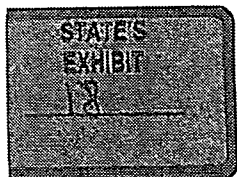
Upon viewing these photos, do not discuss the results of this procedure with other victim(s) or witness(es).

I ☒ WAS ☐ WAS NOT) able to make an identification from the photographs shown.

Photo Number 4

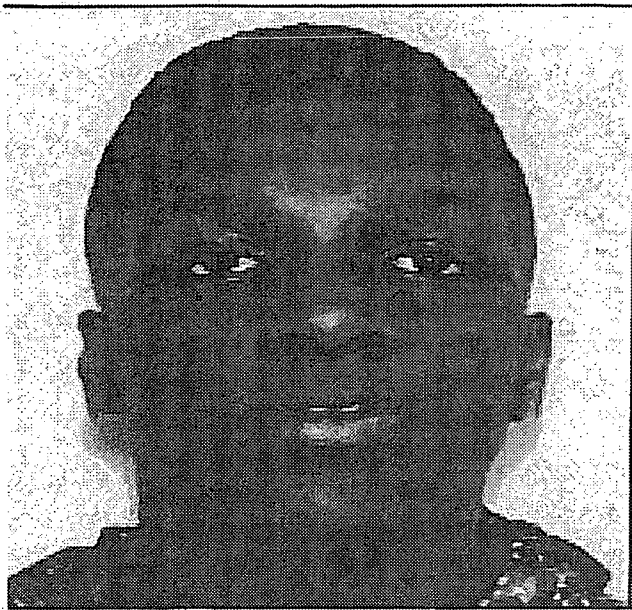
Signature: Kristina K. Hooks

OTHER COMMENTS: _____

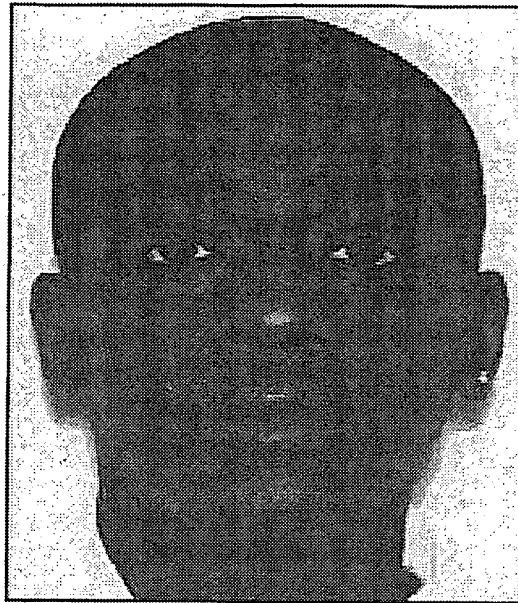


Charleston Police Department
180 Lockwood Blvd Charleston, South Carolina 29403
(843) 577-7434

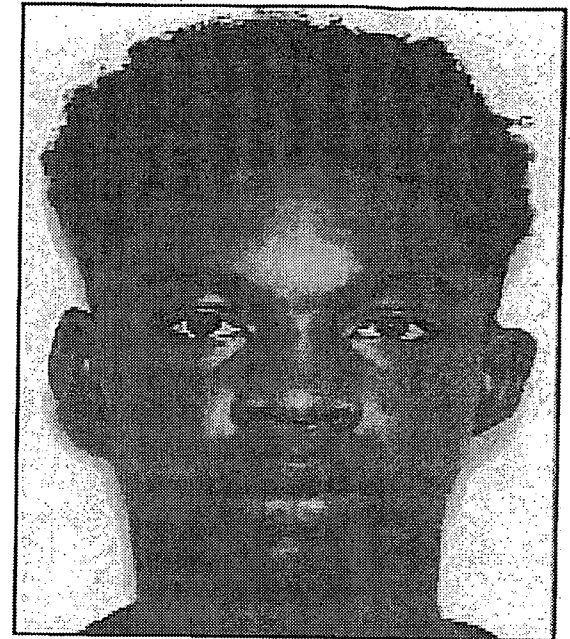
FORM 52-A
Revision 20120904



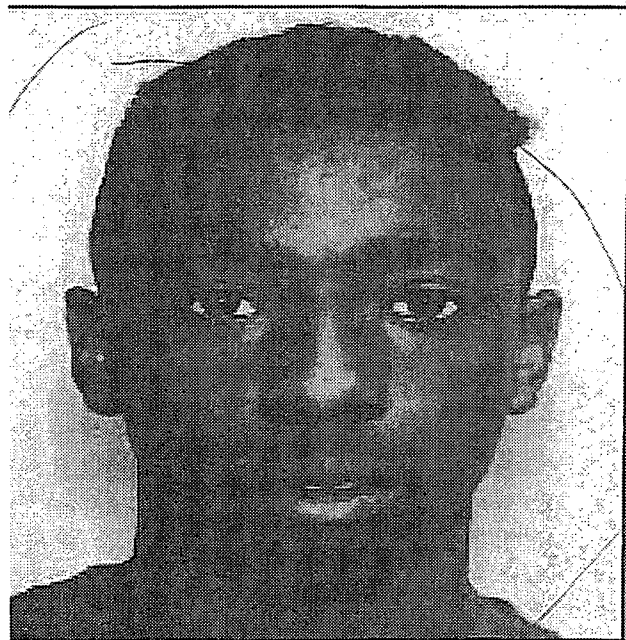
1.jpg



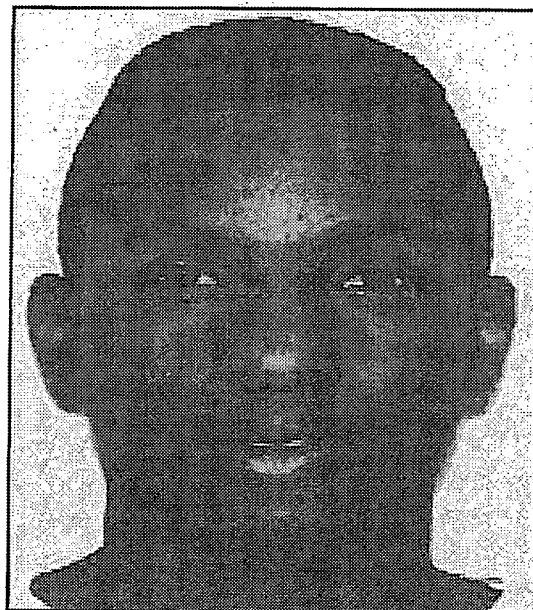
2.jpg



3.jpg



4.PNG



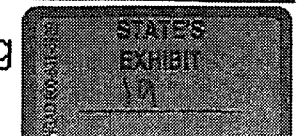
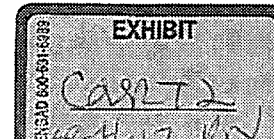
5.jpg



6.jpg

572

74



Devante Grant Jail Call Transcript for 2/8/16 at 19:50:18 (7:50:18pm)

D: Devante Grant
MJ: Michael Allen

STARTS AT 14:35

D: You ain't got her number in it?

MJ: No.

D: Hey, you know what I had tell you now? To keep doing that thing for me. [unintelligible]

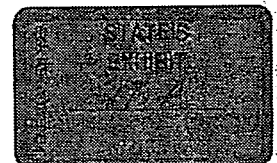
MJ: What, the connector?

D: No, not that. I talking about um the Facebook shit.

MJ: Oh yea, I done de, I about, I done deactivate that.

D: Yeah like keep deactivating that shit. Word, now don't be on that shit. Cause them boy. Them boy trying to find all the evidence they can. I already know what time it is.

ENDS AT 15:06



Devante Grant Jail Call Transcript for 3/20/16 @15:03:25 (3:03:25pm)

D: Devante Grant

M: Devante's Mother

STARTS AT 2:50

M: Right. Ok. So what's up with this letter you write to Saivon? You write a letter to Saivon?

D: [unintelligible]

M: Huh?

D: Well, they say he relieve, he relieve, I mean he um he receive a letter.

M: Ok, well.

D: Say he had received

M: Stop writing them bad things in them letters before you get yourself in trouble. Cause obviously he told his mama but you know I don't really talk to her.

D: Yeah, Allie, Allie had write me. and tell me

M: [unintelligible] What he have to say?

D: He say not to really worry about that. He say that, that could be used against me in court but he say not to really worry that, so. Shaun got it.

M: Yeah.

ENDS AT 3:36

STARTS AT 8:33

D: Right, right. Oh yea. Another thing.

M: What?

D: Paper is saying this incident happened on January 26, on Tuesday.

M: Yea.

D: And, I normally works... I work Tues, I work Monday, Tuesday, Wednesday. Off Thursday.

M: You normally do but you called out that day.

D: Huh?

M: Isn't that the day that you called out?

D: I mean, I did, but I ain't know, I ain't know how they ya know?

M: Boy.

D: [unintelligible]

M: Because I been told that they subpoenaed you and Saivon's, um, cell phone records also.

D: They got phone records?

M: Yea, they subpoenaed for y'all's phone records so they got y'all's phone records. I don't know why they subpoenaed for that but.

D: Phone records [unintelligible].

M: [Unintelligible]. Y'all cell phone records. Yea.

D: What numbers they had?

M: I don't know what numbers they had but I heard y'all's names. They subpoenaed phone records for Devante Grant and Saivon, um, Saivon. But when they came here I told them you didn't have nothing so I don't know. But you know these people are gonna get whatever information they wanna get.

D: Yea, but.

M: So



D: I see on my paper, on my Rule 5, it says something about we had messages. He told them my Facebook

M: [Unintelligible].

D: He say, basically, he say we had messages, but they gone and look and then they can't find nothing. They try to

M: Ah ok.

D: My page was gone, like. I ain't know, that's that's what it say, like, it say something about that on the paper. He told them we had messages.

M: [Unintelligible] they knew all that.

D: They can't find that. Step ahead, step ahead.

ENDS AT 10:29

STARTS AT 12:25

D: I been trying to call Rhonda to see. And she been at work. She had answered, then she just she hang up. I been trying to get her to get the, um, get my schedule, like my work schedule, cause, I know some people in the job that, they'll ya know?

M: Yea.

D: They'll back me up.

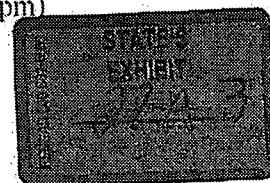
M: Right.

D: Like, ya know...

ENDS AT 13:03

Devante Grant Jail Call Transcript for 5/17/17 22:07:22 (3:03:25 pm)

D: Devante Grant
MJ: Michael Allen



STARTS AT 7:30

D: You ain't even want to talk to them boy. You ain't even want to talk to them boy without a lawyer present. Period. Straight like that.

MJ: No, ain't, don't even, don't even do that, don't even

D: Yea boy.

MJ: Act like you know something. No, boy I trying to tell you that's how I getting off with this shit with you, brah. Just don't even [unintelligible]

D: Don't slip up and say nothing. Don't slip up and say nothing.

ENDS AT 7:56

STARTS AT 11:12

D: I trying to tell you, that's what, they can try to hit him with accessory.

MJ: Oh I know.

D: Before the fact.

MJ: Crazy all type of shit.

D: No, after the fact.

MJ: Conspiracy.

D: But

MJ: It ain't gonna run like that though, man

D: Yeah. Long as you play the card, you gotta do, play your cards right, you gonna be straight.

MJ: Pray for the best and prepare for the worst.

D: huh?

MJ: Pray for the best and prepare for the worst.

ENDS AT 11:45

Devante Grant Video Visitation #302147 Transcript for 3/9/17 at 1:00-1:30pm

D: Devante Grant
MJ: Michael Allen

**STARTS AT 15:35**

MJ: Fool.

D: I meant to tell you, boy. Them boy talking about yesterday, yesterday, Mans meet with the prosecutor. Type thing supposed to be, supposed to be, testifying type thing. You feel what I saying?

MJ: Oh no.

D: Yeah. That's crazy. I ain't really worried about that shit though.

MJ: I mean. But, my nigga. Hey, listen.

D: Word.

MJ: At the end of the day, if Dog want, ya know?

D: Yeah.

MJ: Yeah, I ain't even gonna say, fuck em. Ya know?

D: Yeah.

MJ: [unintelligible], brah

D: [unintelligible]

MJ: But at the end of the day, everything good. You already know what time it is.

D: Fuck that boy, man. That shit crazy.

MJ: He better, they better not get

D: [unintelligible] Yeah, Mans gonna be home early though [unintelligible] for me type thing

MJ: He ain't wanna come home. He ain't wanna come home, brah. He ain't wanna come brah, I ain't gonna lie.

D: Yeah

MJ: Word. And he right there.

D: Yeah

MJ: Ya know? And I

D: Matter of fact, if Jigga. If you fuck around get in contact with Jigga. Tell Jigga to tell Mans not to thing like that you feel what I saying?

MJ: Right.

D: Don't even take that shit that far, you feel what I saying, you already did what you did, you see what I saying. That's some fuck shit.

MJ: Right. Yeah, I got that nigga's visit next.

D: Right. Yeah, tell them to ming thing that now.

MJ: Right.

D: Matter of fact. At least. Yeah. Try to get Mans. Try to get. Tell. Yeah. Get Jigga to try to get, at least get Mans to drop that. I mean. You feel what I saying. Switch that, switch that thing up.

MJ: Right.

D: You know what I saying? Cause if he switch that thing up, boy. I, this case, yea, automatically beat, my nigga. You feel what I saying? Automatically beat. Yeah. That's why I trying to shake something, man.

ENDS AT 17:29

Devante Grant Video Visitation #313677 Transcript for 4/5/17 at 1:35-1:52pm

D: Devante Grant

MJ: Michael Allen

STARTS AT 10:56

D: Yeah. Them boy send me some. It some shit. I'm gonna send em in the mail. You ain't gonna like what you see but from my understanding, it ain't, you feel what I saying, it ain't nothing serious, but that shit, that shit, ya know.

D: No, messages between another nigga. I ain't know who this nigga is, you feel what I saying. But they got the nigga's name. You see what I saying. They got the nigga's name. You see what I saying. But, I'm gonna just send that shit.

MJ: What the nigga's name is on the book? What the nigga's name been on the book?

D: Nigga's name, nigga's name start with an M. And nigga's last name

MJ: Oh no.

D: Yeah. Nigga's last name starts with an A. You see what I'm saying?

MJ: No.

D: Yeah. Yeah.

MJ: Oh no. What, brah?

D: Yeah, what brah. I don't know how they thing, but I got them shit.

MJ: So brah really doing all that?

D: I mean, I guess them boy been had that shit. But I just now getting that shit like. I just get that shit, my people [unintelligible] send that paperwork. Ain't nothing too serious

MJ: Yeah.

D: Cause it ain't no. It just. It, I ain't know. That shit ain't really nothing serious. Cause that shit still ain't nothing. Cause if that the case Mans would have been in here, you feel what I saying?

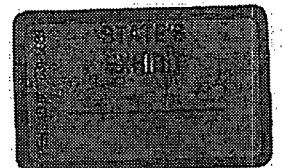
MJ: Yeah.

D: Yeah. Mans would have been in here. They got Mans whole name.

MJ: Yeah.

D: So, Mans would have been in here.

ENDS AT 12:32





A. L. Phelps

Procedures & Compliance, Director

Certification for Court

Customer No: 33711541 Driver License No: [REDACTED]
Name: GRANT, DEVANTE ANTONIO
Address: [REDACTED]
City: NORTH CHARLESTON State: SC Zip: 294058606
County: CHARLESTON
DOB: [REDACTED] Height: 5'06 Weight: 120 Sex: M Race: BLACK Driver Training: N
Status - DL: NO SUSPENSION CDL: NO DISQUALIFICATION

License Information

Type	Class	Function	Issued	Expires	First Issued	Rest.	Endor.	ACN
Current								
ID		Renewal	11/19/2015	11/19/2020		N	N	1011501900009445
Prior								
ID		Original	08/19/2015	08/19/2020		N	N	1011425200065878

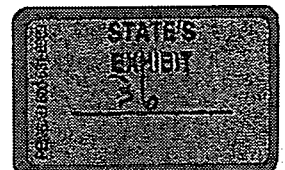
Point Summary

Total Current Points: 0
Driver Credit: -0
Adjusted Current Points: 0

Suspension Summary

Driving Under the Influence:	Total 0 DUI Suspensions
Driving Under Suspension:	Total 0 DUS Suspensions
Unlawful Alcohol Concentration:	Total 0 Per Se Suspensions
Failure To Make Payment For Gasoline:	Total 0 Gasoline Suspensions
Uninsured Motorist:	Total 0 UM Violations

End of Report



From London Fields

Damn why name in yo mouth, you caught up
 100 Percent you one drag me in this like
 this, aint it like who the KIV KERA mouth
 work tape I would never rat not on my
 right hand not on my family I was never thought
 this would happen not 10 shit for all I K
 you probably gone show this to the police
 now you work with now that that mean
 you as informin I was this funny the wiggles
 son the g time like man you what they
 say people get with that time and told that's
 crazy this job the me like who you going out
 suppose the be a g it is out the stars
 for ganga boy you a stop if you out no
 gun to can't say quit acting like something
 that never since a young in you never hear
 you out bolt for this shit you out bolt
 suppose a grown as man check that paper
 that paper work don't lie lol you bet a yeah
 you know was up you know this is you bout to
 be home in two weeks that rich you manna
 i say a duck dik for me a yeah i hope
 you get a good plead no informins get good
 doc/c

L-17-8
 L-16-16678
 9.18

like this ant 100 percent

L16-16678

9.28

like this ant 100

like this ant 100

like this ant 100

like this ant 100

like this ant 100

like this ant 100

like this ant 100

like this ant 100

like this ant 100

like this ant 100

L16-16678

9.38

You one drag me in this shit

You one drag me in this shit

You one drag me in this shit

You one drag me in this shit

You one drag me in this shit

You one drag me in this shit

You one drag me in this shit

You one drag me in this shit

You one drag me in this shit

You one drag me in this shit

L16-16678

9.48

You get caught up now

You get caught up now

You get caught up now

You get caught up now

You get caught up now

You get caught up now

You get caught up now

You get caught up now

You get caught up now

You get caught up now

L16-16678

9.5 #

From London Fields

From London Fields

From London Fields

From London Fields

From London Fields

From London Fields

From London Fields

From London Fields

From London Fields

From London Fields

L16-16678

9.68

Dan why name in ya mouth

Dan why name in ya mouth

Dan why name in ya mouth

Dan why name in ya mouth

Dan why name in ya mouth

Dan why name in ya mouth

Dan why name in ya mouth

Dan why name in ya mouth

Dan why name in ya mouth

Dan why name in ya mouth

L16-16678

9.78

10/10/10

L 16-16678
9.88

From London Fields

dam why name in your mouth

you get caught up in this shit

like this and too

like who the shit

I would never rat on my right hand

not my family

Imao never thought would happen

not you shit for i k you probably gone show this
to the police Imao you work there now so that me

you as informin this shit funny the me niggas

can the g time like man but you what they

say people get with that time told that shit a joke

the me time what you gone a and you suppose the

a g and the g stand for gangsta you need a snap

if you and no gun like to say quit acting like

something you not ever since a younging you never

had you and wait for this shit you suppose to be

be a grown as man check that paper that paper work

don't lie you lot hell o yeah you know wazzup you

this is you bout to be home in two week

and bitch your mama i say fuck sick for me

o yeah i hope you get a good piece no informins get

good deals

L16-16678

10.18

From London fields

From London fields

From London fields

From London fields

From London fields

From London fields

From London fields

From London fields

From London fields

From London fields

From London fields

L16-16678

10.2

dam why name in your mouth

dam why name in your mouth

dam why name in your mouth

dam why name in your mouth

dam why name in your mouth

dam why name in your mouth

dam why name in your mouth

dam why name in your mouth

dam why name in your mouth

dam why name in your mouth

You get caught up now

You get caught up now

You get caught up now

You get caught up now

You get caught up now

You get caught up now

You get caught up now

You get caught up now

You get caught up now

You get caught up now

L 16-16678

10-4-8

you want to drag me in this shit
you want to drag me in this shit
you want to drag me in this shit
you want to drag me in this shit
you want to drag me in this shit
you want to drag me in this shit
you want to drag me in this shit
you want to drag me in this shit
you want to drag me in this shit
you want to drag me in this shit

L16-16678

10.58

like this one hundred

like this one hundred

like this one hundred

like this one hundred

like this one hundred

like this one hundred

like this one hundred

like this one hundred

like this one hundred

like this one hundred

L16-16678

10.68

SOUTH CAROLINA LAW ENFORCEMENT DIVISION

FORENSIC SERVICES LABORATORY REPORT

HENRY D. MCMASTER
Governor



MARK A. KEEL
Chief

Inv. Daniel Eckert
Ninth Judicial Circuit Solicitor's Office
101 Meeting Street
Charleston, SC 29401

QUESTIONED DOCUMENT

August 01, 2017
SLED LAB: L16-16678
Your Case No: 1601522
Incident Date: 01/26/2016
[V] Kristina Hooks
[S] Devante Grant
[S] Saivon Chisolm

This is an official report of the South Carolina Law Enforcement Division Forensic Services Laboratory and is to be used in connection with an official criminal investigation. These examinations were conducted under your assurance that no previous examinations of person(s) or evidence submitted in this case have been or will be conducted by any other laboratory or agency.

Mark A. Keel, Chief
South Carolina Law Enforcement Division

ITEMS OF EVIDENCE:

- Item: 8 Machine copy of letter beginning, "From London Fields..." and ending, "...get good deal."
- Item: 9 Nine (9) pages submitted as known writing of Devante Grant (left handed)
- Item: 10 Six (6) pages submitted as known writing of Devante Grant (right handed)
- Item: 11 Emailed copy of letter beginning, "From London Fields..." and ending, "...get good deal."
- Item: 12 Emailed copy of an envelope addressed to "Savion Mateel Chisolm (informant)" postmarked 04 MAR 2016
- Item: 13 Copy of two pages containing a letter and envelope



AN ASCLD/LAB-International ACCREDITED TESTING LABORATORY SINCE 09/19/2014

P.O. Box 21398, Columbia, South Carolina 29221-1398 Phone (803) 896-7300 Fax (803) 89



ALI-359-



Item: 13.1 Copy of letter
Item: 13.2 Copy of letter and envelope

RESULTS OF EXAMINATION:

Items 8, 11, 13.1 and 13.2 are copies of the same letter. Items 12 and 13.2 are copies of the same envelope.

It is probable that the writer of Items 9 and 10 (Devante Grant) wrote the questioned entries appearing on the Items 8, 11 and 13 letter and the Item 12 and 13.2 envelope. The range of variation exhibited in the questioned entries and in the known writing contains some significant similarities with no significant dissimilarities. Additionally, there were limitations due to the machine reproduction process in the questioned documents and it does not appear that the known documents were freely and naturally written as they lack internal consistency (indications of disguise) in the known writing.

FOR INVESTIGATIVE PURPOSES ONLY:

It appears that the writer of Items 9 and 10 (Devante Grant) attempted to disguise the handwriting standards he provided. Normal course of business writings may provide a more definitive finding.

This report contains the conclusions, opinions and interpretations of the analyst whose signature appears below.

Gaile Heath

Gaile Heath
Forensic Scientist



The following is a progressive list of the examiner's reporting options regarding the association(s) determined to exist between the known and questioned evidentiary items; this list may assist in the interpretation of the examiner's reported results.

REPORT TERMINOLOGY

- IDENTIFICATION
- STRONG PROBABILITY
- PROBABLE
- INDICATIONS
- NO CONCLUSION
- INDICATIONS DID NOT
- PROBABLY DID NOT
- STRONG PROBABILITY DID NOT
- ELIMINATION



AN ASCLD/LAB-International ACCREDITED TESTING LABORATORY SINCE 09/19/2014

P.O. Box 21398, Columbia, South Carolina 29221-1398 Phone (803) 896-7300 Fax (803) 896-7351

STATE OF SOUTH CAROLINA
COUNTY OF CHARLESTON

) IN THE COURT OF GENERAL SESSIONS
) FOR THE NINTH JUDICIAL CIRCUIT

Indictments: 2016GS1002116, 2016GS1002106
Charges: Armed Robbery, Possession of Weapon
During Commission of a Violent Crime

STATE OF SOUTH CAROLINA)

vs.)

DEVANTE ANTONIO GRANT,)

Defendant)

**MOTION TO EXCLUDE
ANY PORTION OF THE RECORDED
INTERVIEW WITH THE DEFENDANT**

FILED
2017 AUG -3 PM 3:47
CLERK OF COURT
J. AKHSTRONG

YOU WILL PLEASE TAKE NOTICE that the Defendant, by and through the undersigned attorney, will move before the Presiding Judge of the Court of General Sessions at the Charleston County Courthouse, for a determination prior to trial of the admissibility of any portion of the recording of the Defendant's interrogation and time in the Charleston Police Department interrogation room.

The State intends to offer a portion of the Defendant's video recorded statement during which the Defendant signs a Miranda Warning card as evidence that the Defendant uses his right hand to write. During the Defendant's time with the police, he does not implicate himself in the alleged offenses, and he very quickly invokes his rights to counsel and to remain silent.

At trial, the State would not be able to bring out any testimony regarding the Defendant's decision to ask for counsel or comment on his decision to remain silent. To show the Defendant in custody at the police station during an interview would open the door to the jury questioning why the Defendant's statement was not played for them or offered at trial and potentially lead the jury to believe evidence is being hidden from them. Should the Court determine it is relevant for the jury to know that the Defendant used his right hand to sign his name, the State should offer

that through the testimony of the lead detective, Detective Jarrell, who witnessed the Defendant's signature. The probative value of the video is substantially outweighed by its danger of unfair prejudice and confusion. The admission of the video violates the Defendant's 5th and 14th Amendment right to due process and his 6th and 14th Amendment right to a fair trial, and the South Carolina Constitution, Article 1, Sections 3 and 14.

Respectfully Submitted,



Megan S. Earlich
Assistant Public Defender
Attorney for Devante A. Grant

Charleston, South Carolina

Dated: 8/3/17

FILED
2017 AUG -3 PM 3:47
JULIE J. ARMSTRONG
CLERK OF COURT
BY MT

STATE OF SOUTH CAROLINA
COUNTY OF CHARLESTON

IN THE COURT OF GENERAL SESSIONS
FOR THE NINTH JUDICIAL CIRCUIT

Indictments: 2016GS1002116, 2016GS1002106
Charges: Armed Robbery, Possession of Weapon
During Commission of a Violent Crime

STATE OF SOUTH CAROLINA

vs.

DEVANTE ANTONIO GRANT,

Defendant

**MOTION IN LEMINE
TO DETERMINE THE ADMISSIBILITY
OF TESTIMONY ABOUT THE
DEFENDANT'S BEHAVIOR DURING THE
HANDWRITING SAMPLE**

[illegible]

YOU WILL PLEASE TAKE NOTICE that the Defendant, by and through the undersigned attorney, will move before the Presiding Judge of the Court of General Sessions at the Charleston County Courthouse, for a determination prior to trial of the admissibility of any testimony by Dan Eckert, investigator for the Solicitor's Office, about the Defendant's behavior during the court ordered handwriting sessions.

The Defense believes the State intends to offer testimony regarding the Defendant's demeanor and act of throwing down a pen. The testimony regarding the Defendant's behavior and demeanor should be excluded on the grounds that irrelevant under SCRE 401, the danger of unfair prejudice outweighs any probative value under SCRE 403, and that it is inadmissible character evidence under SCRE 404.

The Defense further believes that the State intends offer opinion testimony by Mr. Eckert that the Defendant was intentionally interfering with the court ordered handwriting exemplar. The testimony of Mr. Eckert's opinion that the Defendant was intentionally interfering with the court ordered handwriting exemplar is an inadmissible opinion by a lay witness under SCRE 701.

Respectfully Submitted,



Megan S. Ehrlich
Assistant Public Defender
Attorney for Devante A. Grant

Charleston, South Carolina

Dated: 8/3/17

FILED

2017 AUG -3 PM 3:47

William J. ARMSTRONG
CLERK OF COURT

BY AK

STATE OF SOUTH CAROLINA
COUNTY OF CHARLESTON

IN THE COURT OF GENERAL SESSIONS
MOTION COVERSHEET

) WARRANT/TICKET/

) INDICTMENT #'s

2016GS1002116

2016GS1002106

STATE OF SOUTH CAROLINA

-vs-

Devante Grant

DEFENDANT

Solicitor:
Richard Waring, Bar No.
Address:
101 Meeting St. Ste. 400, Chas. SC 29401
Phone: 843-958-1900
E-mail: waringt@scsolicitor9.org

Defendant's Attorney:
Megan Ehrlich, Bar No. 75164
Address:
101 Meeting St. 5th Fl. Chas. SC 29401
Phone: 843-958-1850
E-mail: mehrlich@charlestoncounty.org

☒ MOTION HEARING REQUESTED

☐ FORM MOTION, NO HEARING REQUESTED

SECTION I: Hearing Information

Nature of Motion: Motion to Reconsider Sentence

Estimated Time Needed: Approx. 15-30 minutes

Court Reporter Needed: ☒ YES/ ☐ NO

SECTION II: Motion/Order Type

☒ Written motion attached

☐ Form Motion/Order

I hereby move for relief or action by the court as set forth in the attached proposed order.

Signature of ☐ Solicitor ☒ Attorney for Defendant

8/18/17

Date submitted

FILED
2017 AUG 18 PM 2:28
CLERK OF COURT
BY *MF*

STATE OF SOUTH CAROLINA
COUNTY OF CHARLESTON

) IN THE COURT OF GENERAL SESSIONS
) FOR THE NINTH JUDICIAL CIRCUIT

Indictments: 2016GS1002116, 2016GS1002106
Charges: Armed Robbery, Possession of Weapon
During Commission of a Violent Crime

STATE OF SOUTH CAROLINA)

vs.)

DEVANTE ANTONIO GRANT,)

Defendant)

**MOTION TO
RECONSIDER SENTENCE**

FILED
2017 AUG 18 PM 2:28
CLERK OF COURT

TO: Richard Waring, Assistant Solicitor for the Ninth Judicial Circuit:

PLEASE TAKE NOTICE that the above-captioned defendant, by and through the undersigned attorney, moves this Honorable Court for a reconsideration of the sentence imposed upon the defendant on August 9, 2017, by the Honorable R. Markley Dennis, pursuant to the above-captioned charge.

The motion will be made upon the grounds that:

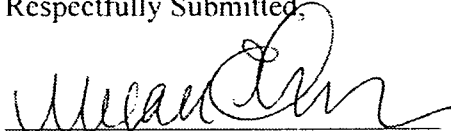
1. The sentence imposed by the Court is unnecessarily severe and does not fully take into consideration the fact that the Defendant was a juvenile (age 17) at the time of the offenses and other mitigating factors regarding his life, social environment, negative older peer influence, and underdeveloped adolescent brain. The Defense failed to thoroughly and completely present mitigation to the Court that should be taken into consideration.
2. During sentencing, the Court raised concerns over the Defendant's behavior during short clips of jail calls and video visitations, as well as a letter provided by the Co-Defendant. The Defense would like the opportunity to more thoroughly address the Court's concerns regarding the Defendant's behavior following his arrest.
3. During sentencing, the Court indicated that sending a message to the streets was a motivating factor in sentencing. The effect of severe sanctions on crime rates has been extensively studied and there is no evidence to support that a severe sentence would have a deterrent effect on society. In addition, the Defense failed to accurately address the concerns that a co-defendant

had been intimidated into not providing testimony and has further argument to present to the Court.

4. The Co-defendant in this case, Saivon Chisolm, entered a guilty plea and was sentenced by the Court to sixteen years incarceration suspended upon the service of ten years. The Defendant's sentence, in comparison, at thirty years incarceration is three times as long as his older Co-defendant. This sentence is not proportional to the actual crimes he was convicted of at trial or to other defendants sentenced in Charleston County with more significant prior records and more violent crimes.
5. The State argued to the Court that the Defendant is an active gang member, and the Defense failed to address this argument in the sentencing phase.
6. Any further grounds as may hereinafter be presented in a Memorandum in Support of this Motion to be filed on August 23, 2017, and any additional arguments made at the time of a hearing.

The Defendant prays for fair and adequate reconsideration of the sentence imposed and requests a hearing in front of the Court on the record following the filing of the Memorandum in Support of this Motion (to be filed on August 23, 2017) and any response filed by the State in response.

Respectfully Submitted,



Megan Ehrlich
Attorney for Devante A. Grant

Charleston, South Carolina

Dated: August 18, 2017

FILED
2017 AUG 18 PM 2:28
CLERK OF COURT
BY [Signature]

STATE OF SOUTH CAROLINA

FILEDIN THE COURT OF GENERAL SESSIONS
FOR THE NINTH JUDICIAL CIRCUIT

COUNTY OF CHARLESTON AUG 23 PM 2:14

JULIE J. ARMSTRONG
CLERK OF COURTIndictments: 2016GS1002116, 2016GS1002106
Charges: Armed Robbery, Possession of Weapon
During Commission of a Violent Crime

STATE OF SOUTH CAROLINA

vs.

DEVANTE ANTONIO GRANT,

Defendant

**DEFENSE MEMORANDUM IN SUPPORT
OF MOTION TO
RECONSIDER SENTENCE****PROCEDURAL HISTORY**

Devante Grant was arrested on February 6, 2016, by the Charleston Police Department and charged with the offenses of Carjacking and Possession of a Weapon During the Commission of a Violent Crime. The State indicted Devante on the charges of Armed Robbery, Carjacking, and Possession of a Weapon During the Commission of a Violent Crime. On May 12, 2017, his codefendant, Saivon Chisolm, entered a guilty plea to the charges of Armed Robbery and Unlawful Carrying of a Pistol. Sentencing was deferred to May 15, 2017, at which time Mr. Chisolm was sentenced to one year on the pistol charge and sixteen years suspended upon the service of ten years on the Armed Robbery charge.¹

Devante exercised his constitutional right to go to trial on his charges, and the State proceeded against him on the Armed Robbery and weapon offense. On August 9, 2017, a jury returned a verdict of guilty on both charges, and the Court sentenced him to the maximum sentence of thirty years on the Armed Robbery and five years on the weapon offense to be run concurrently.²

¹ Sentencing Sheets for Saivon Chisolm.

² Sentencing Sheets, Indictments, and Verdict Forms for Devante Grant.

On August 18, 2017, the Defense filed a Motion to Reconsider Sentence³, and this Memorandum is being submitted in support of that motion.

DICUSSION

Given the additional mitigating information presented both in the filed Motion to Reconsider Sentence and this memorandum, the current sentence of thirty years violates the 8th Amendment of the United States Constitution and Article 1, Section 15 of the South Carolina Constitution.

I. Devante was a juvenile at the time of the offenses, and the sentence imposed by the Court is unnecessarily severe and does not fully take into consideration the mitigating factors of his youth, life, social environment, negative peer influence, and undeveloped adolescent brain.

Devante Grant was born on [REDACTED], and he turned seventeen on [REDACTED] 2016. The robbery occurred on January 26, 2016, less than 20 days after he had turned seventeen years old. Over the last decade, the Supreme Court of the United States has dramatically altered the legal framework governing the sentencing of juvenile offenders. In *Roper v. Simmons*, 543 U.S. 551 (2005), the Court held that the Eighth Amendment's prohibition against cruel and unusual punishment prevented states from sentencing juveniles to death. Next, in *Graham v. Florida*, 560 U.S. 48 (2009), the Court went a step further, holding that sentencing juvenile offenders to life imprisonment without the possibility of parole for non-homicide offenses was also barred by the Cruel and Unusual Punishment Clause. In 2012, the Court determined in *Miller v. Alabama*, 567 U.S. ___, 132 S.Ct. 2455 (2012), that even in homicide cases, states are precluded from imposing mandatory life without parole sentences on juvenile offenders. Most recently, in *Montgomery v.*

³ Motion to Reconsider Sentence.

Louisiana, 577 U.S. ___, 136 S.Ct. 718 (2016), the Court held *Miller* to be “a new substantive rule that, under the Constitution, must be retroactive” and effectively ordered new sentencing proceedings for hundreds of individuals who had been sentenced to mandatory life without parole as juveniles. All four cases were grounded in one core Eighth Amendment principle: “children are constitutionally different from adults for purposes of sentencing.” *Miller* at 2464.

In *Aiken v. Byars*, 410 S.C. 534, 765 S.E.2d 572 (2014), the South Carolina Supreme Court vacated all life without parole sentences imposed on juvenile offenders concluding that such sentences violated the Eighth Amendment’s ban against cruel and unusual punishment. The Court further held that all such defendants were entitled to new sentencing hearings that must be “individualized” and at which “courts [must] fully explore the impact of the defendant’s juvenility on the sentence rendered.” *Id.* at 545; 765 S.E.2d at 578. The *Byars* Court set forth key factors that must be taken into consideration when juvenile life without parole is a possible sentence that include the chronological age of the offender and the hallmark features of youth, including “immaturity, impetuosity, and failure to appreciate the risks and consequence, the “family and home environment” that surrounded the offender, and circumstances of the homicide offense, including the extent of the offender’s participation in the conduct and how familial and peer pressures may have affected him. 410 S.C. at 544, 765 S.E.2d at 577 (citing *Miller v. Alabama*, 132 S.Ct. at 2468).

While the defendant in this case, Devante Grant, was not convicted of Murder and did not face a Life Without Parole sentence upon conviction, due to his age, the *Miller* factors are relevant that should be considered by the Court in fashioning a sentence. *Miller* was based on the premise that juveniles are less morally culpable because they “have a lack of maturity and an underdeveloped sense of responsibility, leading to recklessness, impulsivity, and heedless risk-

taking.” 132 S. Ct. at 2464 (internal quotation marks omitted). Rather than being a function of incorrigibility, such traits are biological, due to the lack of neurological development of juveniles. At the time of the incident, Devante was only seventeen years old, and therefore, he was considered an adolescent. To sentence him to the maximum sentence of thirty years ignores that this State and our country have a long established history of both giving those under the age of eighteen special protections and placing on them special restrictions.⁴ While the State may argue that Devante was age 18 during some of his post-arrest behavior, he was not months away from the end of adolescence (late adolescence is defined as ages 18 to 22).⁵

Research on adolescent development and brain development indicate that Devante was at the height of the development phase where risk taking behavior peaks. The pre-frontal cortex of his brain, the part which is responsible for impulse control, was not fully developed. Adolescence is characterized by “hallmark features” that “increase the likelihood of making poor decisions and engaging in risky conduct.” Because Devante was an adolescent at the time of the incident, he was more likely to be reckless, take risks, have difficulty considering long-term consequences, and have impaired judgement.

Because Devante was a juvenile, his moral culpability is diminished and his conduct must be considered differently than an adult, and any consideration into how to sentence him must not rely

⁴ For example, at age 17, Devante could not vote, serve on a jury, or legally purchase alcohol or tobacco. He also could not be drafted for military service. His parent was legally responsible for providing for his care including for the necessities of life (food, shelter, clothing, etc.).

⁵ Arnett, J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, 55, 469-480; Kagan, J. & Coles, R. (Eds.). (1972). *Twelve to sixteen: Early adolescence*. New York: Norton; Keniston, K. (1970). Youth: A “new” stage of life. *American Scholar*, 39, 631-641; Lipsitz, J. (1977). *Growing up forgotten*. Lexington, MA: Lexington Books.

solely on the facts as established at trial. The Court should also consider the “hallmark features of youth,” which include “immaturity, impetuosity, and failure to appreciate the risks and consequence.” 410 S.C. at 544, 765 S.E.2d at 577 (internal quotation marks omitted). These biological characteristics are to be considered greatly mitigating, and Devante as an adolescent is developmentally different from an adult, and the qualities of adolescence reduce his culpability, while at the same time increasing his capacity for change.

At the initial sentencing, the Defense briefly provided a social history of Devante, but failed to fully present relevant information about his life. Devante’s mother is Tameaka Parker, and she was present with him throughout the trial. When Devante was only one year old, his father, Ulysses Grant, was murdered. With no positive father figure in his life, older male peers stepped into that role and were very influential in his young life. While his mother has done her best to provide for the family, a report to the Department of Social Services was made in 2003 when Devante was approximately four years old. That case was substantiated for neglect due to a lack of instability, and the family was placed in a shelter for about two months before being moved to public housing.

Due to some attention problems in school, Devante was evaluated for ADHD and prescribed Concerta up until around age 13 or 14. His mother stopped the medication after having trouble obtaining a prescription refill. This is around the time that he experienced legal trouble in Family Court, including a juvenile arrest for Armed Robbery. While the Department of Juvenile Justice (DJJ) could have recommended that Devante be committed indeterminately for a period not to exceed his twenty-first birthday, the agency instead recommended a determinate commitment. It is the understanding of the Defense that he only received a ninety day sentence. In addition, DJJ could have placed him in an alternative placement or group home for additional

treatment, but instead did not make that recommendation. The Family Court also had the option to not follow the DJJ recommendations but instead accepted the recommendation for only a short-term commitment. In this sense, he faced very little involvement in the rehabilitation services available to juveniles in the family court system and received only a minimal consequence for bad behavior. The sentence imposed on the adult convictions is one hundred and twenty times as long as what he received in family court.

In *Miller*, the Courts recognize the importance of considering the circumstances of the offense, including how familial and peer pressures may have impacted a juvenile's behavior. During the trial, the Court was provided with very little information regarding the actual events leading up to the offense, where the gun came from, and the involvement of others in the alleged crime. As the Court is aware, Devante did not provide a statement to police. However, his codefendant, Mr. Chisolm spoke with police on two different occasions, giving multiple different versions of events including but not limited to: not knowing anything about the robbery, blaming another individual for the robbery and saying he tried to shoot that person, and eventually implicating Devante. In all versions of his story, however, he was consistent that drugs were being abused that night including right before the actual incident.

Devante would have been only seventeen years old (by a couple weeks) at the time of this incident. Mr. Chisolm, the only other person arrested was age twenty. Mr. Chisolm was also consistent in saying that it was his weapon and not Devante's gun. There was also an indication that others were present and part of the incident but no one else was arrested. However, no information provided by Mr. Chisolm implicated any known individual younger than Devante.

Given Devante's age at the time of the alleged conduct, his moral culpability of less than an adult defendant. Sentencing him to the maximum sentence ignores what our courts have recognized repeatedly: that children are different.

II. During sentencing, the Court raised concerns over the Defendant's behavior during short clips of jail calls and video visitations, as well as a letter provided by the Co-Defendant.

During sentencing, the Court expressed concerns over Devante's behavior during short clips of jail calls and video visits with a peer named Michael Allen. The Defense failed to fully address the Court's concerns. Two of the jail calls played during trial were allegedly made when Devante was still only seventeen years old and at the beginning of his incarceration. One call was made on February 8, 2016, and the other call was made on March 20, 2016. The final call played was made in May 2017 and was to Michael Allen. The conversation was about Michael Allen being interviewed by police and that he not implicate himself, a right of all individuals under the 5th Amendment. There are no threats made to anyone in any of these calls. The State argued these calls are indications of guilt, and it is clear that the calls had an impact on the jury's verdict. However, these calls were made by an adolescent male. Even at age 18, scientific research he was an adolescent and at the height of impulsivity.

The State also played two video visitation clips for the jury – one from March 2017 and the other from April 2017 – only a few months after Devante had turned 18 years old. Both visits involved Michael Allen. The Court acknowledged the influence of those videos on the Court and described it as an “absolute disregard for anything that resembles law and order.”⁶ In the second visit, he appears to be warning Michael that police have his name. He threatens no one. It is the March 2017 clip that includes language that the State would argue shows Devante was trying to

⁶ Transcript from Sentencing, p. 9.

get his codefendant to change his story. The only threatening words come from Michael Allen when he says the codefendant is not going to want to come home. Devante communicates no threats.

In addition, the State provided the jury with a letter linked to Devante Grant and allegedly sent to Mr. Chisolm. This letter is postmarked March 4, 2016. While the State was able to argue the authoring of this letter implied guilt, the State failed to establish that this letter had any impact on Mr. Chisolm's decision not to cooperate. In fact, he continued to cooperate up until May 2017, when the State made the decision, while albeit only temporarily, that he was not credible enough to use in the trial against Devante. There was no testimony that the letter influenced the decision by Mr. Chisolm to not answer questions during the trial.

The issues with Devante's behavior during the handwriting sessions were raised throughout this court process, including the use of his left hand during one of the sessions. While this behavior certainly was not helpful to his defense at trial, it is again reflective of his immaturity and youth. The Court in *Miller* explained that all its recent holdings regarding juveniles hinged on the now established constitutional maxim that juveniles have both "diminished culpability and greater prospects for reform" and are thus "'less deserving of the most severe punishments.'" *Id.* at 2464 (quoting *Graham*, 560 U.S. at 68). The lessened culpability and possibility of rehabilitation are grounded in three constitutionally significant differences between juveniles and adults:

- ♦ Children are less mature and developed than adults, leading to "recklessness, impulsivity, and heedless risk-taking," *id.*;
- ♦ Children are more "vulnerable . . . to negative influences and outside pressures," and have "limited control over their own environment and lack the ability to extricate themselves from horrific, crime-producing settings," *id.* (internal quotations omitted);
- ♦ Children's actions are "less likely to be evidence of irretrievable depravity" because "a child's character is not as well formed as an adult's" and "his traits are less fixed," *id.* (internal quotations omitted).

These differences, *Miller* noted, result in part from a consistently growing body of social science and neuroscience research conclusively establishing that: a) only a small percentage of adolescents who commit crimes, even serious crimes, “develop entrenched patterns of problem behavior,” *id.* at 2464 (quoting *Roper*, 543 U.S. at 570), and, b) there are fundamental differences between the brains of juveniles and adults in areas “involved in behavior control.” *Id.* at 2464–65 (quoting *Graham*, 560 U.S. at 68). Because the brains of juveniles are not “fully mature in regions and systems related to higher executive functions such as impulse control, planning and risk avoidance,” juveniles have a constitutionally different level of moral blameworthiness and, for that reason, the penological justifications for any criminal punishment—deterrence and retribution—are inconsistent with life without parole sentences. *Id.* at 2464 n.5 (quoting Brief of the American Psychological Association et al.). The same characteristics that make this category of offenders less culpable necessarily mean that “an irrevocable judgment about a [juvenile] offender’s value and place in society, [is] at odds with a child’s capacity for change.”⁷ *Id.* at 2465.

The Court during sentencing indicated its assessment of Devante is that “he is a little thug” and that “he has embarked on being a thug.” While the Court considers him to be a savvy criminal, his behavior is reflective of an adolescent who does not think through consequences, makes poor decisions, and this behavior does not justify sentencing him to the maximum sentence of thirty years, nor does it fall in line with what the Courts have recognized about juvenile offenders.

⁷ Laurence Steinberg, *A Behavioral Scientist Looks at the Science of Adolescent Brain Development*, 72 *BRAIN AND COGNITION* 160, 162 (2010) (“From this perspective, middle adolescence (roughly 14–17) should be a period of especially heightened vulnerability to risky behavior, because sensation-seeking is high and self-regulation is still immature. And, in fact, many risk behaviors follow this pattern, including unprotected sex, criminal behavior, attempted suicide, and reckless driving.”); Sarah-Jayne Blakemore, *Imaging Brain Development: The Adolescent Brain*, 61 *NEUROIMAGE* 397 (“The plentiful data that consistently paint a picture of the adolescent brain as relatively immature might speak against the relatively young age of criminal responsibility and harsh sentences for adolescents.”).

III. The State argued to the Court that the Defendant is an active gang member.

During sentencing, Assistant Solicitor Waring argued that he was notified by the jail that Devante was validated as a gang member, and the Defense failed to respond to this argument. The jail records indicate he was validated as a gang member under the SC GangNet Criteria Checklist because he was (1) Identified by reliable informant and (2) Identified by corroborated independent information. However, the records do not provide any additional information regarding the informant, why he/she is considered reliable, or what independent information was used to corroborate Devante is an actual gang member. No other police agency had previously identified him as a gang member. Given there is no documentation of the details regarding how the jail determined Devante should be labelled as a gang member, the Defense requests the Court not take that allegation into consideration in fashioning the sentence.

IV. Devante had no adult record or convictions prior to the convictions at trial.

During the sentencing phase, Assistant Solicitor Waring read to the Court a record for Devante. However, he did not accurately report to the Court that all of those offenses were juvenile adjudications of delinquency and not adult criminal convictions. The Defense did clarify that the armed robbery adjudication was related to a juvenile case, but did not correct on the record for the Court that none of the offenses listed were adult convictions. Mr. Waring also informed the Court that Devante was out on bond for a Strong Arm Robbery offense at the time of the charges that resulted in a conviction at trial. The allegation in that case was that Devante (at age 16) and a codefendant who was six years older than him, took money from another juvenile at a bus stop. The State never called the Strong Arm Robbery case against Devante to trial even though it was

the older offense, and it was dismissed on August 10, 2017.⁸ The State had previously allowed his older codefendant to plead guilty to Assault and Battery 2nd Degree in that case.

V. During sentencing, the Court indicated that sending a message to the streets was a motivating factor in sentencing. The effect of severe sanctions on crime rates has been extensively studied and there is no evidence to support that a severe sentence would have a deterrent effect on society.

The Court during sentencing indicating the sentence would be sending a message to the streets, implicating deterrence was a motivating factor in the decision to sentence Devante to the maximum sentence. The effect of severe sanctions on crime rates has been studied extensively, and there is no evidence to support it.

In a meta-analysis of studies assessing the effects of prison sentences on crime rates, the Sentencing Project has concluded that longer prison sentences do not reduce crime rates.⁹ While *certainty* of punishment—in other words, likelihood of apprehension—does lower the risk of criminal behavior, severity of punishment does not. As to the effect of a prison sentence on the person sentenced, long sentences actually *increase* rates of recidivism.¹⁰ This is because people serving long sentences become institutionalized, lose their pro-social contacts with the outside world, and lose legitimate employment opportunities. As another summary of studies on the topic stated, “[d]eterrence-based sentencing makes false promises to the community.”¹¹ Canada, Finland, Ireland and Sweden are all examples of nations that have deliberately abandoned general deterrence as a factor to be used in sentencing, because it has proven to have no effect on crime

⁸ Status Change Form.

⁹ Wright, Valerie, “Deterrence in Criminal Justice,” The Sentencing Project, Nov. 2010.

¹⁰ Wright, Valerie, “Deterrence in Criminal Justice,” The Sentencing Project, Nov. 2010, p. 6-7.

¹¹ Doob, Anthony, “Sentence Severity and Crime: Accepting the Null Hypothesis,” 30 Crime & Just. 143, 191 (2003).

rates.¹²

In addition, the hallmark features of youth also weaken the deterrence rationale. Because of the inherent features of youth such as “immaturity, impetuosity, and failure to appreciate risks and consequences,” juveniles are “less likely to consider potential punishment” that may result from present conduct. *Miller*, 132 S.Ct. at 2465, 2468. In *Roper*, the Court recognized that the “same characteristics that render juveniles less culpable than adults suggest as well that juveniles will be less susceptible to deterrence.” 543 U.S. at 571. Sending a message to the streets that Devante Grant received a thirty year sentence is not going to deter other youth from engaging in criminal activity or have any impact on what is commonly referred to as “street code.”

VI. The thirty year sentence is not proportional to the co-defendant’s sentence, the actual crimes Devante was convicted of, or to other defendants sentenced in Charleston County.

Saivon Chisolm, the only charged codefendant, was twenty years old at the time of the incident, and he was twenty-two years old when he was sentenced. Mr. Chisolm was initially charged with Carjacking, Unlawful Carrying of a Handgun, Possession of a Stolen Motor Vehicle, and Possession of a Stolen Handgun. The State also indicted him with Armed Robbery. On May 12, 2017, Mr. Chisolm appeared before the Court and entered a guilty plea to the charges of Armed Robbery and Unlawful Carrying of a Handgun. Sentencing was deferred to May 15, 2017. Assistant Solicitor Waring argued that Mr. Chisolm should not receive the minimum and asked for a sentence in the range of 15 to 20 years.¹³ The Court declined to follow the State’s request and instead sentenced Mr. Chisolm to sixteen years but suspended that to the service of only ten

¹² Doob, Anthony, “Sentence Severity and Crime: Accepting the Null Hypothesis,” 30 Crime & Just. 143, 191 (2003).

¹³ Transcript from Chisolm Sentencing Hearing.

years active incarceration - the minimum for armed robbery. The sentence for Unlawful Carrying was one year in prison (run concurrently).

The Court sentenced Devante to thirty years in prison – three times what his older codefendant received. Devante was alleged to have been the gunman during the incident, but the gun is also alleged to have belonged to Mr. Chisolm and continued to be in his possession after the incident and up until his arrest. Allegedly being the one to have held the gun during the incident does not justify a sentence that is three times as long as his older codefendant.

The South Carolina Department of Corrections provided information on new admissions from Charleston County for the offense of Armed Robbery over the past five years.¹⁴ In that time period, there have been 81 admissions for Armed Robbery. Only five of those received sentences of 30 years or more. Specifically, in the fiscal year for 2013, only one other Defendant has received a sentence of 30 years, one received a sentence of 35 years, one received a life without parole sentence, and two received sentences of 65 years. The individuals who received 65 year sentences had additional convictions for Attempted Murder and a firearms offense, with all sentences run consecutively.

Defendants convicted of Armed Robbery in Charleston County over the last five years have overwhelmingly received sentences lower than the sentence Devante received. The most common sentence was 10 years, with 35 new admissions serving the minimum sentences for Armed Robbery. Nothing about the actual facts as presented at trial justifies Devante receiving a sentence so disproportionate to what other defendants have received in this county. While he was accused of robbing a stranger at gunpoint, there was no actual assault on Ms. Hooks. She was not pistol

¹⁴ FY13-F&17 SCDC New Admissions from Court from Charleston County with Most Serious Offense of Armed Robbery.

whipped, the gun was never fired, and the only time she was touched was when Mr. Chisolm took her cigarettes. There was an allegation that there were verbal threats made to her and a gun pointed at her, which was certainly an intimidating and frightening event that cannot be considered a minor trauma to her; however, the allegations certainly could have been worse and have been worse in multiple cases prosecuted by the 9th Circuit Solicitor's Office. For example:

- a. Tappia Green: Mr. Green was convicted at trial of Armed Robbery, Kidnapping, and Possession of a Weapon During the Commission of a Violent Crime. He was accused of pretending his codefendant's car needed to be jumped and then taking the victim at gunpoint and forcing him to provide cash. It was also alleged that Mr. Green wanted to kill the victim, but that the codefendant refused. His prior record included adult convictions for Strong Arm Robbery, Possession of a Stolen Pistol, Unlawful Conduct Towards a Child, and Assault and Battery. He was 24 years old at the time of the armed robbery and kidnapping, and he received a sentence of 15 years in prison.
- b. Ishmel Lemon and Antwan Champaigne: In 2015, both men were convicted in Charleston County of Burglary 1st Degree, during which they entered a West Ashley apartment armed with handguns while the victim hid in her closet. Mr. Champaigne received a sentence of 16 years, and Mr. Lemon who failed to even appear for trial was sentenced to 30 years in prison.
- c. Laquan Bryan: In 2015, Mr. Bryan entered a guilty plea to the charge of Attempted Murder and Possession of a Weapon During the Commission of a Violent Crime. He was accused of firing shots at an apartment maintenance man and coworker who asked him to leave an apartment complex because he was causing a disturbance. He received 20 years for the Attempted Murder and a consecutive 5 years for the weapon charge. He was 18 years old at the time of the offense.
- d. Kendall Tyus, Jr.: In 2015, Mr. Tyus was convicted of robbing a restaurant in North Charleston. He was sentenced to thirteen years for the Armed Robbery and 5 years on the weapon offense, to run concurrently. He was twenty one years old at the time of the robbery.
- e. Christopher Boling: Mr. Boling was convicted at trial of Burglary 1st Degree, after forcing his way into a home of acquaintances and assaulting them. He and a codefendant entered the home a second time armed with a gun and threatened to kill one of the victims. Mr. Boling had a prior record that included Assault and Battery of a High and Aggravated Nature and Criminal Domestic Violence. Mr. Boling received the minimum sentence 15 years for this violent home invasion.

In reviewing the information regarding new admissions over the past five years for Armed

Robbery at the South Carolina Department of Corrections and in comparison to more violent cases prosecuted by the Solicitor's Office, the sentence imposed on Devante is unnecessarily harsh and severe. It is disproportionate to the actual crimes he was convicted of, the sentence of his older co-defendant, other individuals convicted of armed robbery in Charleston County, and other defendants sentenced for violent crime in this county.

VII. Impact of Incarceration on Life Expectancy

Vera Dolan was commissioned to conduct an investigation and develop a life table with life expectancies specific to male inmates at SCDC.¹⁵ The Life Tables created indicate that any person who has been incarcerated in SCDC has a lower life expectancy than someone in the general United States population. An 18 year old African American male in the U.S. Population has a life expectancy of approximately 73 years.¹⁶ In comparison, an 18 year old African American male incarcerated at SCDC has an expected death at 56.2 years of age, a 16.8 year difference.¹⁷ In addition, when reviewing deaths of inmates serving life sentences, in comparing those who are serving life and entered the incarcerated setting between ages 16 and 19, died an average of 31.8 years earlier than what is predicted by the U.S. Life Expectancy.¹⁸

The impact of incarceration on life expectancy is relevant when considering the sentence of Devante. With the current sentence of thirty years to be served at 85%, he will be almost 43 upon his release. With this sentence, on average it can be expected that he would live approximately 13 years additional years. The Court acknowledged that it did not think Devante is

¹⁵ Ms. Dolan's CV, Affidavit (which includes a detailed explanation of her methodology), and tables are attached as an exhibit to this memorandum.

¹⁶ Dolan Affidavit, Exhibit 6.

¹⁷ Dolan Affidavit, Exhibit 9.

¹⁸ Dolan Affidavit, p. 7.

a "waste," yet the Court's sentence does not take into account the dramatic impact that incarceration will likely have on his life expectancy.

CONCLUSION

For the foregoing reasons, the Defense prays for fair and adequate reconsideration and reduction of the sentence imposed. In light of the additional mitigation presented, the current sentence of thirty years violates the 8th Amendment of the United States Constitution and Article 1, Section 15 of the South Carolina Constitution. The Defense requests a hearing on this matter and will present any further additional grounds as appropriate at that time and in response to any memorandum or arguments made by the State in opposition to the reduction.

Respectfully Submitted,


Megan Ehrlich
Attorney for Devante A. Grant

Charleston, South Carolina

Dated: August 23, 2017

FILED
2017 AUG 23 PM 2:14
JILL ARMSTRONG
CLERK OF COURT

EXHIBIT LIST

- Exhibit A: Saivon Chisolm Sentencing Sheets
- Exhibit B: Devante Grant Sentencing Sheets, Indictments, and Verdict Forms
- Exhibit C: Defense Motion to Reconsider Sentence
- Exhibit D: Devante Grant Sentencing Phase Transcript
- Exhibit E: Status Change Form, Strong Arm Robbery
- Exhibit F: "Deterrence in Criminal Justice," The Sentencing Project
- Exhibit G: "Sentence Severity and Crime: Accepting the Null Hypothesis"
- Exhibit H: Transcript from Chisolm Sentencing Hearing
- Exhibit I: SCDC FY13-FY17 New Admissions from Charleston County with Most Serious Offense of Armed Robbery
- Exhibit J: Affidavit of Vera Dolan, C.V. of Vera Dolan, Mortality Tables, U.S. Population Life Tables, SCDC Population Life Tables

Exhibit A

622

STATE OF SOUTH CAROLINA

COUNTY OF CHARLESTON

STATE VS.

SAIVON MATEEL CHISOLM

AKA: Savion Mateel Chisolm

Race: Black/African American

Sex: M

DOB: [REDACTED]

Address: [REDACTED]

City, State, Zip: North Charleston, SC 29405-7540

DL# [REDACTED]

STD# [REDACTED]

*CDL Yes ☐ No ☐ CMV Yes ☐ No ☐ Hazmat Yes ☐ No ☐

In disposition of the said indictment comes now the Defendant who was

TO: Armed Robbery

In violation of § 16-11-0330(A) of the S.C. Code of Laws, bearing CDR Code # 0139

☐ NON-VIOLENT☒ VIOLENT☐ SERIOUS☒ MOST-SERIOUS☐ Mandatory GPS☐ §17-25-45(CSC w/minor 1st or Lewd Act)The charge is: ☒ As indicted,☐ Lesser Included Offense,☐ Defendant Waives Presentment to Grand Jury.

(Def.'s initials)

The plea is: ☒ Without Negotiations or Recommendation,☐ Negotiated Sentence,☐ Recommendation by the State.

ATTEST:

T. Richard Waring, Assistant Solicitor

100465
SC Bar #Savion M. Chisolm
Defendant

Attorney for Defendant

12396
SC Bar #

WHEREFORE, the Defendant is committed to the ☒ State Department of Corrections ☐ County Detention Center, for a determinate term of 16 days/months/years or ☐ under the Youthful Offender Act not to exceed _____ years and/or to pay a fine of \$ _____; provided that upon the service of 10 days/months/years and or payment of \$ _____; plus costs and assessments as applicable*; the balance is suspended with probation for _____ months/years and subject to South Carolina Department of Probation, Parole and Pardon Service standard conditions of probation, which are incorporated by reference.

☐ CONCURRENT or ☐ CONSECUTIVE to sentence on: _____☒ The Defendant is to be given credit for time served pursuant to S.C. Code §24-13-40 to be calculated and applied by the State Department of Corrections. 469 days☐ The Defendant is to be placed on Central Registry of Child Abuse and Neglect pursuant to S.C. Code §17-25-135.

Pursuant to 18 U.S.C. Section 922, it is unlawful for a person convicted of a violation of Section 16-25-20 or 16-25-65 (Domestic Violence) to ship, transport, possess, or receive a firearm or ammunition:

SPECIAL CONDITIONS:

☐ RESTITUTION:☐ Deferred☐ Def. Waives Hearing☐ Ordered

PTUP

Total: \$ _____ plus 20% fee: \$ _____

_____ days/hours Public Service Employment.

Payment Terms: _____

Obtain GED ☐☐ Set by SCDPPPS _____

Attend Voc. Rehab. Or Job Corp. _____

May serve W/E beginning: _____

Substance Abuse Counseling ☐Random Drug/Alcohol Testing ☐

Fine may be pd. in equal consecutive weekly/monthly

pmts. of \$ _____ Beginning _____

\$ _____ Paid to Public Defender Fund

DEFERRED SENTENCE: (Plea Accepted)

Other: _____

Judge: W. P. [Signature]

2060

Date: 5-12-17

Recipient: _____

*Fine: _____

\$

§14-1-206 (Assessments 107.5%)

\$

§14-1-211 (A)(1)(Conv. Surcharge)

\$100

\$

§14-1-211 (A)(2)(DUI Surcharge)

\$100

\$

§56-5-2995 (DUI Assessment)

\$12

\$

§56-1-286 (DUI Breath Test)

\$25

\$

Proviso 61.6 (Public Def/Prob)

.\$500

\$

§14-1-212 (Law Enforce. Funding)

\$25

\$

§14-1-213 (Drug Court Surcharge)

\$150

\$

§50-21-114 (BUI Breath Test Fee)

\$50

\$

§56-5-2942(J) (Vehicle Assessment)

\$40/ea

\$

3% to County (if paid in installments)

\$

\$

TOTAL:

\$

\$ 128.75☐ Appointed PD or appointed other counsel,

§47.12 requires \$500 be paid to Clerk

during probation.

Clerk of Court/Deputy Clerk: CallieCourt Reporter: Phyllis NationPresiding Judge: [Signature]Judge Code: 2060Sentence Date: 5-15-19

STATE OF SOUTH CAROLINA

COUNTY OF CHARLESTON

STATE VS.

SAIVON MATEEL CHISOLMAKA: Saivon Mateel ChisolmRace: Black/African AmericanSex: MDOB: [REDACTED]SS#: [REDACTED]Address: [REDACTED]City, State, Zip: North Charleston, SC 29405-7540DL# [REDACTED]SID# [REDACTED]*CDL Yes ☐ No ☐ CMV Yes ☐ No ☐ Hazmat Yes ☐ No ☐

In disposition of the said indictment comes now the Defendant who was

TO: Unlawful Carrying of a PistolIn violation of § 16-23-0020 of the S.C. Code of Laws, bearing CDR Code # 0044☒ NON-VIOLENT☐ VIOLENT☐ SERIOUS☐ MOST SERIOUS☐ Mandatory GPS☐ §17-25-45(CSC w/minor 1st or Lowd Act)

The charge is:

☒ As indicted,☐ Lesser Included Offense,☐ Defendant Waives Presentment to Grand Jury,

(def.'s initials)

The plea is:

☒ Without Negotiations or Recommendation,☐ Negotiated Sentence,☐ Recommendation by the State.

ATTEST:

Richard Waring 100465
T. Richard Waring, Assistant Solicitor SC Bar #Saivon M. Chisolm 13516
Defendant Attorney for Defendant SC Bar #

WHEREFORE, the Defendant is committed to the ☒ State Department of Corrections ☐ County Detention Center, for a determinate term of 1 year months years or ☐ under the Youthful Offender Act not to exceed years and/or to pay a fine of \$; provided that upon the service of days/months/years and or payment of \$; plus costs and assessments as applicable*; the balance is suspended with probation for months/years and subject to South Carolina Department of Probation, Parole and Pardon Service standard conditions of probation, which are incorporated by reference.

☐ CONCURRENT or: ☐ CONSECUTIVE to sentence on:☒ The Defendant is to be given credit for time served pursuant to S.C. Code §24-13-40 to be calculated and applied by the State Department of Corrections. 1 year☐ The Defendant is to be placed on Central Registry of Child Abuse and Neglect pursuant to S.C. Code §17-25-135.

Pursuant to 18 U.S.C. Section 922, it is unlawful for a person convicted of a violation of Section 16-25-20 or 16-25-65 (Domestic Violence) to ship, transport, possess, or receive a firearm or ammunition.

SPECIAL CONDITIONS:

☐ RESTITUTION:☐ Deferred☐ Def. Waives Hearing☐ Ordered

PTUP

Total: \$ plus 20% fee: \$ days/hours Public Service EmploymentPayment Terms: Obtain GED ☐☐ Set by SCDPPPS Attend Voc. Rehab. Or Job Corp. May serve W/E beginning Substance Abuse Counseling ☐Random Drug/Alcohol Testing ☐

Fine may be pd. in equal consecutive weekly/monthly

pmts. of \$ Beginning \$ Paid to Public Defender FundOther: DEFERRED SENTENCE: (Plea Accepted)Judge: [Signature] 2060Date: 5-12-17☐ Appointed PD or appointed other counsel,

\$47.12 requires \$500 be paid to Clerk

during probation.

Presiding Judge: [Signature]Judge Code: 2060Sentence Date: 5-15-17Clerk of Court/Deputy Clerk: [Signature]Court Reporter: [Signature]

Exhibit B

STATE OF SOUTH CAROLINA

COUNTY OF CHARLESTON

STATE VS.

DEVANTE ANTONIO GRANT

AKA:

Race: Black/African American

Sex: M

DOB: [REDACTED]

SS#: [REDACTED]

Address: [REDACTED]

City, State, Zip: North Charleston, SC 29418

DL# [REDACTED]

SID# [REDACTED]

*CDL Yes ☐ No ☐ CMV Yes ☐ No ☐ Hazmat Yes ☐ No ☐

In disposition of the said indictment comes now the Defendant who was

☒ CONVICTED OF or☐ PLEADSTO: **Armed Robbery**

In violation of § 16-11-0330(A) of the S.C. Code of Laws, bearing CDR Code # 0139

☐ NON-VIOLENT☒ VIOLENT☐ SERIOUS☒ MOST SERIOUS☐ Mandatory GPS☐ §17-25-45(CSC w/minor 1st or Lewd Act)

The charge is:

☒ As indicted,☐ Lesser Included Offense,☐ Defendant Waives Presentment to Grand Jury.

(def.'s initials)

The plea is:

☒ Without Negotiations or Recommendation,☐ Negotiated Sentence;☐ Recommendation by the State.

ATTEST:

T. Richard Waring, Assistant Solicitor 100465 SC Bar #

Defendant

Attorney for Defendant 75164 SC Bar #

WHEREFORE, the Defendant is committed to the ☒ State Department of Corrections ☐ County Detention Center, for a determinate term of 30 days/months/years or ☐ under the Youthful Offender Act not to exceed _____ years and/or to pay a fine of \$ _____; provided that upon the service of _____ days/months/years and or payment of \$ _____; plus costs and assessments as applicable*; the balance is suspended with probation for _____ months/years and subject to South Carolina Department of Probation, Parole and Pardon Service standard conditions of probation, which are incorporated by reference.

☐ CONCURRENT or ☐ CONSECUTIVE to sentence on: _____☒ The Defendant is to be given credit for time served pursuant to S.C. Code §24-13-40 to be calculated and applied by the State Department of Corrections. 551 days☐ The Defendant is to be placed on Central Registry of Child Abuse and Neglect pursuant to S.C. Code §17-25-135.

Pursuant to 18 U.S.C. Section 922, it is unlawful for a person convicted of a violation of Section 16-25-20 or 16-25-65 (Domestic Violence) to ship, transport, possess, or receive a firearm or ammunition.

SPECIAL CONDITIONS:

☐ RESTITUTION:☐ Deferred☐ Def. Waives Hearing☐ Ordered

PTUP

Total: \$ _____ plus 20% fee: \$ _____

_____ days/hours Public Service Employment

Payment Terms: _____

Obtain GED ☐☐ Set by SCDPPPS

Attend Voc. Rehab. Or Job Corp. _____

May serve W/E beginning _____

Substance Abuse Counseling ☐Random Drug/Alcohol Testing ☐

Fine may be pd. in equal consecutive weekly/monthly

pmts. of \$ _____ Beginning _____

\$ _____ Paid to Public Defender Fund

Other: _____

Recipient: _____

*Fine: _____

\$ _____

§14-1-206 (Assessments 107.5%)

\$ _____

§14-1-211 (A)(1)(Conv. Surcharge)

\$100

\$ 100

§14-1-211 (A)(2)(DUI Surcharge)

\$100

\$ _____

§56-5-2995 (DUI Assessment)

\$12

\$ _____

§56-1-286 (DUI Breath Test)

\$25

\$ _____

Proviso 61.6 (Public Def/Prob)

\$500

\$ _____

§14-1-212 (Law Enforce. Funding)

\$25

\$ 25

§14-1-213 (Drug Court Surcharge)

\$150

\$ _____

§50-21-114 (BUI Breath Test Fee)

\$50

\$ _____

§56-5-2942(J) (Vehicle Assessment)

\$40/ea

\$ _____

3% to County (if paid in installments)

\$

\$ 3.75

TOTAL

\$ 128.75☐ Appointed PD or appointed other counsel,

§47.12 requires \$500 be paid to Clerk

during probation.

Clerk of Court/Deputy Clerk: Phillip NortonCourt Reporter: Phillip NortonPresiding Judge: R. M. [Signature]Judge Code: 2060Sentence Date: 8/9/17

626

DLO/0313851
WITNESSES

Charleston City Police Department

AGENCY CASE NUMBER

2016-01522

ARREST WARRANT NUMBER

2016-GS-10-02116

DATE OF ARREST

02/06/2016

ACTION OF GRAND JURY

TRUE BILL

APR 11 2016

Forfeiture of Grand Jury

Date:

VERDICT

Guilty

[Signature]
Forfeiture of Petit Jury

8/9/17
Date:

DOCKET NO. 2016-GS-10-02116

The State of South Carolina

County of Charleston

COURT OF GENERAL SESSIONS

APRIL TERM 2016

THE STATE

VS.

DEVANTE ANTONIO GRANT

B/M DOB: [REDACTED]

Indictment for

ARMED ROBBERY

SC Code: § 16-11-0330(A)
CDR Code: 0139

STATE OF SOUTH CAROLINA
COUNTY OF CHARLESTON

INDICTMENT

At a Court of General Sessions, convened April 2016, the Grand Jurors of Charleston County present upon their oath:

ARMED ROBBERY

That on or about January 26, 2016, in Charleston County, South Carolina, the Defendant, Devante Antonio Grant, by use of force, threats or intimidation and while armed with a deadly weapon, or while alleging, either by action or words, he was armed while using a representation of a deadly weapon or any object which a person present during the commission of the robbery reasonably believed to be a deadly weapon, did take and carry away goods and/or monies from the person or immediate presence of Kristina Kirby Hooks with the intent to permanently deprive the victim of possession thereof, in violation of §16-11-330(A) of the South Carolina Code of Laws (1976) as amended.

Against the peace and dignity of the State, and contrary to the statute in such case made and provided.

Alex J. Ziegler for
DAVID L. OSBORNE
ASSISTANT SOLICITOR

STATE OF SOUTH CAROLINA
COUNTY OF CHARLESTON

) IN THE COURT OF GENERAL SESSIONS
) CASE NUMBER: 2016-GS-10- 02116
)
)

STATE OF SOUTH CAROLINA

vs.

VERDICT FORM

DEVANTE GRANT,

Defendant.

We, the Jury, by unanimous consent, find the Defendant, **DEVANTE GRANT**, on
the charge of **ARMED ROBBERY**:

X GUILTY

____ NOT GUILTY



PRESIDING JUROR

Charleston, South Carolina
August 9, 2017

STATE OF SOUTH CAROLINA

COUNTY OF CHARLESTON

STATE VS.

DEVANTE ANTONIO GRANT

AKA:

Race: Black/African American

Sex: M

DOB: [REDACTED]

SS#: [REDACTED]

Address: [REDACTED]

City, State, Zip: North Charleston, SC 29418

DL# [REDACTED]

SID# [REDACTED]

*CDL Yes ☐ No ☐ CMV Yes ☐ No ☐ Hazmat Yes ☐ No ☐

In disposition of the said indictment comes now the Defendant who was

☒ CONVICTED OF or☐ PLEADSTO: Possession Of A Weapon During The Commission Of A Violent Crime

In violation of § 16-23-0490 of the S.C. Code of Laws, bearing CDR Code # 0549

☒ NON-VIOLENT☐ VIOLENT☐ SERIOUS☐ MOST SERIOUS☐ Mandatory GPS☐ §17-25-45(CSC w/minor 1st or Lewd Act)

The charge is:

☒ As indicted,☐ Lesser Included Offense,☐ Defendant Waives Presentment to Grand Jury.

(def.'s initials)

The plea is:

☒ Without Negotiations or Recommendation,☐ Negotiated Sentence,☐ Recommendation by the State.

ATTEST:

T. Richard Waring, Assistant Solicitor

100465
SC Bar #

Defendant

Attorney for Defendant

75164
SC Bar #

WHEREFORE, the Defendant is committed to the ☒ State Department of Corrections ☐ County Detention Center, for a determinate term of 5 days/months/years or ☐ under the Youthful Offender Act not to exceed _____ years and/or to pay a fine of \$ _____; provided that upon the service of _____ days/months/years and or payment of \$ _____; plus costs and assessments as applicable*; the balance is suspended with probation for _____ months/years and subject to South Carolina Department of Probation, Parole and Pardon Service standard conditions of probation, which are incorporated by reference.

☒ CONCURRENT or ☐ CONSECUTIVE to sentence on: _____☒ The Defendant is to be given credit for time served pursuant to S.C. Code §24-13-40 to be calculated and applied by the State Department of Corrections. 551 days☐ The Defendant is to be placed on Central Registry of Child Abuse and Neglect pursuant to S.C. Code §17-25-135.

Pursuant to 18 U.S.C. Section 922, it is unlawful for a person convicted of a violation of Section 16-25-20 or 16-25-65 (Domestic Violence) to ship, transport, possess, or receive a firearm or ammunition.

SPECIAL CONDITIONS:

☐ RESTITUTION:☐ Deferred☐ Def. Waives Hearing☐ Ordered

PTUP

Total: \$ _____ plus 20% fee: \$ _____

_____ days/hours Public Service Employment

Payment Terms: _____

Obtain GED ☐☐ Set by SCDPPPS _____

Attend Voc. Rehab. Or Job Corp. _____

May serve W/E beginning _____

Substance Abuse Counseling ☐Random Drug/Alcohol Testing ☐

Fine may be pd. in equal consecutive weekly/monthly

pmts. of \$ _____ Beginning _____

\$ _____ Paid to Public Defender Fund

Other: _____

Recipient: _____

*Fine: _____

\$ _____

§14-1-206 (Assessments 107.5%)

\$ _____

§14-1-211 (A)(1)(Conv. Surcharge)

\$100

\$ 100-

§14-1-211 (A)(2)(DUI Surcharge)

\$100

\$ _____

§56-5-2995 (DUI Assessment)

\$12

\$ _____

§56-1-286 (DUI Breath Test)

\$25

\$ _____

Proviso 61.6 (Public Def/Prob)

\$500

\$ _____

§14-1-212 (Law Enforce. Funding)

\$25

\$ 25-

§14-1-213 (Drug Court Surcharge)

\$150

\$ _____

§50-21-114 (BUI Breath Test Fee)

\$50

\$ _____

§56-5-2942(J) (Vehicle Assessment)

\$40/ea

\$ _____

3% to County (if paid in installments)

\$

\$ 3.75

TOTAL

\$ 128.75☐ Appointed PD or appointed other counsel,

§47.12 requires \$500 be paid to Clerk during probation.

Clerk of Court/Deputy Clerk: _____

Court Reporter: _____

Presiding Judge: _____

Judge Code: _____

Sentence Date: _____

630

DLO/0313851
WITNESSES

Charleston City Police Department

AGENCY CASE NUMBER

2016-01522

ARREST WARRANT NUMBER

2016A1020100727

DATE OF ARREST

02/06/2016

ACTION OF GRAND JURY

TRUE BILL

APR 11 2016

For person of Grand Jury

Date:

VERDICT

Guilty

For person of Petit Jury

Date:

DOCKET NO. 2016-GS-10-02106

The State of South Carolina

County of Charleston

COURT OF GENERAL SESSIONS

APRIL TERM 2016

THE STATE

VS.

DEVANTE ANTONIO GRANT

B/M DOB: [REDACTED]

Indictment for

POSSESSION OF A WEAPON DURING
THE COMMISSION OF A VIOLENT
CRIME

SC Code: § 16-23-0490
CDR Code: 0549

STATE OF SOUTH CAROLINA
COUNTY OF CHARLESTON

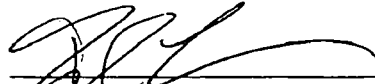
INDICTMENT

At a Court of General Sessions, convened April 2016, the Grand Jurors of Charleston County present upon their oath:

POSSESSION OF A WEAPON DURING THE COMMISSION OF A VIOLENT CRIME

That in Charleston County, South Carolina, on or about January 26, 2016, the Defendant, Devante Antonio Grant, did possess a firearm or did visibly display what appeared to be a firearm or did visibly display a knife during the commission of or attempted commission of a violent crime, to wit: Armed Robbery; in violation of Section 16-23-490, Code of Laws of South Carolina, (1976, as amended).

Against the peace and dignity of the State, and contrary to the statute in such case made and provided.



DAVID L. OSBORNE
ASSISTANT SOLICITOR

STATE OF SOUTH CAROLINA
COUNTY OF CHARLESTON

) IN THE COURT OF GENERAL SESSIONS
) CASE NUMBER: 2016-GS-10-02106
)
)

STATE OF SOUTH CAROLINA

vs.

VERDICT FORM

DEVANTE GRANT

Defendant.

We, the Jury, by unanimous consent, find the Defendant, **DEVANTE GRANT**, on the charge of
POSSESSION OF A WEAPON DURING THE COMMISSION OF A VIOLENT CRIME:

X GUILTY

____ NOT GUILTY



PRESIDING JUROR

August 9, 2017

Exhibit C

STATE OF SOUTH CAROLINA
COUNTY OF CHARLESTON

IN THE COURT OF GENERAL SESSIONS
MOTION COVERSHEET

) WARRANT/TICKET/

) INDICTMENT #'s

2016GS1002116

2016GS1002106

STATE OF SOUTH CAROLINA

-vs-

Devante Grant

DEFENDANT

Solicitor:

Richard Waring, Bar No.

Address:

101 Meeting St, Ste. 400, Chas. SC 29401

Phone: 843-958-1900

E-mail: waringr@scsolicitor9.org

Defendant's Attorney:

Megan Ehrlich, Bar No. 75164

Address:

101 Meeting St, 5th Fl, Chas. SC 29401

Phone: 843-958-1850

E-mail: mehrlich@charlestoncounty.org

☒ MOTION HEARING REQUESTED

☐ FORM MOTION, NO HEARING REQUESTED

SECTION I: Hearing Information

Nature of Motion: Motion to Reconsider Sentence

Estimated Time Needed: Approx. 15-30 minutes

Court Reporter Needed: ☒ YES ☐ NO

SECTION II: Motion/Order Type

☒ Written motion attached

☐ Form Motion/Order

I hereby move for relief or action by the court as set forth in the attached proposed order.

Signature of ☐ Solicitor ☒ Attorney for Defendant

8/18/17

Date submitted

FILED
2017 AUG 18 PM 2:28
CLERK OF COURT

STATE OF SOUTH CAROLINA
COUNTY OF CHARLESTON

) IN THE COURT OF GENERAL SESSIONS
) FOR THE NINTH JUDICIAL CIRCUIT

Indictments: 2016GS1002116, 2016GS1002106
Charges: Armed Robbery, Possession of Weapon
During Commission of a Violent Crime

STATE OF SOUTH CAROLINA

vs.

DEVANTE ANTONIO GRANT,

Defendant

MOTION TO
RECONSIDER SENTENCE

FILED
2017 AUG 18 PM 2:28
CLERK OF COURT

TO: Richard Waring, Assistant Solicitor for the Ninth Judicial Circuit:

PLEASE TAKE NOTICE that the above-captioned defendant, by and through the undersigned attorney, moves this Honorable Court for a reconsideration of the sentence imposed upon the defendant on August 9, 2017, by the Honorable R. Markley Dennis, pursuant to the above-captioned charge.

The motion will be made upon the grounds that:

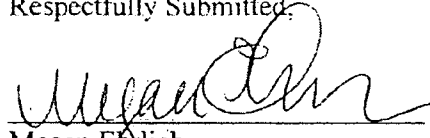
1. The sentence imposed by the Court is unnecessarily severe and does not fully take into consideration the fact that the Defendant was a juvenile (age 17) at the time of the offenses and other mitigating factors regarding his life, social environment, negative older peer influence, and underdeveloped adolescent brain. The Defense failed to thoroughly and completely present mitigation to the Court that should be taken into consideration.
2. During sentencing, the Court raised concerns over the Defendant's behavior during short clips of jail calls and video visitations, as well as a letter provided by the Co-Defendant. The Defense would like the opportunity to more thoroughly address the Court's concerns regarding the Defendant's behavior following his arrest.
3. During sentencing, the Court indicated that sending a message to the streets was a motivating factor in sentencing. The effect of severe sanctions on crime rates has been extensively studied and there is no evidence to support that a severe sentence would have a deterrent effect on society. In addition, the Defense failed to accurately address the concerns that a co-defendant

had been intimidated into not providing testimony and has further argument to present to the Court.

4. The Co-defendant in this case, Saivon Chisolm, entered a guilty plea and was sentenced by the Court to sixteen years incarceration suspended upon the service of ten years. The Defendant's sentence, in comparison, at thirty years incarceration is three times as long as his older Co-defendant. This sentence is not proportional to the actual crimes he was convicted of at trial or to other defendants sentenced in Charleston County with more significant prior records and more violent crimes.
5. The State argued to the Court that the Defendant is an active gang member, and the Defense failed to address this argument in the sentencing phase.
6. Any further grounds as may hereinafter be presented in a Memorandum in Support of this Motion to be filed on August 23, 2017, and any additional arguments made at the time of a hearing.

The Defendant prays for fair and adequate reconsideration of the sentence imposed and requests a hearing in front of the Court on the record following the filing of the Memorandum in Support of this Motion (to be filed on August 23, 2017) and any response filed by the State in response.

Respectfully Submitted,


Megan Ehrlich
Attorney for Devante A. Grant

Charleston, South Carolina

Dated: August 18, 2017

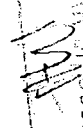
FILED
2017 AUG 18 PM 2:28
CLERK OF COURT
BY 

Exhibit D

STATE OF SOUTH CAROLINA	)	COURT OF GENERAL SESSIONS
	)	NINTH JUDICIAL CIRCUIT
COUNTY OF CHARLESTON	)	
	)	
STATE OF SOUTH CAROLINA,	)	CASE NO. 2016-GS-10-02116
	)	2016-GS-10-02106
PLAINTIFF,	)	
	)	
VS.	)	PARTIAL
	)	TRANSCRIPT OF RECORD
	)	
DEVANTE GRANT,	)	
	)	
DEFENDANT.	)	
	)	

August 9, 2017

Charleston, South Carolina

B E F O R E:

The Honorable R. Markley Dennis; and a Jury.

A P P E A R A N C E S:

Richard Waring, Esquire
For the Plaintiff

Megan Ehrlich, Esquire
For the Defense

Certified Transcript Provided For: Megan Ehrlich, Esq.

Phyllis Norton, CVR-Master, Nationally Certified Verbatim Court Reporter

636 Long Point Road, Unit G, #74, Mt. Pleasant, South Carolina 29464

PNorton@sccourts.org

I N D E X

PARTIAL TRANSCRIPT - Sentencing Phase -- 03

EXHIBITS - None, Proffered During Partial Transcript

CERTIFICATION OF TRANSCRIPT -- 13

If you need an additional copy of this transcript or a sealed transcript or if opposing counsel requires a copy of the transcript, you should contact the court reporter.

Certification will satisfy Rule 80, Stenographic Report of Transcript as Evidence.

1 (WHEREUPON, partial transcript prepared as follows:)

2 (WHEREUPON, pause for Judge R. Markley Dennis to excuse
3 jury after verdict.)

4 SENTENCING PHASE:

5 THE COURT: Anything further from the State?

6 MR. WARING: Your Honor, if I may briefly.

7 THE COURT: Oh, absolutely. Please take as much
8 time as you need, Mr. Waring. I appreciate it.

9 MR. WARING: Thank you, Your Honor. Just briefly,
10 his record: 2012 possession of marijuana; 2013 receiving
11 stolen goods, armed robbery, petty larceny; 2015
12 possession of a stolen vehicle. He has got a pending
13 strong-armed robbery. And then he got this armed robbery
14 after he was out on bond for that.

15 I have been notified by the jail he was validated as
16 a gang member. And as Your Honor can tell throughout
17 this process he's -- hasn't been the most cooperative
18 defendant.

19 Based on all of the above, Your Honor, prior armed
20 robbery, etc., we are asking for a 25 year ---

21 THE COURT: What happened to his armed robbery?

22 MS. EHRLICH: It was a juvenile charge.

23 THE COURT: Juvenile?

24 MR. WARING: It was juvenile. Yes, Your Honor.

25 THE COURT: Okay.

1 MS. EHRLICH: He got 90 days ---

2 THE COURT: I gotcha. Okay. There it is. Okay.

3 All right. Anything else?

4 MR. WARING: The victim is here. I don't know if
5 she wants to talk or not.

6 (WHEREUPON, Mr. Waring confers with victim.)

7 MR. WARING: She doesn't.

8 THE COURT: I appreciate her being here. One of the
9 things that I just told the jury, and it is something
10 that you learn very quickly at least when you do this
11 job, probably did as a lawyer, but it is more evident
12 because I see things - as I should be, I am not an
13 advocate anymore - murders are horrible but to me armed
14 robbery is more serious than that because you don't know
15 whether you are going to live or die. And those thoughts
16 are just horrific thoughts, and no human being ought to
17 be put through that. So I understand. And I am thankful
18 that you are here.

19 THE VICTIM: Thank you.

20 THE COURT: You bet.

21 Okay. Be happy to hear from you.

22 MS. EHRLICH: Thank you, Your Honor. As far as jail
23 time he has been in since his initial arrest. So I
24 calculated that to be 551 days.

25 THE COURT: Okay.

1 MS. EHRLICH: As you heard throughout the trial he
2 was 17 years old when he was arrested and when this
3 incident would have occurred. I do want to briefly
4 address the record.

5 THE COURT: Certainly.

6 MS. EHRLICH: The State raised that as one of the
7 justifications for the request in sentencing. He did
8 have a juv- -- everything on as far as adjudications was
9 as a juvenile.

10 THE COURT: I understand.

11 MS. EHRLICH: He had a juvenile armed robbery charge
12 when he was only 14 years old, Your Honor. Very, very
13 little consequences in Family Court unfortunately.

14 They have many options. They could have committed
15 him to DJJ. They could have sentenced him to a group
16 home for treatment.

17 Instead, my understanding - and I didn't represent
18 him on that - but I think he only got 90 days. And 90
19 days certainly does not do much as far as teaching
20 somebody about consequences. I think it is unfortunate
21 that that is how things played out.

22 Had I been his juvenile attorney I am sure I would
23 have been thrilled with the 90 days on an armed robbery;
24 but looking in -- at how that could impact somebody
25 moving forward I don't think that that benefited him in

1 any way.

2 He started with barriers in his life when he was
3 only one year old. His father was murdered. So he has
4 grown up without a father. And while he was only one and
5 didn't have to deal with the trauma of going through the
6 loss he certainly had to deal with the trauma of not
7 actually having a father.

8 And his mother Tamika Parker has been here
9 throughout this process and other family members. She is
10 a strong woman. She makes no excuses for her son. But
11 she has spoken to me about the impact not having a father
12 has had on him.

13 THE COURT: Sure.

14 MS. EHRLICH: Clearly he has turned to others --
15 other older male peers in the community who have stepped
16 in and have had probably not the best influence on him.

17 I have had an opportunity to review some of his
18 records. There are some depression issues I think
19 related to home life. And a lot of recognition by those
20 at least in the juvenile process that he lacks coping
21 skills, turns to peers to kind of direct his life moving
22 forward.

23 THE COURT: Absolutely.

24 MS. EHRLICH: Certainly it is not an excuse, but I
25 do think that there has been influence there.

1 I would imagine that the court shares concerns about
2 some of his post-incident behavior. And I do want to
3 address some of those. And while the court may find him
4 to be savvy, I find him to be just so immature and
5 reckless. And ---

6 THE COURT: I think you can be savvy and be immature
7 and reckless. But anyway. I hear you.

8 MS. EHRLICH: He has been such a delight to
9 represent as far as dealing with me and dealing with my
10 co-counsel. And ---

11 THE COURT: That is even more of a concern to me.

12 MS. EHRLICH: Yes, sir. And I ---

13 THE COURT: Because it shows -- he can play the
14 role.

15 MS. EHRLICH: Well, ---

16 THE COURT: When he wants to. See, that is the
17 problem, ---

18 MS. EHRLICH: Yeah, ---

19 THE COURT: --- Ms. Ehrlich. I hear you. And I
20 understand that. And I am delighted he was. But the
21 problem I have with that is it shows there is another
22 side and that he is capable of maintaining that proper
23 decorum when he has to.

24 But when -- but I interrupted you. And forgive me;
25 I am not -- I am not trying to argue with you and not

1 going to.

2 MS. EHRLICH: And when I say delightful in dealing
3 with me I mean not demanding, not coming to court with
4 unrealistic expectations.

5 THE COURT: I understand.

6 MS. EHRLICH: He has been -- he was -- we have been
7 prepared for today. And I don't want the court to think
8 that we weren't prepared for that.

9 And even at his young age I think he saw the writing
10 on the wall as this case was developing, as soon as those
11 calls start coming up and the letters.

12 He has worked with our social worker some while he
13 has been in the jail. And I think that that has been a
14 positive influence on him. And I know Ms. Birt has
15 worked with him not just in the weeks leading up to trial
16 but in the last several months.

17 His family is very supportive. They are too upset
18 to speak out, Your Honor. But ---

19 THE COURT: I appreciate that and understand that.

20 MS. EHRLICH: --- they want you to know that they
21 support him. His mother has been nothing but realistic
22 as far as how the case was looking.

23 And I think in true mother form instead of making
24 excuses for her son is not happy with some of the -- some
25 of the things that came out. But she loves him and

1 supports him.

2 I know that the codefendant received a 16-year
3 sentence suspended on the service of 10. We would
4 obviously ask the court to consider the minimum or
5 something in the range of that and taking into
6 consideration his age and his lack of adult record, Your
7 Honor.

8 THE COURT: Okay. All right. Anything else?

9 Mr. Grant, is there anything you want to share?

10 MR. GRANT: No, sir.

11 THE COURT: Okay. Ask the defendant to please rise,
12 please.

13 (WHEREUPON, defendant complied.)

14 THE COURT: I hear you, Ms. Ehrlich. And no
15 question you all have been prepared. You did -- both you
16 and Ms. Birt did an incredible job in presenting -- in
17 representing your client.

18 There is no question that as I mentioned to you
19 after viewing the videos -- and frankly, I think it may
20 have had some influence on some of the jurors as well.
21 It sure had an influence on me. Because I saw an
22 absolute disregard for anything that resembles law and
23 order.

24 And consistent -- I didn't know a thing in the world
25 about his record until y'all just told me that. But it

1 shows that, yep, that is where he was.

2 And, frankly, my assessment of him is he is a little
3 thug. That is what he is. And he has embarked on being
4 a thug. And when he wrote the letter that is exactly
5 what and the jury found that he did. There is no
6 question about that. But I think that was clearly his
7 letter. And he even said so. You couldn't understand
8 most of it.

9 Do I think he is a waste, no. Do I think he hasn't
10 had -- -- hasn't been -- broken some hearts in his
11 family, I know that is true.

12 I remember -- I wish my mother was here right now.
13 But I can remember some of the things she told me. She
14 said, son, you don't understand and you will never
15 understand because a man can't appreciate a mother's
16 love.

17 And I have been blessed to have three children and
18 six grandchildren. And I understand that clearly. I
19 love them. But my goodness the depth and breadth of a
20 mother's love is unbelievable.

21 And one day I hope this young man will do something
22 to honor that kind of love and what she has done for him
23 and the sacrifices that she has made for him in her life.

24 And because my mother said, son, if you were -- I
25 love you so much if you were to stab me with a knife and

1 when you pulled the knife out and you cut your hand I
2 would worry about how bad you cut your hand.

3 And that is precisely what that mother feels right
4 now. She didn't cause it. He did.

5 I understand the problems that you have talked
6 about, and I am cognizant of those things. I pray as a
7 society we can find something that when we have them in a
8 juvenile setting we can start doing more positive things
9 than just 90 days in jail.

10 I am not finding fault with the system. It is
11 expensive, and we as a society have to be willing to pony
12 up. What it means, it means I don't want to pay anymore
13 taxes than anybody else; but if that is what we want, we
14 have got to pay for it. And I think he is an example of
15 why we should, to be candid with you. I don't fault that
16 at all.

17 But the problem I have with sentencing in this case
18 especially, especially this case, and this is what I have
19 been wrestling with since I watched the video, what are
20 you going to do. I

21 Part of me wants to do what you are asking me to.
22 But there is something else a part of this sentence. And
23 this one, this one, I already see how much is involved in
24 the community, how much is involved in the street.

25 Well, it is time to let the street know what happens

1 when you do these things. And that is precisely -- so
2 this man is an example. And he is going to be.

3 The good thing about it for you is it is only 85
4 percent. You will miss a good proportion of your life,
5 but if you take advantage of some opportunities - and I
6 hope there are more for you while you are incarcerated -
7 you will be 43 when you get out.

8 You asked for 25. That is precisely what I am going
9 to give him. But in order to fulfill the 25 this is what
10 your sentence is: 30 years.

11 And the only difference is -- and I wrestled with it
12 as to whether to give you a consecutive sentence. But I
13 will take into consideration and give you five, and it is
14 concurrent. You get the credit from 551 days.

15 Good luck to you, sir.

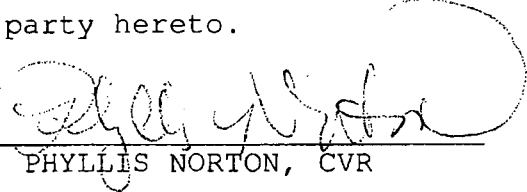
16 (WHEREUPON, the trial concluded.)

(NOTE: Please contact the court reporter for additional copies or certified transcripts.)

CERTIFICATE

I, the undersigned Phyllis Norton, Official Court Reporter for the Ninth Judicial Circuit of the State of South Carolina, do hereby certify that the foregoing is a true, accurate, and partial transcript of record of all proceedings had and evidence introduced in the captioned case, relative to appeal, in the court for South, Carolina, on August 9, 2017.

I do further certify that I am neither of kin, Counsel, nor interest to any party hereto.



PHYLLIS NORTON, CVR

Date: August 22, 2017

Certified Transcript Provided For: Megan Ehrlich, Esq.
Certification Reference #082217

Exhibit E

**OFFICE OF THE SOLICITOR
NINTH JUDICIAL CIRCUIT**

**INDICTMENT/WARRANT STATUS CHANGE FORM
(One Defendant and One Warrant/Indictment per Form)**

Name: Devante Antonio GrantIndictment #: 2015-GS-10-04221Race: BSex: MWarrant Number: 2015A1010201847Year of Birth: 1999Case Number: 0304066**Disposition (Check One)**☐ Dismissed (4A)☒ Nolle Prosequi (4B)***REASON (4A OR 4B):**Weak case since victim was uncooperative. Defendant also was convicted at trial for armed robbery☐ Remanded (7)

Charge: _____

Municipal Court: _____

Magistrate Court: _____

Judge: _____

☐ Failure to Appear (9)

Date Bench Warrant Issued: _____

Trial/Plea Docket Week: _____

PROSECUTOR: Richard Waring

T. Richard Waring, Assistant Solicitor

Date: 8/10/17

CODE: DPPD

CLERK OF COURT'S DATE/TIME STAMP: _____

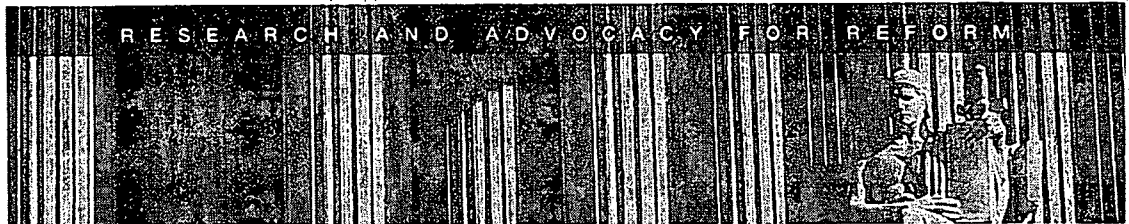
RECEIVED BY: _____

DATE: _____

** Questions regarding the reason for disposition should be directed to the Solicitor's Office.*

Defense Attorney: Megan Ehrlich

Exhibit F



Deterrence in Criminal Justice

Evaluating Certainty vs. Severity of Punishment

Valerie Wright, Ph.D.

November 2010



For further information:

The Sentencing Project
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This report was written by Valerie Wright, Ph.D., Research Analyst at The Sentencing Project.

The Sentencing Project is a national non-profit organization engaged in research and advocacy on criminal justice policy issues.

Over the past several decades state and federal incarceration rates have increased dramatically. As a consequence of more punitive laws and harsher sentencing policies 2.3 million people are incarcerated in the nation's prisons and jails, and the U.S. leads the world in its rate of incarceration.

Sentencing systems and incarceration traditionally have a variety of goals, which include incapacitation, punishment, deterrence and rehabilitation. In recent decades, sentencing policy initiatives have often been enacted with the goal of enhancing the deterrent effect of the criminal justice system. Under the rubric of "getting tough on crime," policies such as mandatory minimums, truth in sentencing, and "three strikes and you're out" have been designed to deter with the threat of imposing substantial terms of imprisonment for felony convictions.

While the criminal justice system as a whole provides some deterrent effect, a key question for policy development regards whether enhanced sanctions or an enhanced possibility of being apprehended provide any additional deterrent benefits. Research to date generally indicates that increases in the *certainty* of punishment, as opposed to the *severity* of punishment, are more likely to produce deterrent benefits. This briefing paper provides an overview of criminological research on these relative impacts as a guide to inform future policy consideration.

CONCEPTUALIZING DETERRENCE

In broad terms punishment may be expected to affect deterrence in one of two ways. First, by increasing the certainty of punishment, potential offenders may be deterred by the risk of apprehension. For example, if there is an increase in the number of state troopers patrolling highways on a holiday weekend, some drivers may reduce their speed in order to avoid receiving a ticket. Second, the severity of punishment may influence behavior if potential offenders weigh the consequences of their actions and conclude that the risks of punishment are too severe. This is part of the logic behind “three strikes,” and “truth in sentencing” policies, to utilize the threat of very severe sentences in order to deter some persons from engaging in criminal behavior.

One problem with deterrence theory is that it assumes that human beings are rational actors who consider the consequences of their behavior before deciding to commit a crime; however, this is often not the case. For example, half of all state prisoners were under the influence of drugs or alcohol at the time of their offense.¹ Therefore, it is unlikely that such persons are deterred by either the certainty or severity of punishment because of their temporarily impaired capacity to consider the pros and cons of their actions.

Another means of understanding why deterrence is more limited than often assumed can be seen by considering the dynamics of the criminal justice system. If there was 100% certainty of being apprehended for committing a crime, few people would do so. But since most crimes, including serious ones, do not result in an arrest and conviction, the overall deterrent effect of the certainty of punishment is substantially reduced. Clearly, enhancing the severity of punishment will have little impact on people who do not believe they will be apprehended for their actions.

¹ Christopher Mumola. “Substance Abuse and Treatment, State and Federal Prisoners, 1997.” Bureau of Justice Statistics Special Report, 1999.

Economists often come to different conclusions than criminologists on the value of harsher sentences in reducing crime. While criminologists tend to regard various legal threats as the result of a complex and unpredictable process, economists approach the issue along the lines of a rational choice perspective that considers the risk and benefits of engaging in crime; sanctions merely represent the expected price of engaging in criminal behavior. In critiquing this perspective, Michael Tonry, a leading scholar on crime and punishment, contends that "Such research is incapable of taking into account whether and to what extent purported policy changes are implemented, whether and to what extent their adoption or implementation is perceived by would-be offenders, and whether and to what extent offenders are susceptible to influence by perceived changes in legal threats. At the very least, macro-level research on deterrent effects should test the null hypothesis of no effect rather than the price theory assumption that offenders' behavior will change in response to changes in legal threats."²

Another problem in assessing deterrence is that in order for sanctions to deter, potential offenders must be aware of sanction risks and consequences before they commit an offense. In this regard, research illustrates that the general public tends to underestimate the severity of sanctions generally imposed.^{3,4} This is not surprising given that members of the public are often unaware of the specifics of sentencing policies. Potential offenders are also unlikely to be aware of modifications to sentencing policies, thus diminishing any deterrent effect. The absence of such data on awareness of punishment risks makes it difficult to draw conclusions regarding the deterrent effects of sanction levels and prospects. Below we explore these outcomes in greater detail.

² Michael Tonry, "Learning from the Limitations of Deterrence Research" in *Crime and Justice: A Review of Research* edited by Michael Tonry. The University of Chicago Press, 2008.

³ Kirk R. Williams, Jack P. Gibbs, and Maynard L. Erickson, "Public Knowledge of Statutory Penalties: The Extent and Basis of Accurate Perception," *Pacific Sociological Review*, 23(1), 1980.

⁴ Andrew von Hirsch, Anthony Bottoms, Elizabeth Burney, and P-O. Wikstrom, "Criminal Deterrence and Sentence Severity: An Analysis of Recent Research," Oxford: Hart Publishing, 1999.

CERTAINTY VS. SEVERITY OF PUNISHMENT

Criminological research over several decades and in various nations generally concludes that enhancing the certainty of punishment produces a stronger deterrent effect than increasing the severity of punishment. Key findings in this regard include the following:

- The Institute of Criminology at Cambridge University was commissioned by the British Home Office to conduct a review of research on major studies of deterrence. Their 1999 report concluded that "...the studies reviewed do not provide a basis for inferring that increasing the severity of sentences generally is capable of enhancing deterrent effects."⁵ In addition, in reviewing macro-level studies that examine offense rates of a specific population, the researchers found that an increased likelihood (certainty) of apprehension and punishment was associated with declining crime rates.⁶
- Daniel Nagin and Greg Pogarsky, leading scholars on deterrence, conclude that "punishment certainty is far more consistently found to deter crime than punishment severity, and the extra-legal consequences of crime seem at least as great a deterrent as the legal consequences."⁷

Similar findings are observed in micro-level studies on deterrence that assess the likelihood of individuals engaging in crime. People who perceive that sanctions are more certain tend to be less likely to engage in criminal activity. Scenario-based research using self-reports that examine the effect of certainty of punishment on individual behavior has shown that as the perceptions of the risk of arrest for petty

⁵ Ibid.

⁶ Ibid.

⁷ Daniel Nagin and Greg Pogarsky. "Integrating Celerity, Impulsivity, and Extralegal Sanction Threats into a Model of General Deterrence: Theory and Evidence," *Criminology*, 39(4), 2001.

theft, drunk driving, and tax evasion increases, individuals report they would be less likely to offend.

Researchers have also compared the relative importance of both certainty and severity as dimensions of punishment. In a 2001 study published in the journal *Criminology*, researchers utilized a sample of college students to assess the likelihood of drinking and driving. The authors found that the certainty of punishment was a more robust predictor of deterrence than severity. Increasing the probability of apprehension by 10% was predicted to reduce the likelihood of drunk driving by 3.5%, while the effect of severity eroded when the effects of certainty and severity were combined.⁸

In another study, researchers compared crime and punishment trends in the U.S., England, and Sweden, and failed to find an effect for severity.⁹ The statistical associations were weak and even when there was a negative relationship between severity of punishment and crime rates, the findings were not strong enough to achieve statistical significance. This finding is noteworthy because it reflected varying degrees of punitiveness in the sentencing policies of the three nations.

While most studies suggest that certainty of punishment is related to reductions in crime rates, some researchers speculate that increasing the likelihood of arrest and/or incarceration for both serious and minor offenses could cause sanctions, particularly imprisonment, to be viewed as less stigmatizing.¹⁰ Nagin also emphasizes that sanctions have the potential to erode the deterrent effects of a policy because as he states, “[f]or an event to be stigmatizing it must be relatively uncommon.”¹¹

⁸ Ibid.

⁹ David Farrington, Paul Langan, Per-Olof H. Wikstrom. “Changes in Crime and Punishment in America, England and Sweden between the 1980s and the 1990s,” *Studies in Crime Prevention*, 3:104-131, 1994.

¹⁰ Paul J. Hirschfield, “The Declining Significance of Delinquent Labels in Disadvantaged Urban Communities,” *Sociological Forum*, 23(3), 2008.

¹¹ Daniel S. Nagin, “Criminal Deterrence Research at the Outset of the Twenty-First Century,” In *Crime and Justice: A Review of Research*, edited by Michael Tonry. Chicago: University of Chicago Press, 1998.

MORE SEVERE SENTENCES FAIL TO ENHANCE PUBLIC SAFETY

The logic behind supporting harsher sentences is simple: locking up people for longer periods of time should enhance public safety. From this view, putting people in prison for years or even decades should prevent offenders from re-offending by incapacitating them and/or deterring would-be-offenders from committing crimes. However, contrary to deterrence ideology and “get tough” rhetoric, the bulk of research on the deterrent effects of harsher sentences fails to support these assertions.¹²

A series of studies have examined the public safety effects of imposing longer periods of imprisonment.^{13, 14, 15} Ideally, from a deterrence perspective, the more severe the imposed sentence, the less likely offenders should be to re-offend. A 1999 study tested this assumption in a meta-analysis reviewing 50 studies dating back to 1958 involving a total of 336,052 offenders with various offenses and criminal histories. Controlling for risk factors such as criminal history and substance abuse, the authors assessed the relationship between length of time in prison and recidivism, and found that longer prison sentences were associated with a three percent increase in recidivism. Offenders who spent an average of 30 months in prison had a recidivism rate of 29%, compared to a 26% rate among prisoners serving an average sentence of 12.9 months. The authors also assessed the impact of serving a prison sentence versus receiving a community-based sanction. Similarly, being incarcerated versus

¹² Anthony Doob and Cheryl Webster, “Sentence Severity and Crime: Accepting the Null Hypotheses,” *Crime and Justice*, 30:143-195, 2003.

¹³ Paul Gendreau, T. Little, and Claire Goggin, “A Meta-Analysis of Adult Offender Recidivism: What Works?” *Criminology*, 34(3):575-607, 1996.

¹⁴ Martin A. Levin, “Policy Evaluation and Recidivism,” *Law and Society Review*, 6(1):17-46, 1971.

¹⁵ Lin Song and Roxanne Lieb, “Recidivism: The Effect of Incarceration and Length of Time Served,” Olympia, WA: Washington State Institute of Public Policy, 1993

remaining in the community was associated with a seven percent increase in recidivism.¹⁶

Researchers also find an increased likelihood that lower-risk offenders will be more negatively affected by incarceration.¹⁷ Among low-risk offenders, those who spent less time in prison were 4% less likely to recidivate than low-risk offenders who served longer sentences.¹⁸ Thus, when prison sentences are relatively short, offenders are more likely to maintain their ties to family, employers, and their community, all of which promote successful reentry into society. Conversely, when prisoners serve longer sentences they are more likely to become institutionalized, lose pro-social contacts in the community, and become removed from legitimate opportunities, all of which promote recidivism.¹⁹

The Bureau of Justice Statistics has reported on a nationally representative sample of prisoners assessing the impact of time served in prison on recidivism rates.

Researchers found that recidivism rates did not vary substantially whether prisoners were released anywhere in the range of six months to five years. While recidivism rates were high in general, they fluctuated in the range of 62-68%, and did not decline significantly for those spending more time in prison.²⁰ Furthermore, findings from a natural experiment investigating how prisoners respond to the manipulation of prison sentences show that reduced sentences may reduce recidivism rates. The Collective Clemency Bill passed by the Italian Parliament in July 2006 allowed for a three-year sentence reduction for persons who committed their offense prior to May

¹⁶ Paul Gendreau, Claire Goggin, and Francis T. Cullen, "The Effects of Prison Sentences on Recidivism," Ottawa, Ontario, Canada: Public Works and Government Services Canada, 1999.

¹⁷ Ibid.

¹⁸ *Supra*, note 15.

¹⁹ Thomas Orsagh and Jong-Rong Chen, "The Effect of Time Served on Recidivism: An Interdisciplinary Theory," *Journal of Quantitative Criminology*, 4(2):155-171, 1988.

²⁰ Patrick Langan and David Levin, "Recidivism of Prisoners Released in 1994," U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, 2002.

2, 2006.²¹ The authors of the study concluded that the sentence commutations significantly reduced the likelihood of recidivating.²²

ECONOMIC COSTS OF MORE SEVERE SENTENCES

Fiscal crises and a growing emphasis on using evidence-based practices has caused many policymakers to call into question the practicality of current sentencing policies and the overreliance on incarceration. Incarceration is an expensive sanction and sentencing people to longer prison terms has resulted in valuable resources being devoured. It is estimated that federal, state, and local governments are spending \$68 billion annually.²³ A recent economic analysis estimates that reducing the number of incarcerated non-violent offenders by half could save taxpayers \$16.9 billion annually without putting public safety at risk.²⁴

Non-violent drug offenders comprise a substantial percentage of the prison population and many studies have suggested that this number could be reduced if more treatment alternatives were available. While there are costs associated with treatment, research indicates that they tend to be far lower than the costs associated with lengthy terms of incarceration that show little evidence of deterring future offenses. For example, a recent study showed that spending on drug treatment in community-based programs versus incarceration yields a higher return on the investment while at the same time improving the life outcomes of drug users. The study concluded that a dollar spent on treatment in prison yields about six dollars of

²¹ The Collective Clemency Bill (2006) states that if a former inmate commits a crime within five years following his release from prison, he or she will be required to serve the remaining sentence suspended by the pardon in addition to the sentence given for the new crime.

²² Francesco Drago, Roberto Galbiati, and Pietro Verrova, "The Deterrent Effects of Prison: Evidence from a Natural Experiment," *Journal of Political Economy*, 117(2):257-280 2009.

²³ John Schmitt, Kris Warner, and Sarika Gupta. "The High Budgetary Cost of Incarceration," Center for Economic and Policy Research, 2010.

²⁴ Ibid.

savings, but a dollar investment in community-based treatment yields nearly \$20 in costs savings.²⁵

CONCLUSION

Existing evidence does not support any significant public safety benefit of the practice of increasing the severity of sentences by imposing longer prison terms. In fact, research findings imply that increasingly lengthy prison terms are counterproductive. Overall, the evidence indicates that the deterrent effect of lengthy prison sentences would not be substantially diminished if punishments were reduced from their current levels. Thus, policies such as California's Three Strikes law or mandatory minimums that increase imprisonment not only burden state budgets, but also fail to enhance public safety. As a result, such policies are not justifiable based on their ability to deter.

Based upon the existing evidence, both crime and imprisonment can be simultaneously reduced if policy-makers reconsider their overreliance on severity-based policies such as long prison sentences. Instead, an evidence-based approach would entail increasing the certainty of punishment by improving the likelihood that criminal behavior would be detected. Such an approach would also free up resources devoted to incarceration and allow for increased initiatives of prevention and treatment.

²⁵ Steve Aos, Marna Miller, and Elizabeth Drake, "Evidence-Based Public Policy Options to Reduce Future Prison Construction, Criminal Justice Costs, and Crime Rates," Olympia: Washington State Institute for Public Policy, 2006.

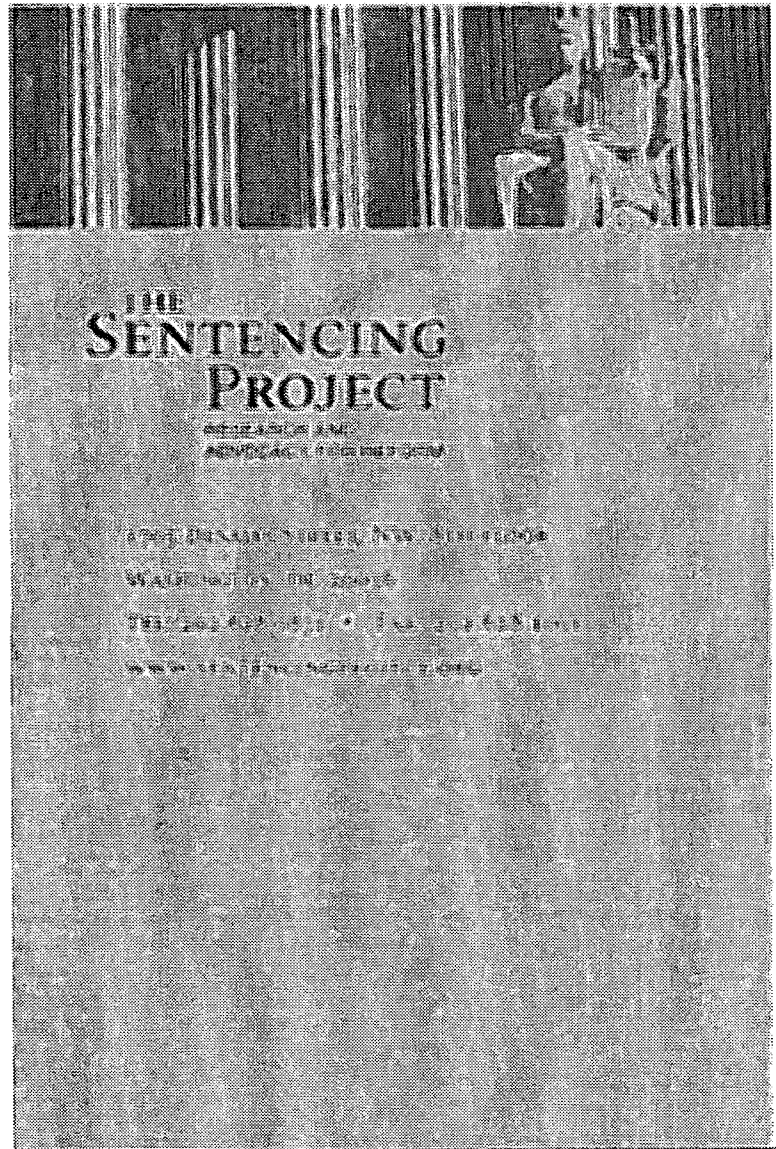


Exhibit G

ARTICLE: Sentence Severity and Crime: Accepting the Null Hypothesis

2003

Reporter

30 Crime & Just. 143 *

Length: 22727 words

Author: Anthony N. Doob and Cheryl Marie Webster

Anthony N. Doob is a professor and Cheryl Marie Webster is a doctoral candidate at the Centre of Criminology, University of Toronto. The impetus for this essay originated with a request from defense counsel Sal Caramanna for a review of the deterrence literature for a case involving a woman found guilty of importing prohibited drugs. We thank him for his suggestion to challenge the sentence severity-crime nexus. We also thank Assistant Crown Attorney John North for helping us sharpen our arguments and encouraging us to consider research that otherwise might have gone uncriticized. Development of the paper was supported by Legal Aid Ontario, a Social Science and Humanities Research Council Grant to Anthony N. Doob, and a graduate fellowship to Cheryl Marie Webster from the Fundacao para a Ciencia e a Tecnologia. Finally, we thank Andrea Shier and Carla Cesaroni for bibliographic assistance.

Highlight

To every thing there is a season, a time to every purpose. (Ecclesiastes 3:1)

ABSTRACT

The literature on the effects of sentence severity on crime levels has been reviewed numerous times in the past twenty-five years. Most reviews conclude that there is little or no consistent evidence that harsher sanctions reduce crime rates in Western populations. Nevertheless, most reviewers have been reluctant to conclude that variation in the severity of sentence does not have differential deterrent impacts. A reasonable assessment of the research to date—with a particular focus on studies conducted in the past decade—is that sentence severity has no effect on the level of crime in society. It is time to accept the null hypothesis.

Text

[*143] This essay examines one aspect of general deterrence—the effects of sentence severity on crime. In addressing this issue—and concluding that variation in the severity of sanctions is unrelated to levels of crime—we do not suggest that the justice system as a whole has no [*144] deterrent effect. On the contrary, we agree with Nagin (1998), who concludes that substantial evidence exists that the overall system deters crime. This conclusion is similar to that drawn by others with respect to specific offenses. For instance, Cavanagh (1993) affirms that the criminal justice system adds "cost" to those involved in the drug trade and consequently affects the size of that industry. Therefore, while Cavanagh is not optimistic about the effects of harsher sentences on drug offending rates, he still argues that any system that criminalizes drugs can be expected to affect the quantity of illegal substances used. We expect that the same could be said for any crime.

Further, this essay does not focus directly on issues surrounding the certainty—or the perception of certainty—of apprehension. However, this is not to suggest that certainty of apprehension is unrelated to the effects of the severity of punishment. There are clearly some circumstances in which these issues may become intertwined. For example, a change in punishment severity can increase or decrease police activity and consequently alter the actual likelihood of apprehension. Conversely, a modification in penalty—or simply a great deal of public discussion about it—may alter the perceived likelihood of apprehension (for at least a short period). Indeed, it is important to

Megan Ehrlich

recognize that it is not the actual probability of apprehension or the actual penalty that would be likely to affect a potential offender's behavior. Rather, it is the perceived likelihood of apprehension and the expected penalty. This distinction is crucial.

Notwithstanding these intersections between certainty and severity of punishment, these issues constitute conceptually distinct phenomena with their own distinct literatures. A similar argument may be made for distinctions between specific and general deterrence. While analogous entwinements may be found between these two issues, the (theoretical and practical) differences between them demand separate analyses. In this light, this essay addresses only the question of whether there is a reasonable likelihood that variation in the severity of a sentence--or of sentences being handed down for an identifiable "class" of offenses--will have differential impacts on the likelihood that other people will commit that type of offense. More simply, this essay examines the existence of an association between sentencing severity and levels of crime.

As any research-methods textbook in social science will suggest, a useful way of testing a particular supposition is by distinguishing between the "research hypothesis"--usually that a relationship between [*145] two variables exists--and the "null hypothesis"--that there is no association between these same factors. However, the problem with this approach is that one cannot logically prove the absence of a phenomenon. Indeed, a relationship may not be found for an infinite number of reasons (e.g., the effect is obscured by some other factor, one has been searching in the wrong place, measures are not sufficiently sensitive). In more mundane terms, that one cannot find something (i.e., a deterrent effect, or a missing sock) does not mean that it does not exist. It may or may not exist. In a technical sense, all that can be demonstrated is that the effect was not to be found with the methods that were employed at the particular time and space in which one looked.

It is perfectly reasonable--from a scientific perspective--to be cautious in drawing conclusions. This is especially so when one is considering the acceptance of the null hypothesis. Indeed, it was only after several decades of research producing consistent results in different periods and places and using multiple measures and methods that most social scientists abandoned the notion that capital punishment deters. This widespread acceptance of the null hypothesis is clearly suggested by a recent survey conducted by Radelet and Akers (1996). Groups that would be expected to differ (i.e., police chiefs and past/present presidents of U.S. criminology organizations) were generally in agreement that the death penalty does not significantly reduce the number of homicides. Further, a recent review of the literature by Bailey and Peterson (1999) corroborated this conclusion. Even when examining specific types of homicides (e.g., killings of police, first degree murder, felony murder) and using multiple sources of data, these reviewers found no consistent evidence that capital punishment "works."

In curious contrast, social scientists have been remarkably more cautious in accepting the null hypothesis that sentence severity, in general, does not reduce levels of crime. Despite similar circumstances (i.e., consistently negative findings over space and time), scholars continue to resist more definitive conclusions. Symptomatically, the 1999 review of the deterrence literature by von Hirsch, Bottoms, Burney, and Wikstrom quotes Sutherland and Cressey's 1960 edition of *Principles of Criminology* which suggested that the deterrent impact of penalty size had been "seriously challenged" (von Hirsch et al. 1999, p. 11) by modern criminology. Although these scholars do not present any strong evidence disputing this affirmation, their own conclusion--arrived at almost forty years later--is not much more definitive in nature. [*146] Rather, it simply states that the effect of sentence severity is "less impressive" than that of certainty (1999, p. 47). While noting that certain types of research "fail" to demonstrate an effect on crime of harsh sentences (1999, p. 47), these scholars continue to call for additional evidence before reaching more definite conclusions.

This assessment is similar to that reached by Daniel Nagin in his 1998 *Crime and Justice* review of the research on deterrence. Despite being confident "in asserting that our legal enforcement apparatus exerts a substantial deterrent effect" (1998, p. 36), Nagin was less certain about "what works in specific circumstances" (1998, p. 36). As a result, he preferred to identify areas in which research would help fill gaps in knowledge. Said differently, although Nagin did not appear to believe that specific criminal justice policies should be based on deterrence, he was not (yet) willing to throw in the towel and accept that variation in sentence severity does not affect crime levels. Once again, the quest for the missing sock continued.

While not disagreeing with these assessments, we believe that research produced in the past several years--some of which appeared after the Nagin (1998) essay and the von Hirsch et al. (1999) report were completed--warrants a stronger conclusion. Although it is tempting to extend the search for consistent relationships between sentence severity and crime rates "just one last time" in the belief that general deterrent effects may still be lurking at the end of the next regression equation, one must recognize that sentencing policies currently in place in many jurisdictions are still based on the assumption that harsh sentences deter. There is no plausible body of evidence that supports policies based on this premise. On the contrary, standard social scientific norms governing the acceptance of the null hypothesis justify the present (always rebuttable) conclusion that sentence severity does not affect levels of crime.¹

This essay reviews the evidence that supports the conclusion that harsher sentences do not deter. We begin with a discussion of some of the more recent reviews of the deterrence literature, comparing and contrasting them with earlier summaries conducted on the topic (Sec. [147] I). We subsequently examine some of the studies that have been cited as evidence for a deterrent impact of sentence severity, demonstrating why we consider their findings generally to be unreliable (Sec. II). Section III assesses the research that--we believe--justifies the conclusion that more severe sentences are no more effective in reducing crime than less severe sentences. Our primary but not exclusive focus is on studies conducted over the last decade, with special consideration to those that examine the dramatic changes in sentencing policy that occurred during the 1990s. In conclusion, we suggest that the continued belief of many people in the deterrent effect of harsh sanctions may be rooted in an imperfect or simplistic form of reasoning about deterrence. This position is contrasted with emerging trends in several countries toward the rejection of policies based on the notion that variation in sentencing severity has differential deterrent impacts (Sec. IV).

I. An Overview of Summaries of the Deterrence Literature

With a body of literature that extends over at least thirty years, it is not surprising that numerous reviews have been conducted on deterrence. The virtues of examining these summaries are twofold. They amass a large number of studies, permitting us to draw general conclusions about the deterrent effects of variations in sentence severity. We are also able to discern trends over time, providing insights into the stability of results. As we demonstrate in this section of the essay, the majority of the reviews examined do not support the claim that harsher sanctions deter. Further, there is a general consistency of this conclusion over time--if not, in fact, a trend toward increased skepticism.

The first era of deterrence summaries could easily be denoted as one of agnosticism. Largely associated with the review conducted for the U.S. Department of Justice by the National Academy of Sciences (Blumstein, Cohen, and Nagin 1978) and--albeit to a much lesser extent--the 1980 summary of deterrence by Cook, this initial period is characterized by an unwillingness to conclude that crime is reduced by harsh sentences. However, the reviewers were equally reluctant to draw the conclusion that sentence severity was not causally linked to levels of crime. Interestingly, Cook was not only more definite in his assessment of the overall impact of the criminal justice system on crime rates than was the National Academy of Science, but was also critical of the research that had been cited as evidence of the marginal deterrent [148] impact of sentence severity. He suggested that studies of policy experiments--dramatic changes in law and practice--would be most useful in informing us about the deterrent process. This insight foreshadowed the pivotal role played by such sentencing experiments as the three-strikes legislation enacted during the 1990s that permits us to draw firmer conclusions about the differential deterrent effects of variation in sentence severity.

However, in terms of immediate effects, the uncertain conclusions of these initial reviews provided little direction for policy decisions. The Canadian and U.S. sentencing commissions adopted substantially different approaches to the issue of general deterrence. The U.S. commission decided that it was too difficult to choose between a

¹ When we are discussing variation in sentence severity, we are clearly considering only those sanctions that fall within the range that is plausible in our present society. Said differently, we are not negating the possibility that the severity of punishments may, in fact, affect levels of crime if taken to the extreme (e.g., a one-dollar fine for murder or capital punishment for stealing a sock). We are simply restricting our analysis to the range of sentences that is currently acceptable in Western countries.

"proportionality" model and a "crime control" model (deterrence or incapacitation) and concluded, in any case, that the results would be the same (see Doob [1995] for a discussion of this issue). By extension, this panel was willing to incorporate deterrence-type thinking in the determination of sentence severity within its guidelines, considering it unnecessary to examine the literature.

In sharp contrast, the Canadian Sentencing Commission concluded that "it can be questioned whether legal sanctions can be used beyond their overall effect to achieve particular results (e.g., deterring a particular category of offenders, such as impaired drivers)" (Canadian Sentencing Commission 1987, p. 138). Its assessment that the evidence did not support the deterrent impact of harsher sentences was one of the justifications for its proposal that sentences be proportionate to the harm done rather than based on deterrence. More specifically, this commission proposed that the "paramount principle" be that the sentence be proportionate to the gravity of the offense and the degree of responsibility of the offender for the offense. However, the court would still be permitted to give consideration to the issue of deterrence when applying this principle. In this way, deterrence could continue to be relevant in sentencing, but only within the range set by the proportionality principle. One interpretation of this proposal is that deterrence could determine the sanction but not the severity of the sentence.

At the same time as these commissions were considering how to address the issue of deterrence, Donald Lewis, an economist, published an unusual review of the research on deterrence in 1986. The selection of papers reviewed is interesting because it is limited to those studies in which the magnitude of the apparent deterrent effect is quantified. [*149] Not surprisingly, the result of this approach is that his summary almost exclusively contains papers that were published in economics journals. This review of the deterrence literature could easily be characterized as "Ehrlich paradigm" research (including some papers by Ehrlich himself)—an expression employed by Cook to describe what he considered to be the "major false start" (1980, p. 269) of deterrence studies in the 1970s. Predictably, Cook (1980) is not referenced in Lewis's (1986) article.

Lewis's conclusion that there is a "substantial body of evidence which is largely consistent with the existence of a deterrent effect from longer sentences" (1986, p. 60) does not appear to have been taken seriously by many commentators on deterrence (see, e.g., von Hirsch et al. 1999). We suggest three possible explanations for this lack of attention. First, the review is based on a small and selective set of data, using largely, if not exclusively, one methodology. Second, Lewis's suggestion that harsher sentences for murder will deter is not consistent with the bulk of the evidence on that specific topic. Third, the manner in which some of the evidence is presented is not entirely consistent with the conclusions drawn by the original authors. For instance, one Canadian paper (Avio and Clark 1978) is summarized by Lewis (1986, p. 49, table 1) as showing "mixed (weak support [for robbery, burglary, and larceny], none for fraud)" in a column headed "evidence generally consistent with deterrent effect of longer sentences." However, Avio and Clark (1978) are considerably more cautious in their conclusions. More specifically, they point out that "the expected sentence length variable is insignificant for all crimes and has the wrong sign in the fraud equations" (1978, p. 13). Said differently, "A statistically significant inverse relationship between incarceration prospects and crime rates is not found for any of the variables examined" (1978, p. 14). Similar skepticism is raised by another study cited by Lewis (1986) which examined the impact of the sentence given to hijackers during the period 1961-76 on their offending rates (Landes 1978). It is hard to know what to make of this study given that two seemingly fundamental factors were not taken into account. More specifically, Landes (1978) did not control for the effects of either the security measures that were implemented during the study period or the agreement between the United States and Cuba to extradite or punish hijackers.

The second era of deterrence summaries could be designated as one of increasing skepticism. Characterized primarily by the reviews carried [*150] out by Nagin (1998) and von Hirsch et al. (1999), this period reflects, to a large extent, the sheer accumulation of studies over the past two to three decades that have not supported the notion that variation in sentence severity affects crime rates. However, given the unwillingness of the reviewers of this era to (conditionally) accept the null hypothesis that harsher sanctions do not deter, their summaries tend to be as much a discussion of other potential avenues of study (the proverbial "further research is needed") as a rehashing of the increasingly consistent body of literature that is generally unsupportive of a deterrent effect.

The principal conclusions of Daniel Nagin's 1998 summary of the deterrence research were not substantively different from those drawn in his review of the same issue two decades earlier (Nagin 1978). Rather, he continued

to be unable to find plausible support for the idea that increased penalties would have a reliable impact on crime levels. For instance, Nagin noted that although traditional utility-theory approaches to deterrence state that increased sanctions would lead to increased deterrent effects, some of the research that examined what individuals actually do suggests that "people do not perceive that costs are proportional to potential punishment. Instead, it seems that they perceive that there is a fixed cost associated with merely being convicted or even apprehended if it is public record" (1998, p. 21). The reason for this phenomenon—in the situation that he describes (tax evasion)—is simple: the criminal justice costs may not be as important as the costs of criminal stigmatization. As Nagin points out, this interpretation is consistent with findings related to the "costs" of criminal conviction (e.g., social and economic costs). He further suggests that if a criminal justice policy "increases the proportion [of a population] that is stigmatized, the deterrent effect [of that stigmatization process] is less likely to be sustainable" (1998, p. 23).

Moreover, Nagin concludes—similar to his findings twenty years earlier—that there is substantial evidence of the deterrent impact of the justice system as a whole, and that evidence exists that the probability of being punished and crime rates are related in a direction consistent with deterrence theory. However, he also states that "this conclusion is of limited value in formulating policy" (including, one might add, sentencing policy) because for policy makers (including judges in interpreting sentencing policy) "the issue is not whether the criminal justice system in its totality prevents crime but whether a specific policy, [*151] grafted onto the existing structure, will materially add to the preventive effect" (1998, p. 3). As an expert in deterrence, he was not optimistic about any generalizations concerning the impact of specific policies—even those in which one might reasonably expect to see an effect (i.e., the increased likelihood of criminal justice sanctions). It is worth noting that when addressing a specific offense—drugs—Nagin argues, "It is not likely that [the] drastic increases in penalties [during the latter part of the twentieth century] for drug dealing have had any material effect on the drug trade. . . . Indeed they may have actually increased the rate of other income-generating crime such as robbery, burglary, and larceny by making them comparatively more attractive than dealing" (1998, pp. 28-29).

Shortly after Nagin's review appeared, von Hirsch et al. (1999) published what is probably the most extensive recent report on the deterrent impact of variation in the harshness of sentences. Similar to Nagin (1998), von Hirsch et al. (1999) are not optimistic about the ability of increased sentences to deter crime. In fact, they note that "present association research, mirroring earlier studies fails . . . to disclose significant and consistent negative associations between severity levels (such as the likelihood or duration of imprisonment) and crime rates" (1999, p. 47). Further, they conclude their review by stating, "there is as yet no firm evidence regarding the extent to which raising severities of punishment would enhance deterrence of crime" (1999, p. 52). However, like Nagin (1998), they do not explicitly accept the null hypothesis that an increase in the size of criminal justice penalties would not reduce crime generally or any specific type of offense. Rather, they prefer to identify gaps in our knowledge of deterrence and speculate on the reasons for a lack of a "severity" effect on crime.

Von Hirsch et al. cite Nagin (1998) when noting that "the most serious deficiency of current deterrence research . . . is the absence of systematic inquiry into how much people know about changes in the . . . severity of punishment" (von Hirsch et al. 1999, p. 46). The studies they located did not address "the link between changes in . . . severity of punishment and potential offenders' awareness of the existence or extent of such changes" (1999, p. 46). Similarly, the research on offender decision making and its amenability to deterrence does not consider severity effects. Finally, there was a clear lack of knowledge surrounding the critical question of "the extent to which penalties would need to be increased in order to achieve a substantial reduction in [*152] crime rates" (1999, p. 47). Arguably, we may simply have not (yet) reached the threshold above (or under) which variation in sentence severity affects the crime rate.

Like the first era of deterrence reviews, this second period also includes a notable exception to the majority of the reviews of the deterrence literature that have failed to find evidence supporting the hypothesis that variation in sentence severity affects levels of crime. More specifically, Levitt (2002)—in a book entitled *Crime: Public Policies for Crime Control* and edited by James Q. Wilson and Joan Petersilia—concludes that harsh sentences do, in fact, deter. In a chapter that purports to focus on "assessing the existing empirical evidence on deterrence" (2002, p. 436), Levitt (an economist) has a relatively short (3.5-page) section on "expected punishment and crime rates." His conclusion that longer sentences have a deterrent effect is interesting, particularly in light of his selective

assessment of the available evidence. Specifically, Levitt ignores the large bulk of literature--and the extensive review by von Hirsch et al. (1999)--which comes to a different conclusion. In addition, although this section is quite short, he cites certain research studies that he, himself, suggests can be explained more readily in terms of incapacitation. Indeed, he describes these studies in the end as "extremely weak tests of deterrence because of the potential incapacitation effects of prisons" (2002, p. 444).

Further, the evidence that Levitt cites on the impact of the three-strikes legislation in various states is selective (i.e., other contrary papers are not referred to) and peculiar. For example, he suggests--in support of the conclusion that harsh punishment deters--that the effect of three-strikes legislation in California "appears to be more consistent with the predictions of deterrence" than with incapacitation (2002, pp. 444-45). To support this affirmation, Levitt states that "between 1994 and 1998, California's prison population grew at a rate only slightly above the national average (29 percent vs. 23 percent) and California's violent crime rate per capita fell 30 percent, compared to 20 percent for the rest of the nation" (2002, p. 445). As far as we could deduce, he seems to be suggesting that these two sets of percentages would have to be equivalent in order to conclude that the three-strikes legislation had no impact on levels of crime. This implication is, of course, unusual for two reasons. First, it assumes that percent reductions in crime should be equivalent no matter what the "starting point" (e.g., that very low crime rates should decrease at the same "rate" as very high crime rates). Second, it implicitly supposes that [*153] there are no other influences on crime. Neither of these is a safe assumption, except perhaps to an economist.

Levitt's review focuses largely on only two studies--both his own (Kessler and Levitt 1999 and Levitt 1998)--as evidence "for a deterrent effect of increases in expected punishment" (2002, p. 445).² In addition, two other studies are cited in which offenders were interviewed. However, this latter research relates more to individual deterrence than to general deterrence. The fact that imprisoned offenders tell interviewers that being sent to prison has taught them a lesson and that they have given up criminal activity forever should not impress anyone (2002, p. 446). Another two-page section on capital punishment is equally void of data that conflict with the perspective that harsh sentences deter. In other words, as with other parts of this assessment of "existing empirical evidence on deterrence," Levitt is remarkably selective in the literature that he cites. This review is notable largely because it is so different--in the detail of its analysis, its selection of materials, and its conclusions--from other published reviews.

For the sake of completeness, it is worth noting that the focus of the reviews that we have addressed has been on crime generally rather than on specific offenses. However, other summaries of the deterrence literature have been produced that examine specific offenses (or offense groups) as well as particular legislation. Interestingly, these reviews not only continue to find little or no support for the notion that harsher sanctions reduce levels of crime, but--in many cases--are bolder in their conclusions than the more general summaries and, by extension, more closely approach our position of (conditional) acceptance of the null hypothesis.

More specifically, Cavanagh's (1993) review on deterrence and drug crimes for the U.S. Office of National Drug Control Policy is pessimistic about the usefulness of deterrence as an approach to reducing drug crimes. However, like much of the more general literature, it is, [*154] in the end, agnostic in its conclusion: "Research on the effects of increased certainty, severity, and/or celerity of punishment upon levels of crime is inconclusive. . . . In short, current research provides little guidance for policy makers in this area" (1993, p. 46). In contrast, MacCoun and Reuter--in a chapter focusing on "drug control" in *The Handbook of Crime and Punishment*--concluded that "severity of sanctioning has little or no influence on offending" (1998, p. 213). Mauer and Young (1996) came to the same conclusion about deterrent sentencing more generally.

² Within the context of this essay, we discuss only the first of these studies in any detail. The latter research (Levitt 1998), which examines the drop in offending as youths shift from the juvenile justice system to the adult system, is a complex paper that appears to us to have little relevance for the question at issue. The main focus--for deterrence purposes--is on the ratio of two quotients: (a) adult prisoners divided by adult violent crime, and (b) juvenile delinquents/juvenile violent crime. The ratio of a/b is said to be the "relative punitiveness" of the two systems (Levitt 1998, p. 1173). This ratio is subsequently said to relate to the crime rate of those over the age of majority. Aside from whether this ratio has anything to do with the relative severity of sentences, we do not appear to have independent measures of "crime" that are not, themselves, related to the relative punitiveness of the system.

On occasion, one gets glimpses of the extent to which the notion that differential sentencing severity does not affect crime is widely accepted among criminologists. Greenwood et al. (1996) estimated the impact of California's three-strikes legislation. They noted in their analysis that "we assume no deterrent effect. That is, we assume that the various alternatives [provided for in the new sentencing legislation] reduce crime by removing criminals from the streets, not by deterring criminals on the street from committing further crimes. This assumption is consistent with recent research" (1996, p. 68). In a similar statement, Tonry notes that "the clear weight of the evidence on the deterrent effects of marginal manipulation of penalties demonstrates few or no effects" (1996, p. 137). Even James Q. Wilson—a man often identified with conservative views of crime—is not confident that harsher penalties will deter crime, or at least drug crimes. In the concluding chapter of a *Crime and Justice* volume on *Drugs and Crime*, Wilson notes that "every contributor to [the] volume agrees that significant reductions in drug abuse will come only from reducing the demand for those drugs" (1990, p. 534), and that he knows of "no serious law-enforcement executive who disagrees with this conclusion" (p. 534). Indeed, though noting that—in his view—supply reduction efforts must continue, Wilson states that the "marginal product of further investments in supply reduction is likely to be small, especially at the international level" (1990, p. 534). Further, he points out—albeit with neither enthusiasm nor endorsement—that "many (probably most) criminologists think we use prison too much and at too great a cost and that this excessive use has had little beneficial effect on the crime rate" (Wilson 1995, p. 499).

As is typically the case with social science, it is not surprising that the reviews of the research literature on deterrence are not entirely consistent. However, with the exception of the selective reviews by [*155] Lewis (1986) and Levitt (2002), most summaries on the deterrence literature have not been optimistic about the ability of variations in the severity of sentences to affect levels of crime in the community. Indeed, the body of literature that does not support the research hypothesis that harsher sanctions deter continues to grow in size and consistency. Nonetheless, many would still like to see further research done before they are willing to throw in the towel—or throw out the sock—on deterrence. Said differently, while a great deal of effort has been spent looking for the missing sock whose whereabouts continues to elude us, reviewers continue to be reluctant in concluding that it does not exist in this particular place and time.

II. Evidence Used to Suggest Harsher Sentences Deter Crime

Any reviewer looking at an area of social science that has been extensively researched will almost certainly find contradictory evidence. The reason can be one of two possibilities. It is plausible that the relationship discovered by these studies is real or genuine. It is also possible that the association identified by this research is spurious or the result of random error whereby methodological, statistical, or conceptual problems within the study produce misleading findings. To resolve this conundrum, one must critically assess the evidence reported in the research and examine trends over time.

There are in the deterrence literature—not surprisingly—several studies that conclude that harsher sentences reduce crime rates. However, the majority of the findings produced by this research are unreliable and, by extension, should cautiously be dismissed. Indeed, these studies suffer from multiple problems that could clearly bias their findings. In particular, the conclusions drawn by some researchers can be more readily explained by mechanisms (e.g., incapacitation) other than deterrence. In addition, the ways in which the principal variables (severity of sentence or crime) are measured in some of the studies are problematic, casting doubt on their meaning and implications. Further, issues of questionable data selection raise skepticism surrounding the generalizability of a number of the findings. Similarly, several studies draw causal inferences that the nature of their data does not justify. Finally, no consistent patterns may be found for some of the results, suggesting the possibility of random fluctuation or chance occurrence.

[*156] A. Studies That Can Best Be Explained by Mechanisms Other than Deterrence

Many of the studies that relate "crime levels" to "punishment levels" suffer from a number of different problems (Nagin 1998). Aside from whether an apparent drop in crime has anything to do with changes in the criminal justice system, it is often virtually impossible to differentiate increased severity from other possible causes. An increase in severity is often associated (as it was in the United States) with increased numbers of police and modifications in the manner in which the police target crime. In this way, changes in severity are frequently related to changes in the

probability of apprehension. Further, alterations in sentencing severity are frequently also associated with modifications in release procedures (e.g., abolition of parole or restrictions in it). Thus, these changes may relate to "incapacitation" effects. Looking at the "500 percent growth in prison population" (Nagin 1998, p. 28) that took place in the United States in the last two decades of the twentieth century, Nagin notes that "any effect on the crime rate of the increase in prison population reflects the effect of an amalgam of potentially interacting treatments" (1998, p. 28). Though relatively little is fully understood about the drop in violent crime that took place in the United States beginning in the early 1990s, there is no logical reason to attribute it to the general deterrent impact of increased imprisonment.

This affirmation takes on particular relevance when examining Levitt's 1996 study that was originally cited as evidence of the deterrent impact of punishment severity. This paper assessed the effects of prison overcrowding litigation on crime. In certain (largely southern) U.S. states, large numbers of inmates were freed before their scheduled release dates as a result of court orders to reduce overcrowding in prison. In effect, the total amount of punishment that sentenced offenders received was suddenly reduced on a once-only basis for those who were incarcerated at the time of the litigation. Levitt suggests that the apparent increase in crime that occurred in these states following this event was a result of a reduced deterrent impact (due to abbreviated prison terms).

Various other commentators (Nagin 1998; von Hirsch et al. 1999) have noted that the impact—if one actually exists—of the early release of a large number of prisoners is more plausibly related to the reduced incapacitation effect of suddenly freeing them. Levitt himself, in his 2002 review of deterrence, appears to agree that the results are explainable ["157] by incapacitation. More generally, though, Nagin points out that "Levitt's estimate [of crime increases caused by the unanticipated release of prisoners] is not likely to be informative about policies affecting prison sanctions for specific types of offenses" (1998, p. 29).

Beyond these obvious problems, Levitt also failed to control for other possible explanations. Knowing that something changes (in this case, crime rates) after some event occurs (release of prisoners from prison) does not identify that event as the only possible cause. The paper provides no evidence of the mechanism that would explain the increase in crime. For example, no data are reported that would suggest that anyone (least of all potential offenders) believed that time served in prison would be less than it had previously been (nor, of course, was there any evidence that it would be less in the future). One might suggest that a potential offender who was aware that large numbers of prisoners had been released before their scheduled dates might also be sufficiently informed to realize that this reduced punishment for one group of offenders had no necessary bearing on the penalty which he or she would experience if apprehended and convicted years (or even decades) later for a similar offense. That is, unless, of course, the offender had read Levitt's paper.

Another paper that inexplicably makes it into the deterrence literature as support for a deterrent effect of harsher sentences is one by Marvell and Moody (1994). The study is framed in terms of incapacitation and focuses largely on the problem of estimating the number of offenses that prisoners might have committed if they had been in the community. In a complex analysis, they suggest that changes in prison populations in the United States are associated with changes in crime rates for certain offenses. However, there are numerous difficulties involved in interpreting this article as evidence of deterrence. Among them, no attempt is made to estimate general deterrent effects independent of incapacitation effects or the effect of the changes in the likelihood of apprehension, either of which could plausibly account for their results.

One must be vigilant in separating the effects of certainty from those of severity. A study by Wright (1996) demands a careful reading of his results in order not to confuse these two issues. In responding to those who suggest that variations in harshness within the range that would be plausible in most societies would not add deterrent value, Wright cites evidence that a "summary of sophisticated studies of drunk driving penalties shows that tougher enforcement efforts and more certain ["158] punishments generally reduce drunk driving rates" (1996, p. 262). We do not take issue with either the cited finding or the specific statement that is made. Rather, we point out that a reader who was not careful in differentiating between severity of penalty and certainty of apprehension ("tougher enforcement efforts and more certain punishment") could easily have been misled to believe that this statement supports the idea that "prisons can achieve the objective of general deterrence"—the topic of this section (Wright 1996, p. 262).

Although not explicitly framed as a contribution to the deterrence literature, a study by Langan and Farrington (1998) has sometimes also been cited publicly as an example of the ways in which national sentencing policies affect crime. For example, the English *Sunday Times* concluded on the basis of this study that "the report appears to be a vindication of tough American policies such as 'zero tolerance' policing, 'three strikes and you're out,' which sends repeat offenders to jail for life, and frequent use of custodial sentences" (Rufford 1998, p. 2). This is clearly a more sophisticated study than many. However, several weaknesses deserve careful consideration.

First, this article could be seen to encourage the reader to mistakenly draw causal inferences about the relationship between criminal justice practices and crime levels. The study looks at crime and "punishment" trends in two countries (the United States, and England and Wales--"England" for short) and "shows" that increases in "punishment" are associated with decreased crime in one country (the United States) while decreases in "punishment" are associated with increased crime in another (England). The problem with studies of this kind as evidence of deterrence is obvious: an infinite number of explanations can be offered for any single trend. For instance, an increase in the homicide rate in Canada during the 1960s could just as easily be attributed to the end of executions in Canada in the early 1960s, the growth in the proportion of the population of young males that took place at that time, the increased popularity of the Rolling Stones, sun spots, or none of the above. Said differently, a rise in crime in a particular jurisdiction (or nation, as is the case here) might be caused by any number of factors: decreased social services, increased enforcement (or increased numbers of police officers to apprehend offenders), broad social changes in the community, or some other alteration in the operation of the criminal justice system. Therefore, studies such as this one may be useful in developing hypotheses, but they cannot be used as serious explanations for changes in crime levels.

[*159] Further, the Langan and Farrington (1998) report looks at crime (measured both by victimization surveys and police reports) and the operation of the justice system in the United States and England, and suggests that the trends in crime and those in "punishment" (or the reaction to crime) in the two countries are different. By juxtaposing these trends in both nations, Langan and Farrington are implicitly asking the question of whether trends in crime are affected by trends in punishment. Unfortunately, these are not the ideal data to answer this question, given the doubtful comparability of the two countries under study. Crime patterns and criminal justice policies have changed in the past two decades in England and in the United States. Moreover, they have changed in different directions. While the United States has tended to favor intensive criminal justice processing, England has preferred more selective prosecution of crime, diverting relatively minor offenders out of the system and attempting--somewhat inconsistently--to develop punishments in the community and thereby limit the use of imprisonment. Similarly, crime patterns have also varied in the two countries. Murder rates in England have been low and unchanged since 1981, whereas American rates look more like a roller coaster: going down in the early 1980s, up in the late 1980s, and then down again since 1991 (Langan and Farrington 1998, p. 4, fig. 5). Comparing other specific crime rates across countries is equally problematic. Looking at robbery as an example, police statistics suggest that firearms were used in 5 percent of English robberies and 41 percent of U.S. robberies (Langan and Farrington 1998, p. iii).

Despite these inherent problems, this report compares the crime levels in these two countries across time. The danger of this practice is illustrated by a news report that quoted one of the authors of the study--Patrick Langan--as saying, "With rising punitiveness in the U.S., crime rates are falling. In England, there is less punitiveness and crime rates are rising" (Johnston 1998, p. 2; Lardner 1998, p. 2). Though perhaps descriptive, the causal inference suggested by this statement between the severity of criminal justice practices and levels of crime is clearly not justified on methodological grounds given the nature of the data.

The second weakness of this study is its use of problematic measures. In the summary that the authors prepared on the "justice system's impact on crime," Langan and Farrington state, "Negative correlations in England between trends in punishment risk and crime trends offer the strongest support for the theory that links falling risk [*160] of punishment to rising crime. Specifically, since 1981 the conviction rate fell in England and English crime rates . . . rose. . . . Likewise, the incarceration rate fell, and English crime rates . . . rose" (1998, p. 38). While statements such as these might seem to imply that failure to incarcerate people caused crime to rise (see p. 28 for "graphic" evidence that "incarceration rates" fell in England while rising in the United States), they may be more a reflection of misleading measures than actual patterns in the data.

There is more to the term "incarceration rates" than meets the eye. This variable does not mean the rate at which convicted offenders are put in prison. Rather, this variable--explained in the notes associated with a set of figures--is "the number of incarcerated persons per 1,000 *alleged offenders* [which was] obtained by dividing the number of juveniles and adults sentenced to incarceration for the specified crime during the year . . . by the number of persons committing the crime [taken from police *reports* of crime, whether or not the offender was apprehended] . . . that year" (1998 p. 62, emphasis added). Langan and Farrington state that incarceration rates are going "down" in England. However, in order for a person to be incarcerated, the offender has to not only be apprehended and convicted but also sentenced to prison. Hence, while the rate at which convicted offenders go to prison could plausibly remain the same, a decrease in apprehension or conviction rates would mean that the "incarceration rate" will still go down. The authors present changes in "conviction" rate in England and, not surprisingly, they tend to go down (1998, p. 18). However, this decline does not necessarily reflect "failed" prosecutions. On the contrary, these data are "convictions per 1,000 offenders" (apprehended or not). Failure to apprehend can obviously lead to failure to convict. But so can criminal justice policy. If minor offenders are apprehended but not prosecuted in the courts--instead being dealt with in the community--there will be a decrease in "convictions" (and, consequently, a decline in both the "conviction rate" and the "incarceration rate"). Using this type of definition, a successful diversion program--in which many minor offenders are placed in programs that might even reduce recidivism--would lead to a "lower conviction rate" and a "lower incarceration rate."

Similar skepticism surrounding the meaning of their measures arises with another variable: "days of incarceration an offender risks serving." The figures presented by Langan and Farrington show that the values of this measure are generally going up in the United States [*161] while they are unchanged or going down in England. However, one needs to carefully examine the meaning attributed to this factor. As they explain, "'Days of incarceration an offender risks serving' were obtained by multiplying the probability of conviction given an offence . . . by the probability of incarceration given conviction and by the average number of days served per incarceration sentence" (Langan and Farrington 1998, p. 63). In other words, let us assume that there are 1,000 burglaries in England, that approximately 60 percent of them are reported to the police (see p. 8), and that the police "record" about 40 percent of them (p. 10). Not everyone gets apprehended. In fact, most do not, and some of those who are apprehended are found not guilty. Some are also diverted into community programs. The result is that there are about eight burglary convictions per 1,000 alleged burglars in England (p. 18). About 40 percent of those convicted (see p. 22) are incarcerated. The report suggests that there are only about two burglars incarcerated per 1,000 alleged burglars (p. 28). These two burglars who make it this far in the process are each sentenced to about twelve months (p. 30) and each serves about six months (p. 32). In other words, the authors argue that twelve person-months (365 days) are served for 1,000 burglaries. Hence, the "days of incarceration a burglar risks serving" is less than one, or roughly 365/1,000 days or 0.4 days (p. 36). This figure is meaningless since the "days of incarceration a burglar risks serving" largely reflects the fact that most burglars are not apprehended.

The third problematic area of this study is, ironically, its findings. Even if the measurement difficulties were put aside, several of the results do not support their general conclusion that punishment severity affects crime trends. In particular, the measures of changes in punitiveness (Langan and Farrington 1998, p. 22) show essentially no change in the likelihood that a convicted offender will be sentenced to incarceration. While they tend to show that for property offenses, the United States incarcerates more, the court-based incarceration rates--that is, the probability that a convicted offender will go to prison--are essentially unchanged. Further, if one is interested in the "average incarceration sentence imposed on convicted offenders," one finds that, if anything, they tended to go up in both countries (or they stayed the same) (1998, p. 30). Finally, the percent of time served "is generally about the same in the U.S. and England" (1998, p. 35), and the changes over time are small and inconsistent (see p. 34, figs. 61-66). In other words, the inferences about "crime going up as punishment [*162] risk goes down" have nothing to do with punishment as meted out by the courts.

The inference that "increased punitiveness" is associated with lower crime rates is challenged by referring to the authors' own words: "correlations [in the United States] between punishment *severity* and crime trends were mixed (table 2, p. 39). Approximately half were positive [more punitiveness, more crime] and half were negative [more punitiveness, less crime]. Moreover, in instances where there were negative correlations, they were often weak. Furthermore, . . . correlations between punishment severity and [victimization] survey crime rates often had a

different sign than correlations between severity and police-recorded rates for the same crime. In short, trends in punishment severity had an inconsistent relationship with trends in crime in the U.S." (1998, p. 38). They subsequently point out that some consistency existed for burglary but provide no explanation as to the reasons for the "consistency" for this particular offense and not others. Furthermore, the authors show these same mixed findings for England as well, providing little consistent support for the relationship between punishment severity and crime.

B. Problems of Measurement (Either of Severity or of Crime)

As Langan and Farrington (1998) demonstrate, measures matter. Unfortunately, this study is not unique in its lack of measures appropriate for examining the effects of sentence severity. For instance, a study by Klepper and Nagin (1989) has been cited as evidence of a deterrent effect of sentence severity. This article uses a scenario-based methodology to ask questions concerning a hypothetical case of tax evasion by a plumber to 163 students enrolled in an evening master's program of public management, presumably at Carnegie Mellon University. The measure of perceived severity of sanctions was the estimate given by the student of the chances that a tax-evading plumber would face criminal prosecution.

A somewhat simplified summary of one aspect of the findings is that students who thought that the tax-evading plumber would face criminal prosecution indicated that they would be less likely to evade tax if they were in the plumber's position. While these results appear to be compatible with a "deterrent" interpretation, Klepper and Nagin (1989) suggest that they are also consistent with the hypothesis that "the perceived probability of criminal prosecution is also a function of the taxpayer's noncompliance behavior" (1989, p. 238). Said differently, [*163] the fact that a person breaks the law can affect that person's estimate of the likelihood of apprehension. A person who breaks the law and does not get caught may change his or her views of the likelihood of being caught. In other words, the person's perceived apprehension risk may be the result of offending, not the other way around. Von Hirsch et al. suggest that although Klepper and Nagin "treat risk of prosecution as a severity variable, in view of the collateral social consequences of prosecution for the middle-class individuals potentially involved" (von Hirsch et al. 1999, p. 35 n.), risk of prosecution is probably best considered to be related to certainty.

Beyond these measurement problems, we would, generally speaking, agree with von Hirsch et al. (1999) in their general critique of this type of methodology: "Scenario studies, one must remember, do not measure subjects' actual behavior, but only how they say they would behave in a given hypothetical situation (i.e., 'armchair deterrence'). A great deal therefore depends on whether the researchers have been successful in developing hypothetical situations in a way that is likely to reflect respondents' real-life behavioral choices" (1999, pp. 34-35). As they further note, these studies explore the link from "respondents' perceptions of the certainty or severity of punishment to their potential criminal choices. They do not explore the link from criminal justice policy changes to changes in those perceptions" (1999, pp. 34-35). Cavanagh (1993) summarizes the problems of many scenario-based studies in his review (conducted for the U.S. Office of National Drug Control Policy) of the deterrence literature in relation to drug crime but which, we argue, is equally applicable to the study by Klepper and Nagin (1989): "the sample is upper-middle-class and not at all representative of persons who are most likely to consider indulging in felonious behavior. Second, the responses are descriptions of how respondents feel they would behave in hypothetical situations not actual behavior in those situations" (Cavanagh 1993, p. 41).

In other papers, additional difficulties emerge in knowing exactly what a measure means. In a study claiming a deterrent effect of punishment severity on crime, Reilly and Witt (1996) examined certain crime rates across time in forty-two English police jurisdictions. Though the study purports to find correlations between harsh punishment and levels of crime, its measure of severity--the length of prison stay, given conviction--is peculiar under the circumstances. Indeed, it uses only average sentence length as its measure of severity, ignoring the fact that the probability of going to prison was relatively low in many instances [*164] as well as variable across time. As such, it is unclear in this study what the "severity" variable is actually measuring.

C. Data-Selection Issues

While no study is perfect, it is important to be able to understand the logic involved when data are selected for inclusion in a study. Unfortunately, this selection process is not always clear, raising doubts about the validity of the findings. For instance, in a study cited by Levitt (2002) as evidence that harsher sentences deter, Kessler and Levitt (1998) attempt to separate the impact of variation in sentence severity on deterrence and incapacitation by examining a referendum-induced sentencing policy change that came into effect in California in 1982. This alteration increased the sentences for a set of crimes that were of particular concern to members of the public (i.e., willful homicide, rape, robbery, aggravated assault with a firearm, and residential burglary). Kessler and Levitt compared changes in rate of these offenses to those of six other crimes not affected by the referendum (i.e., non-residential burglary, motor vehicle theft, theft under \$ 200, theft over \$ 200, nonaggravated assault, and aggravated assault without a firearm).

The first problem is obvious: the two groups of offenses constitute considerably different sets of crimes, and there is no reason to expect that short-term changes in one set (e.g., the more serious first set) might normally be expected to parallel those in the other set (the less serious offenses). Furthermore, the second group is generally more prevalent than the first. Finally, we could find no clear and convincing rationale for comparing these two subsets of crimes.

However, the most important problem with the paper is the researchers' inexplicable choice of data points to examine. More specifically, Kessler and Levitt (1998) chose only two data points (1979 and 1981) before the change in sentencing policy and two points subsequent to it (1983 and 1985). The reason for restricting the time after the change in policy to 1985 was said to be to avoid contamination by incapacitation effects (i.e., crime reduction because potential offenders were in prison longer). While it was argued that this incapacitative impact would likely occur only after the sentence enhancements took effect (i.e., some number of years after sentencing), the deterrent impact of the change in sentencing policy was expected to be immediate. However, we are left wondering why the even-numbered years were not included. For statistical reasons, it would also have been advisable [*165]

TABLE 1

Trend in Residential Burglary, 1979-85

Year	No. of Crimes (in Thousands)
1979	328
1981	369
1982	Change in sentencing policy
1983	309
1985	301

SOURCE.--Kessler and Levitt 1998, p. 26, table 1.

to break this time period down into shorter intervals to obtain more data observations, thereby more accurately illustrating any trends.

Even more perplexing is the reason guiding the authors' decision to examine only two pre- and postintervention data points. Without additional observations, we have no idea of the overall pattern before the change in sentencing policy. While Kessler and Levitt claim that the rate for the serious crimes had been going up (on the basis of a comparison of 1979 vs. 1981 only) but was reversed by the alteration of policy (in 1983 and 1985), we have no way of verifying this interpretation. To illustrate this problem more clearly, potentially the easiest way is to look at

(simplified) data presented for residential burglary--the crime which the authors suggest showed the largest deterrent effect. The data are presented in table 1.

Kessler and Levitt argue that the change in policy that took place in 1982 reversed an upward trend. The problem with the "trend" before 1982 is that it is based on only two observations. It is not difficult to find a consistent trend with two data points. However, the interpretation of their "trend" (and, by extension, the conclusions drawn concerning a deterrent impact of the change in sentencing policy) could be considerably different depending on the values of other preintervention observations. To demonstrate, we have constructed three sets of hypothetical data for odd-numbered years between 1965 and 1977. Kessler and Levitt's data for 1979-85 are also presented in table 2.

If the preintervention data had looked like Pattern A, no one would plausibly believe that the change in sentencing policy had any positive impact on crime. The aberrant years would be 1979 and 1981--the years before the changes in policy. The years after the change in policy would be simply viewed as "normal" years. Pattern B would illustrate [*166]

TABLE 2			
Hypothetical and Actual Trends in Residential Burglary			
Year	Pattern A	Pattern B	Pattern C
Hypothetical data:			
1965	300	450	210
1967	305	410	245
1969	304	425	255
1971	309	372	277
1973	305	355	289
1975	306	370	301
1977	302	330	315
Actual data:			
1979	328	328	328
1981	369	369	369
Change in law			
1983	309	309	309
1985	301	301	301

a general downward trend that was not completely consistent but continued through the period of the law change. Again, the evidence would not support the conclusion of a treatment effect. Only Pattern C could possibly be argued as demonstrating an intervention effect. These data display a general increase over time that is followed by a decrease occurring after 1981. If this decline continued and was consistent over time, it could plausibly be interpreted as being related to some event happening in 1982. However, without additional data points following the change in law, it is equally impossible to assess the postintervention trend. Indeed, the point that we are making is a simple one. Crime trends are not always consistent across time. As such, two points simply cannot be used to describe a "trend." In our opinion, no conclusions should be drawn from this paper.

A similar paper (Kessler and Levitt 1999) extended the analysis to include one more odd-year data point (1977) before the change and two more observations after the change (1987 and 1989). Interestingly, the risk of contamination by incapacitation effects—used to justify their prior study's rejection of data beyond 1985—no longer seemed to be a concern. Further, their examination of only odd-numbered years still remains a mystery. Similarly, despite having added three more data points to their analysis, we continue to be surprised by the [*167] choice of statistical techniques employed by Kessler and Levitt. Their data (or extended versions of them from publicly available data sources) are virtually ideal for carrying out an interrupted time-series analysis. This statistical approach—often used in social science—not only constitutes a considerably more powerful test of their research hypothesis, but also has the additional virtue of being able to handle data from even-numbered years just about as easily as they can for those from odd-numbered years.

Beyond this continuing enigma regarding the limited number of (odd-numbered) data points, only four "noneligible" crimes were used as comparison in this paper. However, the authors included an additional comparison between California and the rest of the United States. Rates were reported rather than numbers of crimes as had been the case in the earlier study. The principal problems with the findings of this paper are twofold. Anomalies in the results are not adequately explained. For example, one of the four "noneligible crimes" (burglary of a nonresidence) appears to show a dramatic drop in rate after the intervention that, presumably, had no bearing on this offense. In addition, the findings of this research are not discussed adequately within the wider deterrence literature. More specifically, this study (as well as the one preceding it) examines the impact of a legal change that is similar to the three-strikes legislation or other harsh sentencing practices. Although their findings are not consistent with those presented in other published research, Kessler and Levitt do not—for the most part—address this difference.

D. Studies in Which the Effects Do Not Show a Consistent, Replicated Pattern

Given that there are no accepted theories that explain or predict when differential sentencing practices are expected to affect crime and when they will not, one has special concerns about research whose findings are inconsistent and, by extension, theoretically inexplicable. In particular, a study by McDowall, Loftin, and Wiersema (1992) needs to be considered in light of this concern. This research examined the effects of laws imposed in three American states (Michigan, Florida, and Pennsylvania) that created mandated minimum prison sentences for offenses that involved the commission of certain other offenses with a firearm. The researchers looked at data from six cities (three in Florida, two in Pennsylvania, and one in Michigan) for homicides, assaults, and robberies with and without a firearm. There was an [*168] overall effect on gun homicides, but not gun assaults, or gun robberies. Further, the gun homicide effect showed up in Detroit, Philadelphia, Pittsburgh, and Tampa, but not Jacksonville and Miami. Gun assaults went up in Tampa and down in Jacksonville. Armed robberies were unaffected by the law.

Attributing these findings to deterrence is clearly problematic in that there is no theoretical reason that would predict effects on gun homicides but not on the other two (considerably more common) offenses. Similar arguments can be made for the appearance of an impact in some cities but not in others. More particularly, it is difficult to understand, given the magnitude of homicide penalties, how the expectation of an additional few years to one's sentence in a homicide offense would deter someone from committing the crime while the homicide penalty (without the firearm penalty added) would not have the same deterrent effect. Presumably, these results would only be relevant in those homicides that occur while committing another offense and in cases in which the sentence was less than life in prison. While the authors attribute the discrepancy to differences in the quality of the data, they provide us with no hard evidence on which to evaluate this explanation.

Another study that should be included within this wider category of theoretically inexplicable findings is one by Grasmick and Bryjak (1980). This research constitutes one of the more thoughtful survey studies on the deterrent impact of perceived punishment. It was carried out by asking 400 ordinary city respondents to indicate which of eight "crimes" (e.g., theft, littering, using fireworks within city limits) they had committed in the past. They were also asked the likelihood of being arrested by the police if they did each of these acts. Finally, the authors used two measures of the severity of the punishment: the chances of being imprisoned if the respondents were arrested, and one that might be called a "subjective" measure of severity. More specifically, study participants were asked to imagine that they had been arrested and found guilty, and were handed down the punishment that they thought

they would get. They were subsequently required to "indicate how big a problem that punishment would create for [their] life" (1980, p. 480).

Clearly, there is a problem with the design of the study: the "crime" measure is retrospective and reflects what the person did in the past. In contrast, the certainty and severity measures are "current." In deterrence theory, we are interested in the opposite temporal ordering. [*169] Nevertheless, the data are worth examining. As we described, there are four relevant measures: involvement in crime, a composite measure of the certainty of being apprehended, severity measured by a composite measure of the likelihood of imprisonment, and severity measured by the respondent's estimate of the degree to which the expected punishment would be a problem for them.

The respondents were divided into four groups according to how likely--across the eight offenses--they thought it was that they would be apprehended if they committed each of the offenses. From data presented in table 1 of the report (Grasmick and Bryjak 1980, p. 479), we estimated that most or all of the respondents in the highest-certainty group answered (combined across the eight offense categories) that they "probably would be" or "definitely would be" arrested by the police if they committed these offenses. For these people--and these people only--the subjective measure of severity (how much of a problem it would be if the respondent received the punishment that he or she expected) made a difference: those who anticipated that the expected punishment would have a serious effect on their lives were less likely (in the past) to have committed these offenses. In other words, crime involvement and subjective measures of severity were correlated in the direction consistent with deterrence theory.

For the other three groups--who indicated lower likelihoods of being apprehended--there was no relationship between subjective severity and offending. In fact, rather mundane findings emerge when one uses this measure. More specifically, if you think that you are likely or certain to get caught, the subjective estimate of the effect of the penalty for you makes a difference. Inversely, if you think that the likelihood of apprehension is less than "likely or certain," the subjective severity of the penalty has no effect. The deterrence literature is full of findings that people do not commit serious criminal offenses when they think that they are going to get caught and they believe that the expected penalty would be devastating to them. The problem with many criminal offenses is that the objective--and subjective--likelihood of being apprehended is undoubtedly low. It is likely that few people commit offenses thinking that they probably or definitely would be caught. Hence, these data--although logical--are not particularly helpful in determining legislative or judicially created sentencing policy.

It is also noteworthy that the conventional measure of severity--whether the respondent thought that prison would be the ultimate result [*170] of arrest--showed a rather peculiar relationship to offending. Those who were most likely to think that they would be jailed if arrested were most likely to be those who had committed offenses. This result is clearly in the opposite direction from that predicted by deterrence theory. Indeed, whatever the reason for these findings, they do not support the notion that harsh sentences will deter.

E. Studies in Which the Conclusions Seem to Be at Odds with the Data

In an extensive analysis of the implementation and impact of three-strikes and truth-in-sentencing legislation in various American states, Chen (2000)--in a political science dissertation with James Q. Wilson as co-chair of the committee--provides a set of findings that is not always, in our assessment, consistent with her commentary on these findings.³ Her main analysis of the impact of this type of legislation on crime rates consists of an assessment of crime data in fifty states over a twelve-year period. Each of these "state-years" appears to be considered a data point for her principal analyses. The best evidence that she could find of an impact of the sentencing legislation on crime appears to come from an analysis that, in effect, apparently compares the four post-three-strikes years (1994-97) for California with all other state-year combinations.

The findings are instructive for those interested in deterrence, even though the author suggests (2000, p. 58) that the effects (presumably for some of the less serious crimes, in particular) could be due to incapacitation rather than

³ This is an extensive dissertation addressing a number of questions related to the legislative choice to impose three-strikes and "truth in sentencing" laws as well as their effects. It uses several different sets of data and provides some interesting and useful findings. Our concerns are limited only to the inferences related to the general deterrent impact of the three-strikes legislation.

deterrence. The reason for this is that some offenders--under three-strikes legislation in California--would get a prison sentence under the new law but would not have been imprisoned prior to its enactment. In addition, some offenders would get dramatically longer sentences than they would have prior to the implementation of the three-strikes laws.

Chen (2000) presents the findings as supportive of deterrence. In summarizing the "trend in California after three strikes," she states that "most coefficients [in her analysis of the impact of the legislation on crime] [are] not significant, but they are large in magnitude and show a very clear pattern" (2000, p. 98). It must be remembered that [*171] her analysis had 600 data points. Particularly with such a large *N*, it is our conservative view that findings that are "not significant" are best thought of as exactly that: not significant. "Not significant" in ordinary circumstances means that one does not reject the "null hypothesis" that there is no impact of the treatment variable--in this case the three-strikes legislation--on crime. Despite this traditional practice in social science, Chen concludes that "even when pre-existing trends in California and in other Three Strikes states are included as control variables, a consistent pattern of substantial declines was found in the growth rates of several types of crime, and these declines appeared to be temporally and spatially correlated with the adoption of Three Strikes and [Truth in Sentencing] in California. Large and statistically significant declines occurred in motor vehicle theft. These findings are consistent with the idea that deterrent effects are more likely to exist for property offenses, which are more likely to be 'calculated' than violent crimes" (2000, p. 236).

Social scientists generally accept as "statistically significant" something whose likelihood of being a "chance" event is less than 5 percent. In contrast to most traditional social scientific research, Chen uses the 10 percent level for her main analyses. As such, one would expect to see instances that she calls "significant" effects that are, in fact, random (chance) events more often in her findings than in most others in the social sciences. The results that she presents as showing an impact of three-strikes and truth in sentencing in California are shown in table 3 (2000, pp. 82-85).

It is worth repeating that she describes these findings--misleadingly, in our opinion--as supportive of the conclusion that the legislation had an effect in California. However, she clearly concludes that three-strikes legislation does not appear to have had an effect on crime nationwide.

In a later part of this same document, she presents a more detailed analysis of what is apparently part of the Zimring, Hawkins, and Kamin (2001) data described briefly elsewhere in this essay. This analysis examined the proportion of people with "strikes" who were arrested before and after the three-strikes law came into force. Her description of the findings is illuminating, particularly when juxtaposed with information provided in the footnotes. In the text, Chen states that "robbers, property offenders, and drug offenders with two strikes [or more] on their criminal records all represented a much smaller proportion of the post-three-strikes sample than they did in the pre-three-strikes [*172]

TABLE 3

Summary of Findings, Chen (2000)

Crime Category	Statistical Significance
Overall violent crime	N.S.
Overall property crime	N.S. at the traditional 5 percent level, "significant" at $p < .10$
Murder	N.S.
Rape	N.S.
Aggravated assault	N.S.

TABLE 3

Summary of Findings, Chen (2000)

Crime Category	Statistical Significance
Robbery	N.S.
Burglary	N.S.
Larceny	N.S.
Motor vehicle theft	N.S. at the traditional 5 percent level, "significant" at $p < .10$

SOURCE.--Chen 2000, pp. 82-85.

NOTE.--N.S. = not significant.

sample, lending support to the idea that three-strikes had some impacts on the offenders in these categories who were most likely to receive the mandatory 'third strike' sentence of 25 years to life" (2000, pp. 173-74). However, she notes later in the text that these findings were not significant. Footnote 79 tells the careful reader that the statistical tests applied to these data demonstrate that the likelihood that each of these findings is a result of chance is 32 percent for robbers, 54 percent for property offenders, and 52 percent for drug offenders. Given that social scientists typically accept the 5 percent standard, we believe that these findings are best described as being "chance" or "random" events and not worthy of consideration. Indeed, these significance levels suggest that no differences exist between the pre- and postintervention periods for these particular offenses:

Finally, it is noteworthy that Chen found no significant effects (even at her impoverished definition of significance) for three-strikes legislation across the United States on any of her nine measures. She attributes this largely to the fact that these laws were not implemented as thoroughly elsewhere as they were in California. However, from a deterrence perspective, this is not of central importance: the legislation received a great deal of publicity, and it took careful studies such as her own--carried out years afterward--to discover that the laws were not being used as extensively as one might have thought. We doubt [173] that many offenders were conducting complex multivariate analyses to determine if three-strikes legislation was being fully implemented.

III. Evidence Suggesting That Increased Severity of Sentences Will Not Deter

Philip Cook (1980) suggested--more than twenty years ago--that policy experiments would, in the end, provide the most useful evidence for assessing the effects of harsh sentences on crime. The three-strikes laws, and other dramatic changes in sentencing policy in the United States introduced in the last ten years, fulfill this prophecy, creating an almost ideal environment for testing deterrent effects. Deterrence is ultimately a perceptual theory: the potential offender must hold the belief that increased penalties will result from apprehension and conviction. Three-strikes legislation in various states of the United States was introduced during a flurry of publicity and, in California, as a result of a referendum vote. Hence, the opportunity for people to know about the increased penalty was much higher than would occur if high penalties were imposed simply through routine cases in a courtroom.

We suggest in this section that the continuing absence of firm evidence demonstrating the existence of crime-reduction patterns attributable to general deterrent effects of these dramatically harsher sentences is important. However, our examination of the literature is not limited to this type of research. Rather, we extend the perceptual element--central to the three-strikes avenue of inquiry--to studies that examine the offenders' thought processes. Particularly when combined with individual studies or programs of research focusing on specific types of offenses or

criminal justice punishments, the consistency of findings provides the most convincing evidence yet that variation in sentence severity does not affect crime levels.

A. Simple Descriptive Data on Three-Strikes Laws

We begin our examination of the three-strikes laws and deterrence with several fairly simple descriptive studies. In our opinion they illustrate the importance of looking at the impact of sentencing reforms broadly rather than selectively. The starting point for a study by Zimring, Hawkins, and Kamin (2001) was a statement by the governor and attorney general of California implying that the three-strikes legislation was responsible for a 27 percent to 31 percent drop in crime. However, these researchers note that the rapid decline in these crime measures in California had started before the three-strikes laws came [*174] into force, and that the drop in crime in Los Angeles (the country's second largest city) was less than the drop in New York and Chicago (cities that did not have three-strikes legislation at the time). The only evidence that they could find that was possibly consistent with a deterrent impact of this type of law was that the proportion of felony arrest suspects (in a sample of large California cities) who were eligible for enhanced sentences under the three-strikes legislation decreased by 1.1 percent. However, this very small effect held only when one examined arrests of third-strike-eligible offenders, but not second-strike-eligible arrests. Given that these are arrest data (rather than crime data) and do not consistently meet normal standards of statistical significance across groups eligible for increased penalties, the conclusion that the authors drew appears to us to be reasonable: "The decline in crime observed after the effective date of the Three Strikes law was not the result of the statute" (2001, p. 101).

Nevertheless, Zimring, Hawkins, and Kamin (2001) are cautious about dismissing the possibility that there was an impact on third-strike-eligible offenders. Clearly, though, we should recall that the only data they have on this aspect of the impact of the law relate to arrests rather than offending by this group or to overall crime rates. Further, the impact on arrests--if due to the change in the law--is very small. As the authors point out in the context of noting that there may be a weak deterrence effect on arrests of the third strike, "The most obvious practical finding of this study is the tiny maximum impact of the new law on crime in California" (Zimring, Hawkins, and Kamin 2001, p. 105).

The concern one might have with this study is that other causes of the change in the pattern of arrests were not examined. In particular, the measure that is used is the proportion of second- and third-strike-eligible suspects in certain California cities. For some offenses, the rates of clearance by arrests are low. In addition, other possible explanations (e.g., changes in police targeting of potential offenders) were not considered. In addition, there is no evidence that the legislation had an overall impact on crime in California. Further, their use of only two data points before and after the implementation of the three-strikes laws as well as the absence of control variables undermine their findings. Indeed, one would not want to make much of the effect, especially given its size. For these reasons, studies that focus more directly on crime measures (rather than those of arrest) are of greater relevance.

[*175] A study by Schiraldi and Ambrosio (1997) provides valuable insights into the (lack of) deterrence effect of harsher sentences on crime rates. These authors compared thirteen states that brought in tough sentencing laws by 1993 with the thirty-seven that had not. This latter group was divided into those that introduced three-strikes laws after the first group and those that did not have three-strikes legislation at all during the study period. They found no evidence that violent crime (the apparent focus of three-strikes laws), or crime generally, had been affected by the legislation. Indeed, their findings are easy to describe: "From 1994-1995, violent crime in non-three-strikes states fell *nearly three times* more rapidly than in three-strikes states. In non-three-strikes states, violent crime fell by 4.6 percent. In states which have passed three-strikes laws, crime fell by only 1.7 percent" (1997, p. 2). Further, California--the state most often identified with the three-strikes model of sentencing--had an overall drop comparable to that in non-three-strikes states. Even when Schiraldi and Ambrosio (1997) examined the data for "total crime," the results were similar. In particular, they note that "from 1994-95, total crime decreased by an average of 0.4 percent in the three-strikes states and decreased by an average of 1.2 percent in states which have not implemented the three-strikes law" (1997, p. 4).

For our purposes, these simple comparisons are useful for a somewhat different reason. More specifically, the data clearly show the variability across jurisdictions. Indeed, crime rates in some states with three-strikes legislation went up while they went down in others. The data in table 4 show the difficulty in comparing individual states with one

another. States (including the District of Columbia) were divided into those that had three-strikes legislation by the end of 1994, those that implemented three-strikes laws in 1995 or later, and those that did not have three-strikes legislation by the completion of the study.

If California (a three-strikes state) were to be compared to neighboring Arizona (a non-three-strikes state), three-strikes legislation would look promising as a deterrence policy. California's rate of overall crime decreased 5 percent and violent crime went down by 4.2 percent, while Arizona shows an increase in total crime of 7.3 percent and a rise in violent crime of 5.0 percent. On the other hand, a comparison of California with New York (a non-three-strikes state) would not be as favorable for three-strikes laws. In fact, total crime fell 10.2 percent and violent crime declined 13 percent in New York. Similarly, the total crime in Michigan (a non-three-strikes state) decreased by 4.3 percent [*176]

TABLE 4

Number of States Showing an Increase/Decrease in Total Crime and Violent

Crime as a Function of the Existence of Three-Strikes Legislation

	Total Crime		
	"Late"		
	Three-Strikes	Three-Strikes	Non-Three-Strikes
	States	States	States
No. of states where crime decreased	4	2	13
No. of states where crime increased	9	9	14
Total	13	11	27

SOURCE.--Schiraldi and Ambrosio 1997, pp. 8-9, tables 1-3.

TABLE 4

Number of States Showing an Increase/Decrease in Total Crime and Violent

Crime as a Function of the Existence of Three-Strikes Legislation

	Violent Crime		
	"Late"		
	Three-Strikes	Three-Strikes	Non-Three-Strikes
	States	States	States
No. of states where crime decreased	5	7	15

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TABLE 4

**Number of States Showing an Increase/Decrease in Total Crime and Violent
Crime as a Function of the Existence of Three-Strikes Legislation**

	Violent Crime		
	"Late"		
	Three-Strikes	Three-Strikes	Non-Three-Strikes
No. of states where crime	States	States	States
increased	8	4	12
Total	13	11	27

SOURCE.—Schiraldi and Ambrosio 1997, pp. 8-9, tables 1-3.

and its rate of violent crime fell by 9.7 percent. In brief, variability, more than consistency, appears to describe state patterns of crime during this period in the United States, illustrating the dangers of haphazardly constructed comparisons between jurisdictions.

This was one of the earlier studies, and as such the authors are correct in concluding that "it is entirely too early to conclude if three-strikes legislation is working or not" (Schiraldi and Ambrosio 1997, p. 4). Interestingly, one of the arguments proposed to justify such a cautious conclusion was that the deterrent effects of three-strikes laws are sometimes confused with their incapacitation potential. However, it is in the early stages that one would expect deterrence impacts to be greatest. This is when there is the most publicity surrounding the legislation. Incapacitation effects would be expected to show up later in time as the enhancement on sentence length began to be felt. Hence, the conclusion that the effects of the laws, overall, are "inconclusive" (1997, p. 6) is a sensible but conservative conclusion.

B. More Sophisticated Studies of Three-Strikes Laws

In a larger study of the impact of three-strikes legislation, Stolzenberg and D'Alessio (1997) examined the effects of the new law on felonies (which presumably should be deterred by the three-strikes legislation) using month-by-month data from California's ten largest [177] cities. For comparison the authors looked at reported misdemeanor larcenies, which one would assume not to be affected by the three-strikes law.

The findings are easy to describe: "The results generally indicate that the three-strikes law did not decrease the California Crime Index [a crime rate based on the rate of reported "index" crimes] below that expected on the basis of preexisting trends" (1997, p. 464). This study correctly examines preexisting trends since crime in California—as elsewhere in North America—was going down before the three-strikes law came into force. As we demonstrated with the Kessler and Levitt (1998) paper, simple "before vs. after" comparisons when examining trends over time can be misleading. If crime were already going down before the three-strikes law was introduced, one cannot logically attribute the drop in crime to the new legislation. In one city (Anaheim), there was a significant decrease in the crime index not attributable to preexisting trends. However, there is no explanation linked to the three-strikes laws that might explain this isolated effect in comparison with that found in the other nine cities. The best guess is that something unrelated to the three-strikes legislation was responsible for the apparent drop in this one city.

This set of findings is very similar to those presented by Austin et al. (1999). They examined California crime data at a county level. As they affirm, in this case as in many other studies suggesting deterrent effects of interventions, it is important to look both at preexisting trends (measured with a reasonable number of data points) and trends elsewhere. The authors note that the implementation of the law was more complete (i.e., harsher) in some counties (San Diego, Los Angeles, and Sacramento) than in others (San Francisco and Alameda). Hence, they argued that the reduction should be larger in those counties in which the prosecutors and police were mostly likely to implement the harsh penalties mandated by the three-strikes law. The results demonstrate that crime trends (or violent crime trends) appeared to be unrelated to the aggressiveness with which the laws were enforced. They also compared three states that had three-strikes laws by 1993-94 with three others that did not. In this rather simple comparison, crime patterns were not consistent with the deterrence hypothesis. As they note in conclusion, "The bottom line is that California, which is the only state to aggressively implement a three-strikes law, has shown no superior reductions in crime rates. Furthermore, within California, [*178] counties that have vigorously implemented the law also show no superior decreases in crime rates as compared to other counties" (1999, p. 158).

C. Studies of the Impact of New Harsh Sentencing Regimes

Research has also examined the effects of other harsher sentencing policies. For instance, a study by Wicharaya (1995) assesses changes in sentencing law that took place in forty-five states from 1959 to 1987. Using time-series techniques, Wicharaya (1995) examined the impact of these alterations in sentencing structure across jurisdictions, rather than concentrating on a single or a small number of states. These changes generally fall into the category of "get tough on crime" (1995, p. 161), and include such regimes as mandatory or presumptive sentences and mandatory minimum sentences. The premise of most of these reforms was to make prison sentences more certain or longer. Not surprisingly, many were undermined in the court process in various ways. Nevertheless, because they typically came into force as a result of high-profile political processes and appear—at least on the surface—to meet the criteria of increasing the perception that harsh sentences would flow from a conviction for one of the relevant offenses, they can be seen as forming a reasonable basis for expecting deterrence effects. These results show the importance of replication. Indeed, a focus on a single state might have led to a conclusion that would not describe the chaotic nature of the findings. Wicharaya examined data from forty-five states on four violent crimes. His findings are summarized in table 5.

Wicharaya notes that the relationship between sentencing reform and these offenses is mixed. Changes are as likely to be in one direction as the other. One can hardly suggest that the data in table 5 support the notion that increased severity of sentences is associated with a decline in crime. In his own words, "Sentencing reforms have not yet proved to be efficacious anticrime measures" (1995, p. 161).

Wicharaya (1995) subsequently extends this analysis by employing a more elaborate statistical approach to these same data—a "pooled time series" technique—that allows a generalizable conclusion (across states) on the effects of sentencing reforms. The author summarizes these findings as again showing "no crime reduction effects of the reform on any crime type nationwide. Both murder and robbery rates remain unaffected in some states, but increased significantly in the remaining part of the country. Similarly, both rape and aggravated assault [*179]

TABLE 5

**Number of States in Which Changes in Their Crime Rates (Following the
Introduction of New Sentencing Regimes) Are Consistent/Inconsistent with a
Deterrent Effect of Harsher Sanctions**

**No. of States with a Change
in the Direction Expected**

**No. of States with a Change
in the Direction Opposite**

Crime	by Deterrence Theory (Decline in Crime)		to That Expected by Deterrence Theory (Increase in Crime)		Total No. of States
	Significant	Nonsignificant	Significant	Nonsignificant	
Type	Decline	Decline	Increase	Increase	
Murder	4	14	7	20	45
Rape	4	10	6	25	45
Robbery	4	13	7	21	45
Assault	6	15	7	17	45

SOURCE.—Data adapted from Wicharaya 1995, p. 162, table 7.2.

rates increased significantly throughout the United States. The evidence of no deterrent effects is consistent across all crime types" (1995, pp. 150-51). The author is even more definitive in his conclusions later in the paper: "Violent crime rates were not deterred by the new sentencing policies" (1995, p. 164). It should be noted that another part of this study shows that harsh sentencing regimes were typically not successfully (or consistently) implemented. A true believer in deterrence could argue that this study does not constitute a fair test of deterrence. However, to argue this is to ignore one important fact: deterrence, by definition, is a perceptual theory. Hence, it is perception that counts. The publicized legal changes did not affect the crimes upon which the author focused.

Beyond the U.S. reality, mandatory sentences in the form of three-strikes legislation also found their way to Australia in the 1990s (Morgan 2000). Although mandatory (prison) sentences came under fire in early 2000 when the predictable types of cases occurred and were publicized (e.g., mandatory imprisonment for a yo-yo thief, a year in prison for an aboriginal man who stole a towel from a washing line to use as a blanket, and a prison sentence for a one-legged pensioner who damaged a hotel fence), the laws in western Australia and the Northern Territory were written broadly enough to ensure that these kinds of cases would result in a prison sentence.

The rationales given for mandatory sentencing laws in Australia (as elsewhere) have varied over time. General deterrence constituted one [180] justification. However, the evidence as summarized by Morgan (2000) showed that crime rates were unaffected by mandatory minimums. Notwithstanding the fact that the laws unequivocally increased the likelihood of a prison sentence and received considerable publicity (providing optimal conditions for deterrence effects), there is "compelling evidence" that the laws did not achieve a deterrent effect (Morgan 2000, p. 172). The author notes that governments "have effectively conceded that mandatory sentences have no deterrent effect, and that there is a need for judicial discretion and for the more vigorous use of diversionary schemes and alternative strategies" (2000, p. 182).

Further evidence of a lack of deterrent effects of new harsh sentencing laws comes from a careful analysis by Kovandzic (1999) of the impact of Florida's habitual offender law. While often justified as an effective way of incapacitating high-rate offenders, this type of legislation is also sometimes justified in terms of deterrence. Kovandzic examined the deterrent effects of the additional amount of prison time imposed by the habitual offender law at a county level. His findings—using data from all Florida counties for a seventeen-year period (1981-97)—would not bring cheer to those who think that crime can easily be legislated away. As the author states, "The results suggest that incarcerating [habitual offenders] for extended periods of time has no significant impact on short or long-term crime rates" (1999, p. viii).

Notwithstanding this overall assessment, Kovandzic did find what he describes as "weak empirical support for the [habitual offender] law effectiveness hypothesis in high population counties, but the reasons for the significant

results remain ambiguous" (1999, p. 69). In the face of these findings, this author recommends that these significant effects be seen in the context of the existence of other effects in the opposite direction from that which would be expected (1999, pp. 68-69). In addition, there is no theoretical reason to expect effects in one size county but not another. One may add another argument in favor of largely dismissing this particular finding. The problem with large studies such as this one (and others such as that by Chen, described earlier) in which numerous statistical tests are being carried out is that some of them are going to be "significant" simply by chance. Kovandzic concludes that the results of this study should not be used to support the view that there is a deterrent impact of the legislation: "Of the 720 crime [analyses performed], no [measures—habitual offender prison months, or the extra months that habitual offenders received in that county] show consistent effects across crime types, varying model specifications, [*181] or samples. The few lags that are significant and negative (48) [more imprisonment, less crime] are not consistent with any theory of deterrent or incapacitative effects and are usually balanced by positive, significant associations (24)" (1999, p. 72).

D. Offenders' Thought Processes

The reduction of crime through general deterrence is based on a perceptual theory: the behavior of a person is hypothesized to be related to the severity of sentences because he or she knows—or perceives—the sanctions to have a certain level of magnitude. Within this context, it is worthwhile to examine several studies in which offenders or potential offenders are asked about the importance of penalties. This approach is particularly relevant to consider after looking at the impact of sentencing law changes such as the three-strikes legislation. Indeed, the findings from this research naturally raise the intriguing question of why offenders do not understand (or do not accept or care) that they will be punished harshly. Asked differently, why it is that offenders do not appear to act as the economists say they should (i.e., calculating utility functions before deciding whether to commit an offense).

Like scenario-based research, these studies of offenders' post hoc explanations of their own thought processes need to be interpreted cautiously. In everyday life, we are often not particularly good at identifying the importance or relevance of factors that affect our behavior. Furthermore, the samples of those caught may not be representative of offenders, generally, or of potential offenders. Nevertheless, they are worth examining, in part because they may tell us something about offenders' thought processes in deciding whether or how to carry out an offense.

In a study of eighty largely middle-class former-sellers of cocaine, Waldorf and Murphy (1995) were able to identify only two people for whom fear of rearrest or imprisonment had been one of the influences in their decision to stop selling cocaine. This is interesting for a number of reasons. It is not what we would have anticipated. On the contrary, one would have expected, at least, that the normal job stresses they experienced due to concerns about apprehension would have been a major factor in a decision to look for another profession. However, the subjects of this study were not impetuous street sellers of drugs. Rather, they were, for the most part, relatively well-educated, middle-aged men who were making a living or supplementing their income by [*182] selling cocaine, often to other middle-class people. That only two of the eighty appeared to have been stopped in part because of criminal justice concerns is notable. Concerns about customers, informants, and so on were more important than police investigations (let alone court decisions). "More than half reported that they felt no criminal justice pressures at all to stop sales. Of those who reported pressures there were near equal percentages of direct [e.g., police investigations] and indirect pressures. The most frequently mentioned indirect pressure to stop was an arrest of a member of a supply network" (1995, p. 31). The severity of the punishment that they might receive from the criminal justice system was not important in their decision to abandon the trade.

Similar findings were reported in a study of ordinary repetitive offenders by Tunnell (1996). This author interviewed sixty prisoners who had been in prison twice or more and at least once for armed robbery or burglary. Respondents were asked to describe their most recent crime, the context in which they made the decision to commit it, and their method of assessing the risk and rewards of committing the crime. The respondents were blunt in reporting that neither they nor other thieves whom they knew considered legal consequences when planning crimes. Thoughts about getting caught were put out of their minds. As one burglar responded to the question of whether "the crime or thinking about getting caught for the crime" came first, "The crime comes first because it's enough to worry about doing the actual crime itself without worrying about what's going to happen if you get caught" (1996, p. 43). Fifty-two of the sixty prisoners reported that they did not think that they would be caught and, as a result, punishment size

was unimportant. Thirty-two of the same sixty inmates apparently did not know what the punishment would likely be. Most (fifty-one of the sixty) believed that they would not be arrested. Even with regard to those who had stopped offending at one point in their lives, the reasons reported were other than threats of punishment.

There was some evidence of short-term individual deterrence. In particular, some of those who had previously been threatened with being declared habitual criminals expressed concern about this possibility in the future. However, predicting the future is more risky than describing the past. Just as one would not want to put much faith in the view of a murderer that capital punishment would have deterred him, one would not want to build criminal justice policy on the views or predictions of repeat property offenders regarding what they would do [*183] in the future. Further, these findings should be interpreted, as the author points out, in the context of the sample: imprisoned offenders. While this study sheds some light on the decision-making processes of those who were caught, it does not necessarily inform us of the factors that may affect other groups of people.

Despite these limitations to the generalizability of the findings, it is interesting that the lack of thought given by offenders to criminal justice consequences is replicated by Benaquisto (1997) in an interview study of 152 inmates in three Canadian penitentiaries. Focusing on the 122 inmates whose own description of their offenses was corroborated by information in their prison files, she asked inmates to talk about the circumstances that led to their arrest. The goal was to try to understand whether the inmate had "anything in mind about whether they would be punished." As Benaquisto notes, "it was relatively rare for an inmate to offer a 'crime story' without referring to the potential risk of being caught or punished. A dominant theme in most such stories is why the deed was done in spite of the consequences, or why and how deterrence failed" (1997, p. 11).

Only 13 percent of her sample "explicitly spoke of their actions in terms of costs and benefits" (1997, pp. 17-18). These individuals tended, it seemed, to be accomplished "professional" offenders (e.g., high-level drug dealers with a great deal of experience) who felt that they could beat the system. In contrast, the largest group of offenders--the noncalculators--simply did not think about the possible consequences. More precisely, it is not that they calculated incorrectly. Rather, they did not calculate consequences at all. As Benaquisto affirms, "crime that results in incarceration is, much more often than not, action taken without any attention, much less reasoned attention to the possible incarceration as a consequence" (1997, pp. 31-32). Not surprisingly, her conclusion is pessimistic: "the vast majority of those already engaging in criminal activities, activities of the most serious nature (and who have, for the most part, experienced punishments prior to the one they are currently experiencing) are very bad candidates for an enhanced deterrence model" (1997, p. 31). Perhaps the only optimism resides with the small minority of federal prisoners whose consideration of utility functions of offending reassures economists that they are not alone in believing in deterrence.

Benaquisto's general conclusion is consistent with that drawn by von Hirsch et al. (1999). In discussing a study of active and persistent burglars (who were interviewed in the community rather than in prison), [*184] they note that most of the burglars "consciously refused to dwell on the possibility of getting caught" (1999, p. 36). Apprehension risk affected "how they committed the burglary . . . to a much greater extent than *whether* they offended" (1999, p. 36). As von Hirsch et al. (1999) point out, improving marginal deterrence would require that such people--currently inclined to offend--be persuaded not to offend because of the enhanced penalty. This practice is unlikely if the possible penalty is not part of their decision-making process.

One situation in which one might expect people to calculate utility functions of offending is a crime that people commit with calculators in their hands: tax evasion. In a Canadian survey carried out in 1990 (Varma and Doob 1998), 18.4 percent of respondents indicated that they had evaded tax. By interviewing both offenders and nonoffenders, this study has the advantage of being able to compare their views of punishment. The sample of offenders (tax evaders) involved, almost exclusively, those who had not been apprehended. Not surprisingly, those who thought that tax evaders (by way of either undeclared cash income, undeclared small business income, or falsified business deductions) would be likely to be caught were less likely to report that they had evaded tax in the previous three years than were those who thought that tax evaders would not be caught. As in other areas of crime, the perceived likelihood of apprehension for a crime is negatively related to involvement in the crime and consistent with deterrence theory.

To test the effect of severity, people were also asked what they thought the penalty would be for evading tax on one of three different amounts (\$ 500, \$ 5,000, and \$ 100,000). Predictably, people thought that the sanction would increase with the size of the tax evasion. However, what is important is that the relationship between expected penalty and reported tax evasion was opposite to what would be predicted by deterrence theory. For example, 27 percent of those who thought that jail would be the likely penalty for evading \$ 5,000 in tax had evaded tax in the previous three years. In contrast, the tax evasion rate for those who thought that a fine would be the result was 16 percent. Said differently, tax evaders do not appear to be controlled by the expected size of the criminal justice penalty.

E. More Specific Studies

Despite the apparent predominance of studies that examine general deterrent effects of sentence severity across (groups of) offenses, a [*185] growing body of literature focuses on more specific types of crime or criminal justice punishment. For example, deterrence has been studied extensively within the context of drinking and driving. This research was carried out largely by H. Lawrence Ross and summarized in his 1982 book that affirms that enforcement campaigns of drinking-driving laws act by increasing people's perceptions of the likelihood of punishment. In contrast, Ross concludes that, when examining the impact of penalties on drinking and driving, size does not matter: "It could not be demonstrated that the increase in the statutory severity of sanctions in Finland, the increase in the threat of judicial severity in Chicago, or the increase in actual judicial severity in Traffictown produced declines in indexes of the threatened behavior. However, conclusions about severity based on these cases must be qualified by the knowledge that the drinking-and-driving offense is one for which the general level of certainty of punishment is extremely low" (Ross 1982, p. 96). Based on these findings, Ross concludes that "the studies reviewed here in their cumulative impact justify the policy recommendation to avoid dependence on severe penalties in attempting to cope with drinking and driving, as least as long as the probability of an offender's being apprehended remains very low" (1982, p. 96).

In an interesting variation on the study of sentence severity, D'Alessio and Stolzenberg (1998) examined the relationships among crime measures, arrests, and pretrial jail incarceration. From a deterrence perspective, arrests are clearly relevant, though not relevant in terms of sentencing policies or decisions. However, from a "sentencing" perspective, it would be pertinent if pretrial detention appeared to reduce crime. Indeed, the effect of pretrial detention--if one, in fact, existed--could be through a mechanism of deterrence or incapacitation, or both. While these authors focus on the incapacitation possibility, we think that it is fair to suggest that deterrence is also relevant.

In any case, a sophisticated analysis produced findings that show that arrests were associated with decreases in criminal activity the day after they had taken place. However, when examining pretrial jail incarceration (a measure of severity of treatment by the justice system), "contrary to predictions derived from the incapacitation thesis, our findings do not lend credence to the importance of pretrial jail confinement as a factor in reducing crime" (D'Alessio and Stolzenberg 1998, p. 748). Neither pretrial nor total jail incarceration levels affected reported crime rates. Once again, evidence suggests that while apprehension of offenders may have a deterrent impact, punishment--in this case operationalized [*186] as pretrial jail confinement--did not have a similar effect. Clearly, pretrial detention is different from being sentenced to prison or penitentiary. Nevertheless, it is interesting that being caught makes a difference to crime levels, but the immediate consequences of this apprehension (detention or not) do not.

The ability of deterrence research to assess the independent effects of apprehension and sentence severity is fundamental in avoiding misleading findings. In a detailed analysis of crime and punishment across Illinois's 102 counties, Olson (1997) noted that the term "deterrence" is used in a number of different ways and that some of these methods almost certainly create artifactual effects that look consistent with deterrence. For example, in the case in which offense rates are measured as offenses per 100,000 in the population, and risk of imprisonment is operationalized as prison admissions per offense, the presence of measurement error in "offenses" will create a "deterrence-like" effect. Indeed, an error in the measurement of offenses (e.g., a campaign to increase reporting) will simultaneously increase the offense rate (more offenses reported per 100,000 in the population) and decrease the risk of imprisonment (by increasing the denominator of the index). This could erroneously lead to the conclusion that a decrease in risk of imprisonment "caused" an increase in offenses.

The related problem is clearly that "risk of imprisonment" measured in this way combines apprehension, conviction, and sentencing. Though the term "imprisonment" is used, what is actually being measured is all three criminal justice processes. As Olson (1997) points out, the correct way to proceed is to employ a model that examines the probability that an offense leads to an arrest, that an arrest leads to a conviction, and that a conviction leads to imprisonment. Measures that look at risk of punishment by combining apprehension, conviction, and sentence tell us nothing about the relative importance of severity and certainty.

Olson looked at the "risk of incarceration relative to conviction" operationalized as the number of prison sentences over the number of convictions (1997, p. 60). He examined data across 102 counties and over a ten-year period. He started by showing that the simple measure of punishment--incarceration relative to offenses--would appear to show a "deterrence" effect in its relationship to crime (1997, p. 86). However, this value dropped dramatically when he examined incarceration relative to conviction (i.e., number of incarcerations over the number of convictions in each county for each of the ten years) (1997, [*187] p. 86). When Olson controlled for certain variables known to be related to crime, the "risk of incarceration relative to offenses" dropped below standard levels of significance, but could be described as showing a "marginal" effect of deterrence. It dropped even further when "risk of conviction" was entered into the equation (1997, p. 110).

The most relevant finding for those interested in the impact of sentencing decisions (i.e., likelihood of going to prison given conviction) is to be found in an analysis that controls for the likelihood of arrest as well as standard predictors of crime. When arrest is held constant, there is no hint of a significant effect of the risk of (adult) incarceration relative to conviction (Olson 1997, p. 113). Olson provides a sensible conclusion: "The most significant policy implication of the results is that risk of punishment has relatively little effect on crime rates. This conclusion, although not necessarily new, adds additional evidence to the fact that earlier assessments . . . may have led policy makers astray" (1997, p. 129). Said differently, simplistic approaches to deterrence--using measures that combine apprehension, conviction, and penalty size--may show deterrent impacts of "punishment." However, when sentence severity is looked at independent of these other factors, sentence severity has no significant effect.

IV. Conclusion

Can we conclude that variation in the severity of sentences would have differential (general) deterrent effects? Our reply is a resounding no. We could find no conclusive evidence that supports the hypothesis that harsher sentences reduce crime through the mechanism of general deterrence. Particularly given the significant body of literature from which this conclusion is based, the consistency of the findings over time and space, and the multiple measures and methods employed in the research conducted, we would suggest that a stronger conclusion is warranted. More specifically, the null hypothesis that variation in sentence severity does not cause variation in crime rates should be conditionally accepted. The condition is a simple one: If a "deterrent effect" of harsh sentences were to be consistently demonstrated under specified conditions at some point in the future, our broad conclusion would require revision.

We have not attempted in this essay to review every paper ever published on the topic of deterrence. Rather, we began with the published reviews of the deterrence literature and moved from there to the studies that are held out, occasionally, as evidence that harsher sentences [*188] would deter crime. We subsequently examined the research that does not find support for a deterrent effect on variation in sentence severity, focusing largely--albeit not exclusively--on those that assessed the general deterrent impact of the structural changes in sentencing laws that have occurred in the last decade in the United States. In brief, this essay looks not only at other reviews but also at research that purports to support as well as challenge the view that variation in sentence severity affects the levels of crime in society. Our findings can be summarized as follows.

With two exceptions, neither of which purports to be comprehensive, the reviews of the deterrence literature are pessimistic about the possibility that harsher sentences handed down in criminal courts would decrease crime. Indeed, our assessment of general deterrence is consistent with the views expressed by most criminologists who have reviewed the current body of literature and concluded that the evidence does not support the hypothesis that variation in sentence severity will differentially affect crime rates. Further, the summaries that challenge this

conclusion not only constitute sporadic anomalies but also do not address most of the relevant research literature on the topic.

The studies that have found support for the notion that harsher sentences deter are relatively few in number. Additionally, they suffer from one or more serious methodological, statistical, or conceptual problems that render their findings problematic. In some cases, causal inferences between sentence severity and crime cannot be drawn because of the basic nature of the data under analysis (e.g., a simple comparison of crime and punishment in two locations). In other cases, alternative explanations (e.g., incapacitation) are more plausible than deterrence. In still others, data selection, measurement, or methodological questions raise sufficient doubt about the generality of the findings that inferences are dangerous. Finally, while some findings do seem to support a deterrent effect, they appear in unstable and inconsistent ways (e.g., for some offenses but not others, in some locations but not others). The data held out as supportive of the general deterrent impact of sentence severity are not strong enough to allow one to conclude that there is a relationship between the severity of sanctions and crime. A strong finding would be one that appears to be reliable across time, space, and, perhaps, offense. The research examined in this essay favorable to the conclusion that there is a deterrent impact of the severity of sentences clearly does not fulfill these criteria.

An impressive body of literature has appeared in the past ten years [189] that has taken advantage of dramatic sentencing changes that have occurred in the United States (e.g., three-strikes legislation). The studies vary in their scope, but not in their findings.

There is no consistent and plausible evidence that harsher sentences deter crime. Moreover, these studies were frequently conducted in almost ideal research conditions in which one would, in fact, expect to find a deterrent effect. There was generally substantial publicity surrounding the introduction of these new sentencing laws. Hence, people would be likely to know (or at least believe) that harsh sentences would follow conviction for the offenses covered by these laws. Further, these sentencing changes have been studied in different countries and with different units of analysis (e.g., states, counties, cities, etc.). Finally, some of these studies were able to break down "punishment" into its various components (i.e., apprehension, conviction, sentencing), permitting an assessment of the separate or unique effects of sentence severity. Even under these conditions, sentencing levels do not appear to be important in determining crime. The effects are consistent: the severity of sentence does not matter. The hypothesis that harsher sentences would reduce crime through general deterrence—which is to say that there are marginal effects of general deterrence—is not supported by the research literature.

A. Accepting the Null Hypothesis

We started this essay by pointing out that we cannot logically "prove" that harsher sentences do not deter. Strictly speaking, one cannot prove the absence of a phenomenon. It may exist somewhere, but research may not have (yet) identified where this is. However, no consistent body of literature has developed over the last twenty-five to thirty years indicating that harsh sanctions deter. While one must always reserve judgment for the possibility that in the future someone may discover persons or situations in which the relative severity of sentences does have an impact on crime, it would not seem unreasonable to conclude that at present in Western populations and with the current methods and measures available, variation in sentence severity does not affect the levels of crime in society.

Our conclusion—and, for that matter, that of the majority of criminologists who have examined the hypothesis that variation in sentence severity has a deterrent effect—defies an intuitive appeal inherent in the logic of deterrence. Indeed, we seem to naturally (want to) accept the notion that any reasonable person—like ourselves—would be deterred [190] by the threat of a more severe sanction. This continued belief, however, is rooted, at least in part, in a simplistic form of reasoning about deterrence. We may not adequately separate the effects of certainty of apprehension and severity of punishment in our minds and, by extension, think of the latter largely within the context of a high likelihood of the former. As research has shown us (see Ross [1982] for a pertinent example), the assumption that the majority of offenses have a high probability of apprehension is clearly not a safe one.

We may also not adequately break down the actual process by which deterrence works. Indeed, many people may not be aware of the complex sequence of conditions that must be met if variation in sentence severity is potentially to affect levels of crime. As von Hirsch et al. (1999, p. 7) have outlined, for a harsher sanction to have an impact, individuals must first believe that there is a reasonable likelihood that they will be apprehended for the offense and receive the punishment that is imposed by a court. Second, they must know that the punishment has changed. It does not good to alter the sanction if potential offenders do not know that it has been modified. Consequences that are unknown to potential offenders cannot affect their behavior. Third, the individual must be a person who will consider the penal consequences in deciding whether to commit the offense. Finally, the potential offender—who knows about the change in punishment and perceives that there is a reasonable likelihood of apprehension—must calculate that it is "worth" offending for the lower level of punishment but not worth offending for the increased punishment. In other words, in arguing that a three-year sentence will deter more people than a two-year sentence, one is suggesting that a measurable number of people would commit the offense with a reasonable expectation of serving a two-year sentence who would not do so if they thought that they would serve a three-year sentence.

Viewed from this perspective, the lack of evidence in favor of a deterrent effect for variation in sentence severity may gain its own intuitive appeal. Clearly, the number of intervening processes that must take place between (a) the change in penalties for a crime and (b) the possible impact of that alteration on the population of potential offenders is considerably greater than most of us imagine. When one factors in the perceptual element at the root of deterrence, the complexity of the process only increases. The very logic upon which deterrence rests may break down. As Foglia (1997) found in her study of the perceived likelihood of arrest on the behavior of inner-city teenagers in a [191] large U.S. northeastern city, "the threat of formal sanctions means little to young people from economically depressed urban neighborhoods. . . . The irrelevance of arrest is understandable considering these young people have less to lose if arrested; also, they perceive less of a connection between behavior and legal consequences because they see many commit crimes with impunity and view law enforcement as arbitrary" (1997, p. 433).

If penalty structures are irrelevant to potential offenders, it does not matter how severe they might be. Or, more broadly, the deterrence process—as a perceptual model—is not nearly as simple as one might assume or the economist might contemplate when employing utility functions to explain why the chicken crossed the road against the red light.

B. The Consequences of Accepting the Null Hypothesis

The time has come to conditionally accept the null hypothesis: severity of sentences does not affect crime levels. This analysis assumes variation in sentence severity within fixed limits. We do not suggest that a one-dollar fine for armed robbery would be the same as a three-year prison sentence. Rather, we propose acceptance of the null hypothesis that variation within the limits that are plausible in Western countries will not make a difference.

Potentially the most intriguing ramification of this conclusion is for sentencing objectives. Principled arguments against sentencing according to deterrence principles have been made by others (e.g., von Hirsch 1985). It is not our purpose to review those arguments here. We simply suggest that in addition to those more theoretically based discussions, we should add another of a more practical or pragmatic nature. Deterrence-based sentencing makes false promises to the community. As long as the public believes that crime can be deterred by legislatures or judges through harsh sentences, there is no need to consider other approaches to crime reduction.

It may be no coincidence that sentencing systems that do not subscribe to general deterrence—in part or in whole—already exist in several Western nations. Finland bases its sentencing provisions on a principle of "general prevention" (i.e., educating the public about the seriousness of offending) rather than general deterrence (Lappi-Seppala 2000). Canada's new youth justice legislation focuses on imposing proportional sentences and avoids the notion that youths will be deterred by harsh sentences imposed on others (Doob and Sprott, forthcoming). Similarly, the Law Reform Commission of Ireland has [192] suggested that general deterrence has no place in a modern sentencing structure in large part because there is no credible evidence of its effectiveness (Law Reform Commission 1996, p. 6). Finally, the Swedish Ministry of the Attorney General notes in a discussion of sanctions that prison is not a deterrent (National Council for Crime Prevention Sweden 1997, p. 22). In other words, it no

longer appears to be a radical suggestion to accept that, like the missing sock, the general deterrent effects of harsher sentences do not exist.

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Crime and Justice

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Exhibit H

1 STATE OF SOUTH CAROLINA COURT OF GENERAL
2 COUNTY OF CHARLESTON SESSIONS
3 2016-GS-10-02117
4
5
6

7 STATE OF SOUTH)
CAROLINA,)

8 PLAINTIFF,)

9 VS.)

10 SAIVON CHISOLM,)

11 DEFENDANT.)
12
13

TRANSCRIPT OF RECORD

MAY 15, 2017
CHARLESTON, SC

14 B E F O R E:

15 HONORABLE R. MARKLEY DENNIS, JUDGE.
16

17 A P P E A R A N C E S:

18 RICHARD WARING, ESQUIRE
Attorney for the State

19 RODNEY DAVIS, ESQUIRE
Attorney for the Defendant
20

21 * * * * *

22
23 Ruth C. Weese, RDR
24 Official Court Reporter
Ninth Judicial Circuit
25

1 (The following proceedings were held
2 May 15, 2017, Charleston County, South Carolina, @
3 2:15 p.m.)

4 THE COURT: You are Saivon Chisolm?

5 THE DEFENDANT: Yes.

6 THE COURT: Mr. Chisolm, we were last
7 together on May the 12th and I discussed with you
8 the charges contained in these two indictments; is
9 that correct?

10 THE DEFENDANT: Yes, sir.

11 THE COURT: And you answered my
12 questions on that day; is that true?

13 THE DEFENDANT: Yes, sir.

14 THE COURT: And you gave me complete
15 answers and truthful answers; is that right?

16 THE DEFENDANT: Yes.

17 THE COURT: And when you concluded I
18 accepted your guilty plea; is that right?

19 THE DEFENDANT: Yes, sir.

20 THE COURT: And that's what you want me
21 to do?

22 THE DEFENDANT: Yes, sir.

23 THE COURT: Do you stand by each of
24 your responses to my questions that you gave me on
25 May the 12th?

1 THE DEFENDANT: Yes, sir.

2 THE COURT: Very well. I'll continue.
3 Solicitor, is there anything you wish to tell me
4 from the State? I will be happy to hear from you.

5 MR. WARING: Thank you, Your Honor. I
6 will try to be as brief as possible.

7 THE COURT: You take as much time as
8 you need.

9 MR. WARING: Thank you, Your Honor. We
10 went into the facts a little bit on Friday and I
11 just wanted to highlight a little bit. The
12 Defendant in this case, he admitted the gun was
13 his. It was used in the armed robbery, that it was
14 on him just before the incident happened. He
15 admits to riding around with five other guys in a
16 car looking to do a robbery or looking to catch
17 somebody slipping.

18 He admits that he physically frisked
19 the victim while she was being held at gunpoint and
20 to snatching her cigarettes out of her hand before
21 they got in the car and fled.

22 He admits that he and the gunman met up
23 with the other guys afterwards after the incident
24 and he was also caught driving the victim's car
25 while in possession of the same gun seven days

1 later.

2 Now, as briefly mentioned on Friday,
3 Mr. Davis is going to talk about how the Defendant
4 has cooperated. I argue that's slightly
5 inaccurate. Obviously I have a little different
6 perspective. The Defendant did come to our office
7 and told us a story, but it was the same story that
8 he had told the police. He had given five
9 different stories and we gave him a chance to give
10 the full story and also provide names of who else
11 was in the car. He couldn't do that. It was only
12 about two weeks before trial that he came forward
13 with the name. As it turns out, that individual
14 says he wasn't in the car, that Mr. Chisolm is
15 lying.

16 Throughout this whole process from the
17 moment he was arrested the Defendant has provided
18 what I would consider piecemeal information that
19 paints himself in the best light possible. For
20 example, what I think is important to note is right
21 before the incident occurred while they were in the
22 car and he was with the other individuals when they
23 otherwise would have talked about doing the actual
24 robbery he claims the gun was in his possession,
25 but he was asleep and when he woke up the gun was

1 out of his possession with the gunman who was then
2 running towards the vehicle to commit the armed
3 robbery.

4 And that's when he got out and
5 participated in the armed robbery. The other issue
6 is that he stated he didn't know who the other guys
7 in the car were. He admits to calling them after
8 the incident to meet up. And so I don't think he
9 would have their numbers unless he knew who they
10 were. The bottom line is that we don't think that
11 he's credible based on what he said, Your Honor. I
12 still don't think he is giving the full story so we
13 don't consider his coming in to talk to us
14 cooperation. We think there is just too many gray
15 areas that don't make sense. And in the end I had
16 to choose what would be credible witnesses to put
17 up against the other guy, and in his current state
18 I just don't think that he is credible.

19 I don't think he should be rewarded for
20 that with a minimum ten years. I consider this to
21 be not the most serious, but fairly serious armed
22 robbery case. The victim is here today, Ms. Hooks.
23 She had just got off work and got in the car. She
24 is a hard working civilian and she was in the
25 privacy of her own car minding her own business

1 when she got yanked out of it and had her car
2 stolen in a violent manner. I think that's
3 something that probably calls for something in the
4 15 to 20 year range. She is here and would like to
5 speak.

6 THE COURT: Sure. Again, what's his
7 record?

8 MR. WARING: Your Honor, he has no GS
9 record.

10 THE COURT: I appreciate that. I will
11 be happy to hear from you, ma'am, thank you.

12 MR. WARING: Ms. Hooks.

13 THE COURT: Anything she wants to tell
14 me be glad to hear from her.

15 MS. HOOKS: Good afternoon. My name is
16 Christina Hooks.

17 THE COURT: Yes, Ms. Hooks.

18 MS. HOOKS: I was getting off work and
19 it was an empty parking lot and got into my car. I
20 was in my car a few minutes when he approached
21 along with somebody else. And so my life changed a
22 year and-a-half ago.

23 THE COURT: No question.

24 MS. HOOK: On that night on January
25 24th at 8:35 and I have had a couple doctor

1 appointments. I don't sleep well. And, Your
2 Honor, his crimes against me were premeditated.
3 They basically sat in the Citadel Mall parking lot
4 and plotted to comit a crime against me. They
5 watched me at my work and watched me walk to my car
6 alone. And it was planned. There was no other
7 cars in the parking lot so they laid in wait. He
8 laid in wait for me and watched me walk to my car
9 and I was just -- everybody said to me that I was
10 in the wrong place at the wrong time and I wasn't
11 in the wrong place. I was just leaving work. All
12 I wanted to do was go home and I don't know how
13 long they sat out waiting for me, but they were
14 hiding.

15 And they made sure that I just was like
16 this. I had my hands out like this and I did have
17 a pack of cigarettes in my hand because I was just
18 trying to get out of my car as fast as possible and
19 just comply. The only reason I am standing here
20 today is because I complied. And he came up to me.
21 I guess he thought it was a cell phone and they
22 wanted to make sure that I could not call anybody,
23 that I could not get in touch with law enforcement.
24 And I never felt so helpless and scared and just
25 scared being in the room with him right now, but

1 there is a lot stuff stolen from my car. I had
2 taken off my engagement ring. It was worth eight
3 thousand dollars. That's gone. Just a lot of
4 things, you know, that beside the fact that I
5 didn't get my brains blown out, thank God. I had
6 to quit my job because my manager had me on nights
7 that next week and I couldn't do nights and I don't
8 go anywhere by myself. I don't like to leave the
9 house and go anywhere by myself.

10 And so I am asking for the maximum. I
11 am asking for the max if you have it in your power
12 because what I have gone through the last year
13 and-a-half just hasn't been fair. Just hasn't been
14 fair. And he was very much a part of the process
15 of what they did to me, but I also -- I really want
16 to thank Mr. Waring because I couldn't have got
17 through this without him. I really couldn't.
18 Thank you so much, Mr. Waring, for everything. And
19 thank you for listening to me, Your Honor. I
20 probably have a million things that I could say but
21 just nervous.

22 THE COURT: That's all right. I
23 understand that and I appreciate. I am sorry that
24 you are here under these circumstances, but the
25 bottom line is I understand fully what you're

1 talking about. I have been doing this for 23 years
2 now. I practiced law for 21. And as I have said
3 before in this courtroom and other courtrooms,
4 growing up you don't realize how significant things
5 are in your life. These are things that I had
6 nothing to do with, I just happened to be born in
7 the family. One thing I will tell you I will
8 preface it with what I am about to share with you
9 is everything that you have talked about today is
10 very relevant and part of a process that I took
11 part in as a lawyer. I have tried cases in civil
12 court all the time dealing with damages. Those are
13 all damages. And those are -- for that you get
14 compensated to the extent money can restore that
15 and we all know, that's ridiculous. No amount of
16 money in the world can restore that.

17 And likewise there's no amount of time
18 that can restore that. If I thought for one second
19 giving him 30 years would suddenly make you -- put
20 you back as you were I would do it in a heartbeat,
21 but that's going not to happen. And I know that
22 because I happened to watch when my father died.
23 He died when he was 81. And he had three sisters
24 and three brothers. Can't speak for the brothers.
25 His sisters seemed to adjust and I don't know why.

1 But my grandfather was gunned down,
2 assassinated on Main Street in Moncks Corner when
3 he was 54 years old. Shot in the face with a
4 shotgun. And the day my father died he was still
5 bitter about the people that he believed were
6 involved, all of them. There was a conspiracy and
7 I am convinced there was because the person that
8 did it was a person that was mentally challenged.
9 And was for \$500 and a Chevrolet. And it was a
10 group of persons that were involved in certain
11 activities back then in the 30s in prohibition.
12 You understand probably what that was.

13 But I will tell you this. He didn't --
14 he never forgot it. So I understand what you are
15 doing. I hope you will find peace in my answer,
16 somehow that they worked through that and were able
17 to adjust. But I assure you I understand and I am
18 sorry. But they give us ten to 20 and ten to 30
19 for a reason. And frankly I had one this morning.
20 I agree with everything you said. But frankly if
21 you were the worst person in the world, if you were
22 just a person that was a homeless person, not to
23 say they are not wonderful people, but it shouldn't
24 change how we look at punishment. Because the
25 crime is the horrible -- it's horrible. I would

1 agree with you. You have used the term. It is one
2 of the things that I thought about a number of
3 times, probably it is worse than murder because you
4 don't know whether you are going to die or not.
5 That's the thing. The trauma to you of sitting
6 there, is this going to be the end of my life. And
7 to be able to think about it. Most murders people
8 don't even know they are going to die. It happens
9 suddenly.

10 So I hear you. I understand it. And I
11 thank you for being here. As I said, I am glad you
12 are here. I hope you can find some peace.

13 MS. HOOK: Thank you, Your Honor.
14 Helps a lot.

15 THE COURT: Mr. Davis, I will be happy
16 to hear from you. Anything else, solicitor?

17 MR. WARING: No, Your Honor.

18 THE COURT: Mr. Davis, I will be happy
19 to hear from you.

20 MR. DAVIS: Judge, I think it would be
21 appropriate if you don't mind, normally I speak
22 first and then if my client has something to say.
23 We have talked long enough.

24 THE COURT: Whatever order. I will be
25 happy to from you, Mr. Chisolm.

1 THE DEFENDANT: I'd like to apologize
2 first to my family about the things that have
3 happened throughout the time even though I know
4 that they forgive me for what happened throughout
5 the time. I'd also like to ask for forgiveness
6 from Mrs. Hooks. I know what happened. I also
7 know the things that she had went through after
8 what happened. I know what it has caused for her.
9 If she was to ask me now or ask me any other day I
10 don't have an answer for her. I don't know why it
11 happened. Wasn't really my intention, but all I
12 can do is ask for her forgiveness. No matter what
13 happens here today it would make me feel better if
14 she forgive me. And I would like to ask for your
15 discretion and for you to be lenient towards my
16 sentencing. That's all I have to say.

17 THE COURT: Thank you.

18 MR. DAVIS: May I approach, Your Honor?
19 I have a letter from his grandparents and from his
20 uncle.

21 THE COURT: Have you seen these?

22 MR. WARING: No, Your Honor. But
23 that's okay.

24 THE COURT: Yes, sir.

25 (Reading.)

1 Thank you, Mr. Davis. I have reviewed
2 the letter from Samson Hewitt, Beverly Chisolm
3 Hewitt and Mr. Gregory L. Chisolm.

4 MR. DAVIS: In court with us today is
5 his grandmother, his mother and one of his three
6 sisters. They are on the front row with us here
7 today.

8 Judge, as an administrative matter,
9 it's 469 days in jail. And just to continue that,
10 the unlawful carrying is a year so we hope he has
11 satisfied one year.

12 THE COURT: Right.

13 MR. DAVIS: Judge, he is 22 years old
14 now. He just passed his 20th birthday when this
15 happened. He is a father now. The child is just
16 over almost two years, here in the area. He has
17 been incarcerated for a little over a year now,
18 Judge. You saw briefly there his uncle's letter to
19 you while he was working here. He had gone to the
20 10th grade at West Ashley High School. He did get
21 his GED in 2014 when he was with his uncle staying
22 up in Virginia. His uncle is now on the west coast
23 in the military. He had done some housekeeping
24 work, he had worked at some hotels trying to make
25 his way as a 20-year old.

1 I want to add a little bit to what the
2 solicitor said. It's undisputed that his younger
3 friend is the one that took the gun and approached
4 Ms. Hooks first. It's also undisputed from his own
5 statements, Saivon's own statement, that he joined
6 in. Here was his role in that. It was his weapon
7 that was used. Here was his role in it. To catch
8 up to his friend when he first approached, he was
9 back in the car until the friend ordered him to
10 grab what was in her hand. Presumably it was a
11 cell phone. He did.

12 His involvement was so quick that she
13 could not identify him. She was able to identify
14 Devonte because Devonte's photo was put in a lineup
15 because he gave his name.

16 Now, he was nervous when he was first
17 arrested a week later in the vehicle, but he
18 complied with the felony traffic stop. Came out,
19 no incident whatsoever. And approximately an hour
20 or so into the interrogation, a very calm
21 interrogation, I commend the detective in the way
22 he handled this, first trying to distance himself.
23 He then began to talk about what had happened, what
24 he had been involved in and he placed himself right
25 in the middle of this and for that he pled on

1 Friday because it was my advice to him with his own
2 words he was unlikely to be successful at trial.

3 We also talked about the fact that this
4 plea prevents Ms. Hooks from having to testify,
5 having to relive this again in great detail, having
6 to face cross-examination. None of that will have
7 to happen. We hope she can take some comfort from
8 that.

9 I understand the State's position, but
10 Judge, I could not disagree more. We met with him
11 for two hours. And simply because he did not share
12 the story in a way that perhaps -- I grew up in
13 rural West Virginia. I didn't run the streets. We
14 didn't have streets to run.

15 So the way he explained what happened
16 that night may not have fell well on the
17 solicitor's ear, but I am very confident, very
18 confident he gave truthful information in that two
19 hour debriefing.

20 And the solicitor mentioned two weeks
21 before we begin the trial he gave a name. His name
22 was in the discovery the entire name. They had the
23 information already. We simply confirmed, yes,
24 that was one of the folks in the car, almost exact
25 same birth date as Devonte. When approached

1 recently he denied it.

2 We understand. We provided everything
3 we could. I am frustrated that I was not able to
4 get a better result in this case for him. It meets
5 the elements of armed robbery, no doubt about it,
6 Judge.

7 He's 22, 20 at the time. Not only no
8 conviction, never arrested, Your Honor. He has no
9 juvenile conviction. Never been arrested. No law
10 enforcement contact prior to this.

11 He was carrying a weapon unlawfully.
12 Where he grew up the way he talks in this
13 confession about his neighborhood and the next
14 neighborhood over, I am thankful I didn't grow up
15 having to worry about my safety. I don't know
16 whether I would have gotten it together or not as a
17 young man. But he did. I was unable to get the
18 State to work anything out with him. We had hoped
19 that they would try his co-defendant first. And I
20 can't wrap my head around the fact that he is not
21 credible to use against these co-defendants, but
22 his story is sure credible enough to try him this
23 week. I just don't understand that with his own
24 confession, both to law enforcement and the
25 solicitor's office and Ms. Hooks identification of

1 the co-defendant. I have been told they may not
2 even try that case. I can't possibly fathom that.
3 I hope they change their mind.

4 But he has provided everything he
5 could, Judge, and I am incredibly frustrated at my
6 inability to convince the State that he had done
7 that and he was deserving for leniency under the
8 mandatory minimum 10 at 85 percent.

9 If you were to sentence him to that, he
10 has done just over a year, about a year and three
11 months. He will have a third of what he has lived
12 on this earth ahead of him to serve in prison. He
13 will come out just under 30 years old. We have
14 talked, this is one of the few judges, you have
15 known me for about 15 years. Yes, I am emotionally
16 invested in this because I think this young man
17 made a horrible mistake, but I can't believe this
18 is only a pound of flesh that he is sacrificing. I
19 wonder about him when he comes out at 30 without
20 having the benefit of being -- without the chance
21 of not serving that sufficient time.

22 Judge, he was sent a letter threatened
23 by his co-defendant. We provided that to the State
24 as well. Not only was he referenced, but his
25 family was referenced. Yet we met with him and yet

1 we met with him. I don't know what more he could
2 have done. I have placed myself in the position of
3 him as best I can. I also remember the words of
4 the solicitor. We need our citizens to help us
5 prosecute cases. He was involved. He admitted it.
6 I don't know what more he could have done. He will
7 never make it right to Ms. Hooks, but I don't know
8 what more he could have done.

9 Respectfully, Judge, because of my
10 emotional connection to this, I will reference age
11 wise, he is a youthful offender. I know that's
12 apparent. But change starts somewhere. If you see
13 fit I would ask you to consider a nonconforming Y.
14 I will also reference the state statute that other
15 than death penalty case or a life imprisonment,
16 Section 24-21-410, despite that Johnson case,
17 compared to a more specific statute, that that
18 statute allows you discretion to dispense any
19 sentence you see it.

20 I have talked to him and his family
21 about Your Honor and how I respect you and you are
22 unlikely to be persuaded by either one of those
23 arguments, but I hope you understand why in this
24 particular case I would ask you to consider it. If
25 you are not inclined to do that, Judge, I would

1 hope that what has been presented to you today is
2 minor, although legally complete involvement in
3 this case, and what he has done since then to try
4 to make it right, try to insure that the lead
5 person, the gunman is convicted.

6 We need no more than the mandatory
7 minimum in this case, Your Honor. He will serve a
8 third of the life he's already lived in prison and
9 we beg for you to be that lenient.

10 THE COURT: Okay. Thank you very much,
11 Mr. Davis. Is there anything else?

12 MR. WARING: No, Your Honor.

13 THE COURT: Mr. Chisolm, it is a tough
14 time for everyone to grow up. And I have six
15 grandchildren. And I don't relish what they are
16 going to face ten years from now getting close to
17 where you are.

18 We as a society have to recognize and
19 hopefully we will begin to do that somewhere along
20 the line, young people have got to be willing to
21 say no; and not only say no, but help stop
22 something, not after it's happened. I am glad you
23 took some action, but the one thing I knew and we
24 had it this morning, I was a part, I believe in
25 this adversarial system we have with every fiber in

1 my body. It's a fabulous system and I have
2 wonderful advocates before me here. I respect both
3 of you. You are doing exactly what you're supposed
4 to do. You are advocating for your respective
5 position. I love that. But, you know, we sit here
6 and what punishment is appropriate. I wish I had a
7 magic answer. I have been searching for that
8 23 years. I don't believe that I have found that
9 yet. But we have some flexibility and I -- for the
10 reasons that you did cooperate, provide maybe not
11 the fullest extent, but a 20 year-old facing with
12 what you possibly faced and facing where you are
13 going, the sad thing is this follows you. You know
14 that. That word travels fast within the correction
15 system. And we know that and you have tragic
16 examples of that.

17 It's not going to be a pleasant time
18 for you. You know that and shouldn't be. It
19 wasn't a pleasant time for Ms. Hooks either. And
20 as I say, this doesn't make her any better or
21 alleviate any of the pain she has and will have. I
22 don't have any problem with it not being pleasant.
23 And, Mr. Davis, I don't disagree with you. I wish
24 we had some flexibility we had when we first
25 started. And be that as it may, maybe one day we

1 will return to that. I don't know that we will.

2 But anyway, so the sentence I'm going
3 to fashion is this: And so that Ms. Hooks
4 understands, I'm going to give the minimum time
5 sentence, but it is going to fashion something
6 else. Because I want this young man to prove that
7 he is sorry and one of the things I have learned
8 and maybe you have, too, words are cheap. It takes
9 actions. And the way you prove that you are sorry
10 is not by standing here and I know that took a lot
11 of courage to do what you just did, but the way you
12 prove that is you have manifested by your actions.
13 You show that you're sorry by doing something with
14 your life, doing something positive with your life.

15 I will share this with you. It
16 happened in this courtroom in fact. Several years
17 ago I took a plea in a felony DUI. Daughter was
18 killed. Lady came from Virginia. And I will never
19 forget because I think about it a lot. When it
20 came time to sentence she said I don't think he
21 should go to jail. It was mandatory minimum of one
22 year. I didn't abide by that. I felt like he
23 should serve five years. It was probably fashioned
24 because of what she said. She said my daughter's
25 birthday, and she gave it was such and such a day.

1 I want you to call me every year on her birthday.
2 She said not to talk about my daughter, but to tell
3 me what you have done with your life so that I know
4 that what's happened here today some positive has
5 come out of this and only then will that make me at
6 least say okay, not that she has been sacrificed
7 for it, but something good had to occur. Not that
8 you have to call Ms. Hooks. I am not advocating
9 that. She will have ways of knowing. And I hope
10 you will do that. I hope you do something
11 positive. But the sentence of the Court is -- you
12 understand about every two-year period?

13 THE DEFENDANT: Yes, sir.

14 THE COURT: And it is very important
15 that you understand that because what you are going
16 to have is you are going to serve about eight
17 and-a-half years and then you are going to have a
18 community supervision program. The sentence of the
19 Court on 2016-2117 is 16 years. Provided upon the
20 service of ten years the balance is suspended.

21 What does that mean? That means simply
22 this. You get out. You have served eight
23 and-a-half years. That means you have seven
24 and-a-half years that are hanging over your head.
25 You have to do a two year community supervision.

1 That means you have to abide by probation and if
2 you don't a judge can return you to jail in one
3 year increments until the balance of that seven
4 and-a-half years is satisfied.

5 And they can do it in half year time.
6 And when you come out you got a two-year period.
7 You got to do it again. And so you could do the
8 math. If you figure seven times, that's seven
9 years down plus you could say a year and-a-half,
10 you could double that and it would be 14 years that
11 we had you under supervision.

12 So just keep that in mind because you
13 are going to show us because if you don't, this
14 group, I have returned several from time to time.
15 They don't have any hesitancy about it and neither
16 do I given the nature of this crime sending you
17 back for a year at a time. So good luck to you.

18 MR. DAVIS: Judge, the weapon?

19 THE COURT: Weapons charge, one year
20 and get credit for one year. Thank you. Get
21 credit for 469 days. Thank you.

22 (These proceedings were concluded at
23 2:42 p.m., May 15, 2017, Charleston County, South
24 Carolina.)
25

1 CERTIFICATE OF REPORTER

2
3 I, Ruth C. Weese, Registered Diplomat
4 Reporter for the State of South Carolina at Large,
5 do hereby certify that the foregoing transcript is
6 a true, accurate, and complete record.

7 I further certify that I am neither related
8 to nor counsel for any party to the cause pending
9 or interested in the events thereof.

10 Witness my hand, I have hereunto affixed my
11 official seal this 29th day of May, 2017 at
12 Charleston, Charleston County, South Carolina.

13
14 *Ruth C. Weese*

15
16 _____
17 Ruth C. Weese

18 Registered Diplomat

19 Reporter
20
21
22
23
24
25

Exhibit I

**FY13-FY17 SCDC New Admissions from Court from Charleston County
with Most Serious Offense of Armed Robbery
Total Sentence for Commitment**

Total Sentence	Number of New Admissions per year				
	FY13	FY14	FY15	FY16	FY17
6 Years	0	0	1	0	0
10 Years	6	9	5	8	7
11 Years	0	0	1	0	0
12 Years	1	3	5	1	3
13 Years	0	2	1	2	0
14 Years	0	0	0	2	0
15 Years	1	2	0	1	2
16 Years	0	1	0	0	0
18 Years	0	1	1	1	0
20 Years	1	1	2	1	0
22 Years	0	1	0	0	0
25 Years	1	0	1	1	0
30 Years	0	0	1	0	0
35 Years	1	0	0	0	0
65 Years	0	0	2	0	0
Life with No Parole	0	1	0	0	0
Total Admissions	11	21	20	17	12

Notes: Total Sentence includes all offense sentences in the commitment.

The two admissions in FY15 with 65 years total sentence received 30 yrs for armed robbery, 30 yrs attempted murder, 5 yrs firearms (all consecutive)

The FY14 admission received life with no parole for the armed robbery offense

Exhibit J

STATE OF NEVADA

)

COUNTY OF CLARK

)

AFFIDAVIT

Vera F. Dolan who appeared personally before me, affirms and states the following:

1. I, Vera F. Dolan, am an epidemiologist and consultant. My business is located in Las Vegas, Nevada.
2. *Referral Question:* In 2015, I was asked by a lawyer representing a juvenile previously sentenced to life without parole to conduct an investigation and develop a life table with life expectancies specific to male inmates in the South Carolina Department of Corrections ("SCDC"). The question to be answered by my investigation was: what is the proper and accurate life expectancy for a male entering SCDC at the time he was a juvenile?
3. *Qualifications:* I am an epidemiologist¹ with a Bachelor's degree in public health from Johns Hopkins University and a Master's of Science in Public Health in epidemiology from the University of North Carolina, Chapel Hill. I have over 30 years of experience in the life and health insurance industries. I am a Fellow of the Academy of Life Underwriting, which is the highest credential in life insurance underwriting. I am currently a private consultant for the life insurance industry and related industries.
4. I have published over 33 peer reviewed articles in which I prepared a mortality ratio analysis from raw population data. I have prepared life tables for over 35 years, beginning when I was a student studying for my Masters of Science in Public Health. My current curriculum vitae is attached as Exhibit 1.
5. I have been qualified as an expert in life expectancy, life insurance, and epidemiology in state and federal courts throughout the country. In South Carolina, I was qualified as an expert in life expectancy and epidemiology in the Williamsburg County Court of General Sessions. In that court, I testified about my South Carolina study and life expectancy findings for SCDC inmates.
6. *Definition of Relevant Terms:*
 - a. **Life expectancy:** the statistical calculation of the average length of life expected for an individual of a certain age, sex, race, and/or other risk factor.
 - b. **Life table:** data laid out in a table format to show how a statistical calculation of life expectancy is done.

¹ An epidemiologist is similar to an actuary in that both are professionals who create life tables to determine life expectancies for various populations. Epidemiologists, unlike actuaries, have a medical background and specialize in the study of health and disease in populations statistically.

- c. **Mortality rate:** the rate at which people die within a given age, sex, race and/or other risk factor group. A mortality rate is calculated by dividing the number of deaths occurring within a given population by the total number of that population at risk of death.
7. *South Carolina Code Life Expectancy Tables:* The South Carolina legislature adopted life expectancy tables, which are contained in S.C. Code § 19-1-150. The tables found in the South Carolina Code were derived from the 2001 Commissioners Standard Ordinary Mortality Tables ("CSO Mortality Tables"). The CSO Mortality Tables were created by the Society of Actuaries in conjunction with the National Association of Insurance Commissioners to provide statutory guidance to state insurance commissioners in figuring out what statutory reserves should be for insurers in their state. The CSO Mortality Tables do not reliably predict the life expectancy for the general population or an incarcerated population because they are based on the lives of insured people, essentially selecting a portion of the population that is much healthier than the general population. An additional problem with the tables is that they were created in 2001 with data much older than 2001 causing concerns that the data relied upon by the tables is outdated and unreliable.
 8. *Methodology:* To determine life expectancies for male inmates in SCDC, I reviewed approximately 68,000 male inmate records provided to me by SCDC.² The SCDC information included a unique identifier for each inmate (in place of the inmate's name), their date of entry to SCDC, their age at entry, and the date of release or death (where applicable). Those records originally included all inmates incarcerated from 1996-2015 and included follow-up data through the first half of 2016. Of the 68,000 records, I identified 3,000 duplicate records and excluded them from my final data set. I also identified and excluded a small number of records where the dates of admission and dates of death or release were incongruent. After making these exclusions, I reviewed the records of the remaining 64,204 unique inmates. For purposes of this affidavit, the records of the 64,204 inmates reviewed are referred to as the "SCDC Population."
 9. In the SCDC records provided to me was information from the South Carolina Department of Health and Environmental Control ("DHEC") on all of those individuals who died between 1996 and 2016. As part of the preparation of the records provided to me, DHEC used the identifying information provided by SCDC to link the SCDC database with DHEC's information. I was thus provided with the

² I did not receive data from the South Carolina Department of Juvenile Justice, so I did not have sufficient data to calculate the mortality rates of 15, 16, or 17 year olds. This does not affect the accuracy of the reported life expectancies for inmates 18 years old and older because, as discussed below, life expectancy is based on mortality rates for people the same age as the individual and those older than that individual.

date of death and the age at the time of death for each individual within the SCDC population who died at some point after they entered SCDC.³

10. *Mortality Rate Calculation:* To determine life expectancies from the SCDC Population, I first needed to determine the mortality rates for each year of age of people incarcerated in SCDC. Exhibit 2 shows my mortality rate calculations for all individuals incarcerated in SCDC between 1996 and 2015 (Exhibits 3 and 4 show my calculations for black inmates only and white inmates only, respectively). The following is a description of my mortality rate calculations, using column references to the tables in Exhibits 2, 3, and 4.
 - a. The first column labeled **Age** lists ages 15 through 97. This range was used because an individual who was incarcerated at SCDC at some point between 1996 and 2015 was alive at each age between 15 and 97.
 - b. The second column labeled **Alive** represents the number of men from the SCDC Population who passed through a given age during the time period between 1996 and 2015.
 - c. The third column labeled **Dead** provides the number of men within the SCDC Population who died at a given age any time between 1996 and 2016.
 - d. The fourth column labeled **Total** provides the total of the “Alive” and “Dead” columns, which is the total population at risk of death during a given age.
 - e. The fifth column labeled **Mortality Rate** provides the rate at which men in the SCDC population die at any given age. The mortality rate is calculated by dividing the number of people who died (column three) at a given age by the total number of people at risk of death (column four) during the same age.
 - f. The sixth column labeled **Smoothed Mortality Rate** provides the trend of the mortality rate. In statistics, when dealing with raw data like the data relating to the population considered in this case, the rate calculations can have anomalies and bumps such that smoothing is necessary to identify the actual trend over time. To find the trend for the SCDC population mortality

³ The individuals died either during their incarceration or after their release from SCDC. Reliance on mortality information both during incarceration and after release is standard methodology in the actuarial field for calculating the life expectancy of individuals who have been incarcerated. Using this data provides the most reliable calculation for the life expectancy of a juvenile sentenced to a prison term of any length of time. Other analyses, including a study of deaths of incarcerated individuals serving life sentences shows the observed age at the time of death for those individuals who died while incarcerated is substantially lower than the life expectancy calculated from the data obtained from DHEC. See ¶¶ 17-18.

rate, I calculated the three-year moving average of the mortality rates by averaging a given age's mortality rate with the two ages surrounding it. As the data became sparser at the older ages, I used a five-year moving average, which included the mortality rate at a given age and the two ages above and below it. This calculation found the trend in these mortality rates for a more accurate calculation of life expectancies at each age.

11. *Mortality Ratio Calculation:* I next compared the SCDC Population mortality rates with the general United States population mortality rates.

- a. The seventh column on Exhibits 2-4 labeled **US Population Mortality Rate** provides the most current mortality rates by age for males in the US population available at the time of this analysis. These mortality rates were determined by the Centers for Disease Control ("CDC") and is used in life tables published in the CDC's Vital Statistics Reports. The CDC mortality rates are calculated for life tables for the all US males, for black US males only, and for white US males only; these life tables are attached as Exhibits 5, 6, and 7 respectively.⁴ On SCDC Population Mortality Rate tables (Exhibits 2-4) for various races, the US Mortality rate was obtained from the US Life Table for the same race.
- b. The eighth, and final column, on Exhibits 2-4 labeled **Mortality Ratios** compares the smoothed mortality rate from the SCDC Population at a given age with the US Population mortality rate for the same age. The mortality ratio is calculated by dividing the SCDC Population mortality rate by the US Population mortality rate, meaning any mortality ratio over 1.0 indicates the SCDC Population mortality rate is higher than the US Population mortality rate. Mortality ratios are provided only for ages in which there were at least five deaths among the SCDC Population in order to ensure the accuracy of the resulting ratios and life expectancies.

12. *Race Specific Calculations:* I created mortality rate and mortality ratio tables for all races, blacks only, and whites only because doing so is consistent with the CDC analysis of the US population, which shows that race has a significant effect on mortality rates.

13. *Creation of Life Tables:* Life tables provide life expectancies based on mortality rates from a given population. Using the mortality ratios calculated in Exhibits 2-4, I created life tables for the SCDC Population. I created individual life tables for all males, all black males, and all white males, which are attached as Exhibits 8, 9, and 10, respectively. The following is a description of the life expectancy calculations, using column references to the tables in Exhibits 8, 9, and 10.

⁴ The mortality rates on the CDC US Population Life Tables are found in the column labeled **Probability of dying between ages x and x + 1** on Exhibits 5-7.

- a. The first column labeled **Age** lists all ages 0-100.
- b. The second column labeled **Basic Mortality** provides the mortality rate at a given age from the US Population Life Tables (Exhibits 5-7).
- c. The third column labeled **Mortality Risk Factor** is the mortality ratio calculated on the SCDC Population Mortality Rate Tables in Exhibits 2-4.
- d. The fourth column labeled **Adjusted Mortality** provides the US mortality rate for a given age adjusted by the mortality risk factor (mortality ratio) using multiplication.⁵ At ages where there was sufficient mortality data (five or more deaths at any given age) from the SCDC Population, the adjusted mortality rate equals the mortality rate calculated from the SCDC Population data.⁶ At ages where there was insufficient mortality data (four or less deaths at any given age) from the SCDC Population, the adjusted mortality rate equals the US Population mortality rates.
- e. The fifth column labeled **Population at Risk** starts with a hypothetical cohort, or population of 100,000 at age 0. This population is decreased at each successive age by the number of deaths that occurred at the previous age. For example, in the SCDC Life Table for all races (Exhibit 8), the population at risk in age 0-1 is the full hypothetical cohort of 100,000 less 658 deaths that occurred during the first year of life.
- f. The sixth column labeled **Deaths** provides the number of deaths expected to occur at a given age. This number is calculated by multiplying the adjusted mortality rate (column four) by the population at risk (column five).
- g. The seventh column labeled **Interval Person-years** provides the number of years lived by the remaining population during a given age. This is calculated by subtracting one half of the number of deaths during that age from the population at risk during a given age (this assumes the individuals who die during that year live an average of half the year before dying).
- h. The eighth column labeled **Cumulative Person-years** provides the total number of years left to be lived by the entire population surviving to a given

⁵ I used the mortality ratio (comparing the SCDC Population mortality rates to the US Population mortality rates) because I did not have mortality rates for all ages from the SCDC Population data. Specifically, there is not sufficient data for male SCDC inmates at the very youngest and very oldest ages. In order to create a credible life table, one needs to have mortality rates for all of the ages. Use of the mortality ratio to create an adjusted mortality rate is standard practice in the actuarial field when reviewing populations that do not have enough data to calculate credible mortality rates for all ages.

⁶ These ages are designated by highlighting in the Mortality Risk Factor column.

age. This is calculated by totaling the interval-person years for a given age and all of the ages after that age.

- i. The ninth column labeled **Life Expectancy** provides the remaining life expectancy for any SCDC inmate surviving to a given age. It is calculated by dividing the cumulative person-years (column eight) by the population at risk (column five) at a given age.
- j. To use the life expectancy to calculate the age to which an SCDC inmate is expected to live, on average, locate the age of the inmate in the age column and identify the corresponding life expectancy, then add the person's age to the life expectancy. For example, on the Life Table for blacks only (Exhibit 9), a black male inmate in SCDC at age 18 has a remaining life expectancy of 38.2 years. This individual would, therefore, be expected to live to age 56 ($18 + 38.2$).

14. *Notes on Using Life Tables:* Because race is a risk factor affecting life expectancy, it is most appropriate to use the life table for the race corresponding to the actual inmate to determine the life expectancy for that inmate. For example, a black male inmate's life expectancy is most accurately determined by using the Life Table for black males only (Exhibit 9). A white male inmate's life expectancy is most accurately determined by using the Life Table for white males only (Exhibit 10). Hispanic or Latino inmates' life expectancies are most accurately calculated by using the Life Table for white males only (Exhibit 10) because SCDC classifies them as white.⁷ Life expectancies for inmates of other races can most accurately be calculated by using the Life Table for all races⁸ (Exhibit 8).

15. *Findings:* The SCDC Population Life Tables (Exhibits 8-10) can be compared to the US Population Life Tables (Exhibits 5-7). Comparing the life expectancy for 18 year old males of any race in the general US Population and the SCDC Population reveals that an 18 year old in the general US Population has a remaining life expectancy of 59.1 years (expected death at 77 years old) and an 18 year old male in SCDC has a remaining life expectancy of 37.3 years (expected death at 55 years old). The 18 year old who is incarcerated in SCDC, accordingly, has a life expectancy that is 21.8 years shorter than a male in the general US Population.

⁷ Because SCDC does not classify Hispanic or Latino inmates separately from whites, the white male only mortality rates and life table include data from Hispanic and Latino inmates.

⁸ In addition to classifying inmates as black or white, SCDC uses classifications for Pacific Islander, Asian, American Indian, unknown, and other, but these categories of inmates did not include a sufficient number of inmates to allow for creation of a life table specific to them. Thus, all races are included in the Life Table for all races and that table can be used for inmates who do not fall within the black, white or Hispanic/Latino categories.

16. The Life Tables created based on the SCDC Population clearly indicate that any person who has been incarcerated in SCDC has a lower life expectancy than a person in the general US Population.
17. *Observed Data on Deaths in SCDC*: SCDC also provided me with information on all inmates serving a life sentence who died in SCDC between January 2001 and June 2016. The number of deaths during this period was not sufficient to create a credible life table for inmates serving life sentences who died while incarcerated.⁹ I was, however, able to compare the actual life span of the individuals who died to their expected age of death based on the US Population Life Tables.¹⁰ I grouped these individuals by the age of their last admission to SCDC and calculated the average number of years difference between their actual age at death and their expected age at death in the table below.

Age at Last Admission Group	Average Difference Observed vs Expected Age at Death
16 to 19	-31.8
20 to 24	-26.5
25 to 29	-21.4
30 to 39	-21.7
40 to 49	-16.8
50 to 59	-10.0
60 up	-4.9

As this table shows, the individuals sentenced to life who entered SCDC between the ages of 16 and 19 died while incarcerated an average of 31.8 years earlier than predicted by the US Population life expectancies.

18. The SCDC Population Life Table for all races shows (Exhibit 8) a life expectancy for a 16 year old male incarcerated in SCDC for any length of time is 39.2 years, which is 21.8 years less than the life expectancy of a 16 year old male in the general US Population. The calculations above, based on observed deaths, show the actual

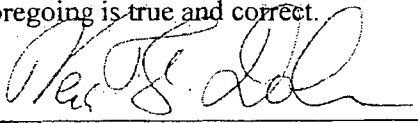
⁹ In order to create a credible life table, the population data must include five deaths at each age. During the period of 2001 to 2016, there were 262 deaths among inmates serving a life sentence. This was insufficient data to create a life table. While the data set is not large enough to create a life table, it is sufficient to show the mortality risk trend of people serving life imprisonment in SCDC as compared to the general US Population.

¹⁰ Because these deaths occurred between 2001 and 2016, I used the life expectancies published in 2000 for the general US Population. Since 2000, the life expectancies for the general population have increased.

life span of a 16 year old serving life imprisonment was 31.8 years less than the life expectancy of a 16 year old male in the general US Population. This demonstrates that a male incarcerated in SCDC for life is at a much higher risk of mortality and has a significantly shorter life expectancy than the general US Population.

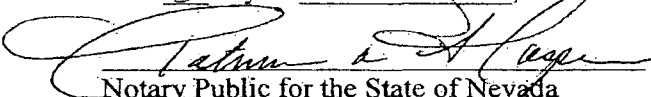
19. *Other Notes:* My life expectancy calculations were completed in 2016 with records from 1996 to 2015 and mortality data through 2016. I recommend updating mortality data and mortality ratios every five years. I recommend a full twenty-year look back, as was completed here, be completed again in ten years.

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


VERA F. DOLAN

Sworn to and subscribed before me

This 5 day of MAY, 2017


Notary Public for the State of Nevada

My commission expires: 10-18-2020



Vera F. Dolan

Curriculum Vitae, continued

Expert witness services provided to the following:

Multiple retentions:

Andres, Andres & Moore, Santa Ana, CA
 Barger & Wolen, Irvine, CA and New York, NY
 County of Hawaii, Hilo, HI
 Donahue Horrow, El Segundo, CA
 Lewis & Roca, Phoenix, AZ

McCue-Pauley & Associates, Dallas, TX
 Taylor Anderson, Denver, CO
 U.S. Department of Justice
 Wilson Elser Moskowitz Edelman & Dicker, Los Angeles and San Diego, CA

Expert witness brokers:

AMFS / Medical Experts Nationwide
 Consolidated Consultants
 Insurance Expert Network
 ForensisGroup
 LITILI

Medical Advisors, Inc
 Medical Consultant Services
 The TASA Group
 Thomson Reuters Expert Witness Service

Single cases:

Andrews Kurth, Dallas, TX
 Bolt Keenley Kim, Berkeley, CA
 Campano Law Group, Lancaster, CA
 Carlin & Buchsbaum, Long Beach, CA
 Carmody Torrance Sandak Hennessey, Waterbury, CT
 City of Torrance, Torrance, CA
 Corr Cronin Michelson Baumgardner Preece, Seattle, WA
 Coughlin Law Firm, San Diego, CA
 Cozen O'Connor, Wilmington, DE
 Deitchman & Deitchman, Placerville, CA
 Demas Law Group, Sacramento, CA
 Dressler Law Office, New Haven, CT
 Egan & Pechtel, Kennewick, WA
 Epstein Becker & Green, Los Angeles, CA
 Evan Fréirich, Boulder, CO
 Fairchild, Price, Haley & Smith, Nacogdoches, TX
 Fallgatter Farmand & Catlin, Jacksonville, FL
 Ferguson, Skipper, Shaw, Keyser, Baron & Tirabassi, Sarasota, FL
 Friedman, Rubin & White, Anchorage, AL
 Gilchrist & Rutter, Santa Monica, CA
 Graves & King, Riverside, CA
 Greenberg Traurig, Denver, CO
 Greene Brouillet & Wheeler, Santa Monica, CA
 The Healy Law Firm, Chicago, IL
 Hinshaw & Culbertson, Los Angeles, CA
 Hoagland, Fitzgerald & Pranaitis, Alton, IL
 Diana Holt, LLC, Columbia, SC
 Jardine Law Office, DeForest, WI
 Kent D. Jensen Law Office, Burley, ID
 Johnson Schachter & Lewis, Sacramento, CA
 Kantor & Kantor, Northridge, CA
 Katten Muchin Rosenman, Los Angeles, CA
 Kirch Drutcher Wagner Valitutti & Sherbrook, Detroit, MI
 Knapp Petersen Clarke, Glendale, CA
 Koch Degen & Gomez, Visalia, CA
 Law Office of Andy Basseri, Beverly Hills, CA
 Law Offices of Benjamin Blakeman, Los Angeles, CA
 Law Offices of Robert A. Brenner, Woodland Hills, CA
 Law Office of Sean Brew, San Diego, CA
 Law Offices of James Matthew Brown, San Diego, CA

Law Offices of Clyde I. Burts, Walnut Creek, CA
 Law Offices of Michael Jay Green, Honolulu, HI
 Law Office of Katherine MacKinnon, St. Louis Park, MN
 Law Office of Stephen W. Penn, Morgan Hill, CA
 Law Office of Charles M. Ray, Newport Beach, CA
 Law Office of Kenneth U. Reyes, Los Angeles, CA
 Law Offices of Cary T. Tanaka, Honolulu, HI
 Law Office of Edward J. Thomas, Bakersfield, CA
 Littler Mendelson, San Jose, CA
 MacMorris & Carbone, Stockton, CA
 Daniel Q. Mahone, Frederick, MD
 McArdle, Frost & Brinron, Chicago, IL
 McDennott Will & Emery, Chicago, IL
 McDowell & Osburn, Manchester, NH
 McFall Burnett & Brinton, Manteca, CA
 Meyers McConnell Reisz Siderman, Los Angeles, CA
 Milavetz Gallop & Milavetz, Edina, MN
 Morris Polich & Purdy, San Francisco, CA
 Myers & Gornel, Las Vegas, NV
 Nicholas & Tomasevic, San Diego, CA
 Norton Rose Fulbright US, Houston, TX
 Ogden Murphy Wallace, Seattle, WA
 Pyle Sims Duncan & Stevenson, San Diego, CA
 Renaud Cook Drury Mesaros, Phoenix, AZ
 Riverside County Public Defender, Riverside, CA
 Saur Law Office, Laguna Hills, CA
 Schumacher Francis & Nelson, Charleston, WV
 Segal and Kirby, Sacramento, CA
 Seyfarth Shaw, Chicago, IL
 SGH Martineau, London, England
 Shook Hardy & Bacon, Kansas City, MO
 Sigelman Law Corporation, Beverly Hills, CA
 Snell & Wilmer, Phoenix, AZ
 South Carolina Commission on Indigent Defense, Columbia, SC
 Stanley Law Offices, Syracuse, NY
 Stennett & Casino, San Diego, CA
 Vaka Law Group, Tampa, FL
 Webb Bordson Law Group, San Diego, CA
 David K. Wilson & Associates, Sherman, TX
 Whitfield & Eddy, Des Moines, IA
 Winters & Associates, San Diego, CA

Vera F. Dolan

Curriculum Vitae, continued

Consulting Projects – Underwriting

- Life Underwriting Requirements Research, 2004 to Present Providing methodologies, analysis and write-up of insurance testing laboratory data to initiate new products and services. Conducting cohort mortality studies to improve life underwriting risk assessment.
- Life Policy and Procedures Manual, 2014 Revised and updated life insurance policy and procedures manual based on current underwriting and business operations.
- Health Medical Underwriting Manual, 2010 Adapted medical underwriting manual for supplemental health insurance products.
- Structured Settlement Underwriting Manual, 2008 Developed underwriting manual for structured settlements based on current processes.
- Life Claims Audit, 2007 Performed random selection of cases and designed case data extraction sheet for large life insurance claims study.
- Critical Illness and Disability Income Training, 2006 Prepared and presented training to life underwriters in critical illness and disability income underwriting.
- Underwriting Manual Research and Writing, 2006 Adapted traditional life underwriting manual for simplified life, disability and waiver of premium products.
- Life Settlement Experience Analysis, 2006 Analysis of life settlement mortality to determine predictive factors.
- Life Underwriting Research, 2001 to 2003 Constructed life tables from medical literature to validate life underwriting guidelines. Produced quantitative and qualitative life underwriting manual guidance.
- Life Settlement Underwriting Research, 1998 to 2004 Provided model and design of automated life expectancy calculation system, data collection instruments, evaluation scoring and impairment risk factor weights.
- Insurance Services Product Development, 1997 to 1998 Provided analysis of disease mortality, incidence and prevalence to develop new insurance services product.
- Pension Underwriting Research, 1994 Provided biostatistical research basis to a multinational consortium for a new type of impaired risk European pension product.

Consulting Projects - Business Development and Technology

- Simplified Products Survey and Report, 2005 Conducted survey of top-selling simplified products for underwriting and business process lessons learned.
- New Business Process Review and Optimization, 2004 to 2005 Examined current life new business processes to identify opportunities for decreasing redundancies, handoffs, and inefficiencies.
- Underwriting Decision Software Development, 2004 to 2005 Product and market development of life underwriting software that uses advanced logic engine
- Freelance Writing and Editing, 2004 Editing and writing summaries of medical articles, medical conferences, and insurance topics for physicians and consumers.
- Underwriting Operations Annual Report, 2004 Assisted in editing, writing and analysis of metrics presented in life underwriting operations report for 2003.
- Business Process Improvement, 2003 Interviewed underwriting and business support staff to prepare future improvement in life insurance business process workflow.

Vera F. Dolan

Curriculum Vitae; continued

Consulting Projects - Banking

- Enterprise Technology Plan, 2000 Collaborated on design of three-year technology plan for a Federal bank.
- Financial Services Experience Analysis and Strategy, 1995 to 1998 Provided statistical analysis and models to select business and consumer customers for acquisition and retention programs. Estimated bank account life expectancies using actuarial life table methods.
- Human Resources Automation Plan, 1993 Collaborated in development of plan and prototype for automated human resources management.

Certificate of Appreciation for 30 Years of Contribution, *On The Risk - Journal of the Academy of Life Underwriting*, May 4, 2016

Associate Editor, *On The Risk - Journal of the Academy of Life Underwriting*, 2004-Present

Contributing Editor, *On The Risk - Journal of the Academy of Life Underwriting*, 1994-1997

Kaiser Foundation Health Plan, Oakland, California

Medical Economics and Statistics, 1988 to 1989

Converted community-based pricing approach to experience-based rating for a \$2.5 billion premium enterprise. Conducted underwriting market study of 20,000 employers. Conducted analyses to determine competitive pricing for 2+ million member optical and pharmaceutical programs.

Transamerica Occidental Life Insurance Company, Los Angeles, California

New Business Underwriting Research, 1985 to 1988

Provided analysis of company data and medical literature to support management and underwriting decisions. Developed original methods for actuarial analyses now used for automated systems underwriting \$1.5 billion in annual business.

Lincoln National Reinsurance, Ft. Wayne, Indiana

Underwriting Research, 1982 to 1985

Provided analysis of company data and medical literature to support management and underwriting decisions.

University of North Carolina, Chapel Hill, North Carolina

Department of Biostatistics, 1981 to 1982

Performed statistical analyses for multinational clinical trials.

National Institute of Occupational Safety and Health, Cincinnati, Ohio

Industrywide Studies Branch, Biometry Section, Summer 1980

Performed proportionate mortality analysis of death certificate data for evidence of excess brain tumors among petrochemical workers. Performed analysis of medical records for evidence of excess birth anomalies among railroad workers exposed to dioxin.

Vera F. Dolan

Curriculum Vitae, continued

PUBLICATIONS - INSURANCE

"Advantages of a Life Expectancy Using Life Insurance Underwriting and Life Settlement Methods in the Legal Setting" VFD Consulting, Inc.

"Highlights of the 2016 CLIMOA Annual Scientific Meeting" On The Risk - Journal of the Academy of Life Underwriting, Vol. 32, No. 4, 2016

"Hemoglobin Screening Independently Predicts All-Cause Mortality" J. Insurance Medicine, Vol. 45, No. 2, 2015, with Michael Fulks and Robert L. Stout

"Adjusting Measured Creatinine for Low Serum Glucose to Improve Mortality Prediction" On The Risk - Journal of the Academy of Life Underwriting, Vol. 31, No. 3, 2015, with Michael Fulks and Robert L. Stout

"Changing the 'Normal Range' for Blood Pressure from 140/90 to 130/any Improves Risk Assessment" J. Insurance Medicine, Vol. 45, No. 1, 2015, with Michael Fulks and Robert L. Stout

"2014 CRL Blood Pressure Study of Life Insurance Applicants" J. Insurance Medicine, Vol. 45, No. 1, 2015, with Michael Fulks and Robert L. Stout

"Which eGFR Calculation Offers the Best Mortality Prediction for Insurance?" On The Risk - Journal of the Academy of Life Underwriting, Vol. 31, No. 2, 2015, with Michael Fulks and Robert L. Stout

"Using Urine Protein Creatinine Ratio Alone or Reflexing to Urine Albumin in the Applicant with HbA1c Elevation" On The Risk - Journal of the Academy of Life Underwriting, Vol. 31, No. 1, 2015, with Michael Fulks and Robert L. Stout

"Basic Laboratory Testing" In: Basic Life Insurance Underwriting, ALU 101 Textbook, Sixth Ed. Academy of Life Underwriting, 2014, with Michael Fulks and Robert L. Stout

"Evaluating the Risk of Renal Disease Using Urine Proteinuria or Urine Albuminuria in the Applicant with HbA1c Elevation" On The Risk - Journal of the Academy of Life Underwriting, Vol. 30, No. 4, 2014, with Michael Fulks and Robert L. Stout

"Advantages of a Life Expectancy Using Life Insurance Underwriting and Life Settlement Methods in the Legal Setting" Defense Research Institute Life, Health and Disability Newsletter, Vol. 25, Issue 2, June 26, 2014

"Serum Globulin Predicts All-Cause Mortality for Life Insurance Applicants" J. Insurance Medicine, Vol. 44, No. 2, 2014, with Michael Fulks and Robert L. Stout

"NT-proBNP as a Predictor of All-Cause Mortality in a Population of Insurance Applicants" On The Risk - Journal of the Academy of Life Underwriting, Vol. 30, No. 2, 2014, with Michael Clark, Valerie Kaufman, Michael Fulks and Robert L. Stout

Vera F. Dolan

Curriculum Vitae, continued

PUBLICATIONS - INSURANCE, continued

"Beware That Low Urine Creatinine!" On The Risk - Journal of the Academy of Life Underwriting, Vol. 30, No. 1, 2014, with Michael Fulks and Robert L. Stout

"NT-proBNP as a Predictor of All-Cause Mortality in a Population of Insurance Applicants" J. Insurance Medicine, Vol. 44, No. 1, 2014, with Michael Clark, Valerie Kaufman, Michael Fulks and Robert L. Stout

"Scoring Life Insurance Applicants' Laboratory Results, Blood Pressure and Build to Predict All-Cause Mortality Risk" J. Insurance Medicine, Vol. 43, No. 3, 2012, with Michael Fulks and Robert L. Stout

"Urine Protein/Creatinine Ratio as a Risk Predictor in Non-Diabetics with Normal Renal Function" J. Insurance Medicine, Vol. 43, No. 2, 2012, with Michael Fulks and Robert L. Stout

"Trends in Mortality of Insurance Applicants with HIV Infection" J. Insurance Medicine, Vol. 43, No. 2, 2012, with Robert L. Stout and Michael Fulks

"PSA: What Values Predict Increased Mortality Risk?" On The Risk - Journal of the Academy of Life Underwriting, Vol. 27, No. 3, 2011, with Michael Fulks and Robert L. Stout

"Letter to the Editor: The Use of Modeling for Associating Test Values and Mortality Risk" J. Insurance Medicine, Vol. 43, No. 1, 2012, with Michael Fulks and Robert L. Stout

"Isolated Hematuria as a Mortality Risk Predictor" On The Risk - Journal of the Academy of Life Underwriting, Vol. 27, No. 4, 2011, with Michael Fulks and Robert L. Stout

"Highlights of the 2011 AHOU Annual Conference" On The Risk - Journal of the Academy of Life Underwriting, Vol. 27, No. 3, 2011

"Correction to article: Association of Cholesterol, LDL, HDL, Cholesterol/HDL and Triglyceride with All-Cause Mortality in Life Insurance Applicants" J. Insurance Medicine, Vol. 42, No. 2-4, 2011, with Michael Fulks and Robert L. Stout

"CDT and Serum Alcohol: What Is the Risk?" On The Risk - Journal of the Academy of Life Underwriting, Vol. 27, No. 1, 2011, with Robert L. Stout and Michael Fulks

"Albumin and All-Cause Mortality Risk in Insurance Applicants" J. Insurance Medicine, Vol. 42, No. 1, 2010, with Michael Fulks and Robert L. Stout

"Mortality Associated with Positive Hepatitis C and B Test Results" On The Risk - Journal of the Academy of Life Underwriting, Vol. 26, No. 3, 2010, with Robert L. Stout and Michael Fulks

"Glucosuria as a Mortality Risk Predictor When Blood Is Not Collected" On The Risk - Journal of the Academy of Life Underwriting, Vol. 26, No. 2, 2010, with Robert L. Stout and Michael Fulks

Results" On The Risk - Journal of the Academy of Life Underwriting, Vol. 30, No. 1, 2014, with Robert L. Stout and Michael Fulks

Cholesterol/HDL and Triglyceride with All-Cause Mortality in Insurance Applicants" J. Insurance Medicine, Vol. 41, No. 4, 2009, with Michael Fulks and Robert L. Stout

Insurance Medicine, Vol. 41, No. 3, 2009, with Michael Fulks and Robert L. Stout

"Alpha-fetoprotein and Carcinoembryonic Antigen" On The Risk - Journal of the Academy of Life Underwriting, Vol. 26, No. 4, 2010, with Robert L. Stout and Michael Fulks

"Insurance Applicants" J. Insurance Medicine, Vol. 41, No. 1, 2009, with Robert L. Stout and Michael Fulks

"On The Risk - Journal of the Academy of Life Underwriting, Vol. 26, No. 3, 2010, with Robert L. Stout and Michael Fulks

"Insurance Applicants: A 5-Year Follow-Up Study", On The Risk - Journal of the Academy of Life Underwriting, Vol. 25, No. 1, 2009, with Robert L. Stout and Michael Fulks

"Predicting Mortality Risk" J. Insurance Medicine, Vol. 40, No. 4, 2008, with Robert L. Stout and Michael Fulks

"The Subprime Mortgage Crisis" On The Risk - Journal of the Academy of Life Underwriting, Vol. 25, No. 3, 2009

"On The Risk - Journal of the Academy of Life Underwriting, Vol. 26, No. 2, 2010, with Robert L. Stout and Michael Fulks

"Alpha-fetoprotein and Carcinoembryonic Antigen in Insurance Applicants" J. Insurance Medicine, Vol. 41, No. 4, 2009, with Robert L. Stout, Michael Fulks, Mark E. Magee and Luis Suarez

"Nonsmoking Insurance Applicants" J. Insurance Medicine, Vol. 41, No. 3, 2009, with Robert L. Stout, Michael Fulks, Mark E. Magee and Luis Suarez

"On The Risk - Journal of the Academy of Life Underwriting, Vol. 26, No. 2, 2010, with Robert L. Stout and Michael Fulks

Practical Life Insurance Underwriting ALU 201, 1st ed., American Academy of Life Underwriting, chapter 4, 2006

Vera F. Dolan

Curriculum Vitae, continued

PUBLICATIONS - INSURANCE, continued

"Underwriting Epilepsy" On The Risk - Journal of the Academy of Life Underwriting, Vol. 2, No. 4, 1986
(as Vera F. Kelly)

PUBLICATIONS - BUSINESS, HEALTH and OTHER

"Selling Our Children in the U.S.: An Interview with Russ Combs" The Voice: The Journal of the Domestic Violence Movement, Winter 2005

Contributor, After the Guns Fall Silent: The Enduring Legacy of Landmines, S. Roberts and J. Williams, Vietnam Veterans of America Foundation, Washington, D.C. 1995

Editor, The Politics of Information Systems, Paul Strassmann, Information Economics Press, New Canaan, CT, 1994

Invited Editorial Response, American Programmer, January, 1993

Editor-Producer, Win Some, Lose Some: My 40 Years in Corporate America, John Tittsworth, Information Economics Press, New Canaan, CT, 1992

Editor, The Business Value of Computers, Paul Strassmann, Information Economics Press, New Canaan, CT, 1990

Editor, Information Payoff: The Transformation of Work in the Electronic Age, Paul Strassmann, Macmillan Free Press, NY, 1985 (as Vera F. Kelly)

"A Proportionate Mortality Study of an Oil, Chemical and Atomic Workers Local in Texas City, Texas" Annals of the New York Academy of Sciences, 381(1982): 54-61, with Reeve, Waxweiler, Thomas and Itaya (as Vera F. Kelly)

PRESENTATIONS

"Life Expectancy for Litigation" Collegium of Pecuniary Damage Experts, Las Vegas, Nevada, March 31, 2017

"Juvenile Life Without Parole Sentencing and Resentencing Case Update" CLE presentation (4.5 hours, course no. 168516), University of South Carolina School of Law, Columbia, South Carolina, December 16, 2016

"Isolated Hematuria: What Is the Risk?" Northern California Life Insurance Association, Walnut Creek, California, May 10, 2012

"Positive Cocaine Tests and Mortality" Northern California Life Insurance Association, Berkeley, California, September 17, 2009

South Carolina DC men admitted 1996 to 2015, followed to 2016

Last admission only, duplicate IDs removed, admission year errors removed

Exposure for all races; N=64,204

Mortality rates are smoothed for ≥ 5 deaths (running average of 3 or 5 raw rates, previous age, current age & next age)

Age	Alive	All races Dead	Total	Mortality Rate	Smoothed Mortality Rate	US Population Mortality Rate	Mortality Ratios (≥ 5 deaths only)
15	3	0	3	0.000000		0.000439	
16	90	0	90	0.000000		0.000552	
17	831	0	831	0.000000		0.000675	
18	2,272	6	2,278	0.002634	0.002701	0.000807	3.3
19	4,322	12	4,334	0.002769	0.003011	0.000942	3.2
20	6,585	24	6,609	0.003631	0.003233	0.001085	3.0
21	8,457	28	8,485	0.003300	0.003812	0.001216	3.1
22	9,725	44	9,769	0.004504	0.004359	0.001310	3.3
23	10,374	55	10,429	0.005274	0.005486	0.001353	4.1
24	10,409	70	10,479	0.006680	0.006254	0.001358	4.6
25	10,065	69	10,134	0.006809	0.006646	0.001351	4.9
26	9,552	62	9,614	0.006449	0.007431	0.001349	5.5
27	8,993	82	9,075	0.009036	0.007899	0.001353	5.8
28	8,454	70	8,524	0.008212	0.008922	0.001371	6.5
29	8,014	77	8,091	0.009517	0.009048	0.001399	6.5
30	7,681	73	7,754	0.009414	0.009188	0.001432	6.4
31	7,465	65	7,530	0.008632	0.010131	0.001464	6.9
32	7,199	90	7,289	0.012347	0.010670	0.001496	7.1
33	6,904	77	6,981	0.011030	0.011365	0.001528	7.4
34	6,738	73	6,811	0.010718	0.010614	0.001563	6.8
35	6,473	66	6,539	0.010093	0.010348	0.001613	6.4
36	6,288	65	6,353	0.010231	0.011223	0.001682	6.7
37	5,989	81	6,070	0.013344	0.012599	0.001764	7.1
38	5,823	84	5,907	0.014220	0.014226	0.001857	7.7
39	5,670	87	5,757	0.015112	0.015292	0.001964	7.8
40	5,529	93	5,622	0.016542	0.016436	0.002083	7.9
41	5,286	95	5,381	0.017655	0.017101	0.002227	7.7
42	5,114	89	5,203	0.017106	0.017659	0.002414	7.3
43	5,012	93	5,105	0.018217	0.018047	0.002653	6.8
44	4,901	94	4,995	0.018819	0.019173	0.002939	6.5
45	4,734	99	4,833	0.020484	0.021675	0.003243	6.7
46	4,545	120	4,665	0.025723	0.025268	0.003563	7.1
47	4,164	127	4,291	0.029597	0.027663	0.003922	7.1
48	3,971	113	4,084	0.027669	0.030107	0.004320	7.0
49	3,715	127	3,842	0.033056	0.032962	0.004749	6.9
50	3,453	137	3,590	0.038162	0.038314	0.005193	7.4
51	3,193	146	3,339	0.043726	0.041608	0.005647	7.4
52	2,920	131	3,051	0.042937	0.044710	0.006122	7.3
53	2,669	133	2,802	0.047466	0.045803	0.006630	6.9
54	2,372	117	2,489	0.047007	0.050491	0.007181	7.0
55	2,068	125	2,193	0.057000	0.053517	0.007779	6.9
56	1,852	111	1,963	0.056546	0.055167	0.008415	6.6
57	1,624	89	1,713	0.051956	0.057715	0.009074	6.4
58	1,418	98	1,516	0.064644	0.061413	0.009727	6.3
59	1,213	88	1,301	0.067640	0.069713	0.010371	6.7
60	1,057	88	1,145	0.076856	0.078531	0.011034	7.1
61	878	88	966	0.091097	0.082366	0.011738	7.0
62	733	63	796	0.079146	0.086399	0.012489	6.9
63	635	62	697	0.088953	0.083857	0.013335	6.3
64	549	50	599	0.083472	0.085654	0.014319	6.0
65	444	41	485	0.084536	0.087103	0.015482	5.6
66	379	39	418	0.093301	0.096722	0.016824	5.7
67	324	41	365	0.112329	0.097724	0.018330	5.3
68	271	26	297	0.087542	0.091657	0.019900	4.6
69	234	19	253	0.075099	0.089544	0.021539	4.2

South Carolina DC men admitted 1996 to 2015, followed to 2016

Last admission only, duplicate IDs removed, admission year errors removed

Exposure for all races; N=64,204

Mortality rates are smoothed for ≥ 5 deaths (running average of 3 or 5 raw rates, previous age, current age & next age)

Age	Alive	All races Dead	Total	Mortality Rate	Smoothed Mortality Rate	US Population Mortality Rate	Mortality Ratios (≥ 5 deaths only)
70	194	23	217	0.105991	0.095649	0.023396	4.1
71	152	20	172	0.116279	0.090170	0.025476	3.5
72	136	14	150	0.093333	0.096203	0.027794	3.5
73	125	8	133	0.060150	0.097922	0.030350	3.2
74	102	12	114	0.105263	0.091534	0.033204	2.8
75	85	11	96	0.114583	0.094742	0.036345	2.6
76	76	7	83	0.084337	0.109378	0.039788	2.7
77	57	7	64	0.109375	0.111855	0.043720	2.6
78	52	8	60	0.133333	0.114580	0.048335	2.4
79	45	6	51	0.117647	0.116462	0.053650	2.2
80	34	5	39	0.128205	0.125356	0.059565	2.1
81	29	3	32	0.093750		0.065848	
82	22	4	26	0.153846		0.072956	
83	20	1	21	0.047619		0.080741	
84	19	0	19	0.000000		0.089357	
85	17	1	18	0.055556		0.099650	
86	14	2	16	0.125000		0.110901	
87	13	1	14	0.071429		0.123146	
88	10	3	13	0.230769		0.136412	
89	13	0	13	0.000000		0.150710	
90	9	0	9	0.000000		0.166038	
91	8	0	8	0.000000		0.182374	
92	7	0	7	0.000000		0.199676	
93	10	0	10	0.000000		0.217880	
94	15	1	16	0.062500		0.236903	
95	2	0	2	0.000000		0.256636	
96	2	0	2	0.000000		0.276954	
97	2	0	2	0.000000		0.297713	
Total deaths		4,239					

South Carolina DC men admitted 1996 to 2015, followed to 2016

Last admission only, duplicate IDs removed, admission year errors removed

Exposure for blacks only; N=40,454

Mortality rates are smoothed for ≥ 5 deaths (running average of 3 or 5 raw rates, previous age, current age & next age)

Age	Alive	Black Dead	Total	Raw Mortality Rate	Smoothed Mortality Rate	US Population Mortality Rate	Mortality Ratios (≥ 5 deaths only)
15	2	0	2	0.000000		0.000655	
16	60	0	60	0.000000		0.000822	
17	543	0	543	0.000000		0.001004	
18	1,504	5	1,509	0.003313	0.003033	0.001206	2.5
19	2,898	8	2,906	0.002753	0.003351	0.001421	2.4
20	4,498	18	4,516	0.003986	0.003383	0.001654	2.0
21	5,847	20	5,867	0.003409	0.004059	0.001874	2.2
22	6,867	33	6,900	0.004783	0.004333	0.002041	2.1
23	7,453	36	7,489	0.004807	0.005139	0.002134	2.4
24	7,508	44	7,552	0.005826	0.005656	0.002168	2.6
25	7,216	46	7,262	0.006334	0.005943	0.002186	2.7
26	6,842	39	6,881	0.005668	0.006574	0.002212	3.0
27	6,426	50	6,476	0.007721	0.007412	0.002230	3.3
28	5,938	53	5,991	0.008847	0.008178	0.002245	3.6
29	5,604	45	5,649	0.007966	0.008357	0.002259	3.7
30	5,284	44	5,328	0.008258	0.007893	0.002267	3.5
31	5,059	38	5,097	0.007455	0.008957	0.002276	3.9
32	4,786	54	4,840	0.011157	0.009753	0.002300	4.2
33	4,554	49	4,603	0.010645	0.010648	0.002350	4.5
34	4,392	45	4,437	0.010142	0.010346	0.002426	4.3
35	4,152	43	4,195	0.010250	0.009901	0.002527	3.9
36	3,937	37	3,974	0.009311	0.010548	0.002646	4.0
37	3,679	45	3,724	0.012084	0.012161	0.002772	4.4
38	3,525	54	3,579	0.015088	0.013441	0.002896	4.6
39	3,452	46	3,498	0.013150	0.015186	0.003027	5.0
40	3,291	58	3,349	0.017319	0.015133	0.003179	4.8
41	3,101	47	3,148	0.014930	0.015972	0.003369	4.7
42	3,016	48	3,064	0.015666	0.015002	0.003607	4.2
43	2,941	43	2,984	0.014410	0.014833	0.003902	3.8
44	2,870	42	2,912	0.014423	0.015822	0.004251	3.7
45	2,739	52	2,791	0.018631	0.019842	0.004616	4.3
46	2,611	71	2,682	0.026473	0.024402	0.005016	4.9
47	2,421	70	2,491	0.028101	0.026482	0.005513	4.8
48	2,274	58	2,332	0.024871	0.026654	0.006129	4.3
49	2,127	59	2,186	0.026990	0.028625	0.006838	4.2
50	1,988	70	2,058	0.034014	0.032107	0.007586	4.2
51	1,830	67	1,897	0.035319	0.035336	0.008344	4.2
52	1,681	64	1,745	0.036676	0.038086	0.009145	4.2
53	1,541	68	1,609	0.042262	0.041294	0.010011	4.1
54	1,360	64	1,424	0.044944	0.046430	0.010959	4.2
55	1,183	65	1,248	0.052083	0.049429	0.011995	4.1
56	1,055	57	1,112	0.051259	0.050691	0.013107	3.9
57	937	48	985	0.048731	0.056749	0.014274	4.0
58	794	60	854	0.070258	0.061732	0.015455	4.0
59	677	48	725	0.066207	0.072218	0.016630	4.3
60	585	51	636	0.080189	0.082261	0.017888	4.6
61	466	52	518	0.100386	0.093277	0.019207	4.9
62	363	40	403	0.099256	0.093367	0.020451	4.6
63	320	28	348	0.080460	0.093350	0.021595	4.3
64	269	30	299	0.100334	0.089763	0.022717	4.0
65	206	20	226	0.088496	0.097257	0.023933	4.1
66	183	21	204	0.102941	0.107622	0.025369	4.2
67	152	23	175	0.131429	0.114021	0.027104	4.2
68	116	14	130	0.107692	0.117090	0.029089	4.0
69	95	12	107	0.112150	0.107763	0.031191	3.5

South Carolina DC men admitted 1996 to 2015, followed to 2016

Last admission only, duplicate IDs removed, admission year errors removed

Exposure for blacks only; N=40,454

Mortality rates are smoothed for ≥ 5 deaths (running average of 3 or 5 raw rates, previous age, current age & next age)

Age	Alive	Black Dead	Total	Raw Mortality Rate	Smoothed Mortality Rate	US Population Mortality Rate	Mortality Ratios (≥ 5 deaths only)
70	78	9	87	0.103448	0.115344	0.033429	3.5
71	60	9	69	0.130435	0.116942	0.035780	3.3
72	55	4	59	0.067797		0.038397	
73	48	3	51	0.058824		0.041254	
74	39	5	44	0.113636		0.044174	
75	30	5	35	0.142857		0.047704	
76	27	2	29	0.068966		0.051047	
77	18	3	21	0.142857		0.054624	
78	17	3	20	0.150000		0.059628	
79	15	2	17	0.117647		0.064976	
80	11	2	13	0.153846		0.070676	
81	9	1	10	0.100000		0.076651	
82	8	0	8	0.000000		0.085516	
83	7	0	7	0.000000		0.092664	
84	6	0	6	0.000000		0.100307	
85	5	0	5	0.000000		0.108460	
86	4	1	5	0.200000		0.117140	
87	5	0	5	0.000000		0.126357	
88	4	0	4	0.000000		0.136120	
89	3	0	3	0.000000		0.146432	
90	2	0	2	0.000000		0.157294	
91	3	0	3	0.000000		0.168701	
92	2	0	2	0.000000		0.180641	
93	3	0	3	0.000000		0.193099	
94	7	0	7	0.000000		0.206052	
95	1	0	1	0.000000		0.219470	
96	1	0	1	0.000000		0.233321	
97	1	0	1	0.000000		0.247561	
Total deaths		2,351					

South Carolina DC men admitted 1996 to 2015, followed to 2016

Last admission only, duplicate IDs removed, admission year errors removed

Exposure for whites only; N=22,081

Mortality rates are smoothed for ≥ 5 deaths (running average of 3 or 5 raw rates, previous age, current age & next age)

Age	Alive	White Dead	Total	Raw Mortality Rate	Smoothed Mortality Rate	US Population Mortality Rate	Mortality Ratios (≥ 5 deaths only)
15	1	0	1	0.000000		0.000414	
16	28	0	28	0.000000		0.000522	
17	268	0	268	0.000000		0.000641	
18	717	1	718	0.001393		0.000773	
19	1,325	4	1,329	0.003010		0.000909	
20	1,944	6	1,950	0.003077	0.003181	0.001053	3.0
21	2,427	8	2,435	0.003285	0.003500	0.001185	3.0
22	2,647	11	2,658	0.004138	0.004806	0.001283	3.7
23	2,697	19	2,716	0.006996	0.006919	0.001333	5.2
24	2,676	26	2,702	0.009623	0.008440	0.001349	6.3
25	2,620	23	2,643	0.008702	0.009056	0.001354	6.7
26	2,466	22	2,488	0.008842	0.010391	0.001365	7.6
27	2,316	32	2,348	0.013629	0.009974	0.001379	7.2
28	2,265	17	2,282	0.007450	0.011864	0.001401	8.5
29	2,173	32	2,205	0.014512	0.011735	0.001432	8.2
30	2,161	29	2,190	0.013242	0.013335	0.001467	9.1
31	2,177	27	2,204	0.012250	0.013876	0.001502	9.2
32	2,195	36	2,231	0.016136	0.013753	0.001536	9.0
33	2,147	28	2,175	0.012874	0.013955	0.001570	8.9
34	2,150	28	2,178	0.012856	0.012136	0.001609	7.5
35	2,131	23	2,154	0.010678	0.011928	0.001665	7.2
36	2,177	27	2,204	0.012250	0.013112	0.001742	7.5
37	2,158	36	2,194	0.016408	0.014128	0.001829	7.7
38	2,156	30	2,186	0.013724	0.016339	0.001921	8.5
39	2,078	40	2,118	0.018886	0.016139	0.002023	8.0
40	2,117	34	2,151	0.015807	0.019133	0.002135	9.0
41	2,066	48	2,114	0.022706	0.019370	0.002273	8.5
42	2,001	40	2,041	0.019598	0.022267	0.002459	9.1
43	1,991	50	2,041	0.024498	0.023331	0.002703	8.6
44	1,956	52	2,008	0.025896	0.024755	0.002997	8.3
45	1,922	47	1,969	0.023870	0.025127	0.003309	7.6
46	1,864	49	1,913	0.025614	0.027223	0.003631	7.5
47	1,684	56	1,740	0.032184	0.030095	0.003984	7.6
48	1,638	55	1,693	0.032487	0.035454	0.004366	8.1
49	1,540	67	1,607	0.041693	0.039239	0.004768	8.2
50	1,428	65	1,493	0.043537	0.046941	0.005179	9.1
51	1,325	78	1,403	0.055595	0.050285	0.005596	9.0
52	1,210	66	1,276	0.051724	0.054307	0.006034	9.0
53	1,104	65	1,169	0.055603	0.052714	0.006508	8.1
54	990	53	1,043	0.050815	0.057024	0.007026	8.1
55	868	60	928	0.064655	0.060073	0.007591	7.9
56	780	54	834	0.064748	0.062302	0.008191	7.6
57	672	41	713	0.057504	0.060358	0.008812	6.8
58	608	38	646	0.058824	0.062585	0.009425	6.6
59	520	40	560	0.071429	0.068333	0.010028	6.8
60	458	37	495	0.074747	0.076123	0.010645	7.2
61	402	36	438	0.082192	0.072227	0.011305	6.4
62	362	23	385	0.059740	0.079569	0.012031	6.6
63	308	33	341	0.096774	0.074694	0.012880	5.8
64	276	20	296	0.067568	0.082340	0.013896	5.9
65	233	21	254	0.082677	0.085880	0.015110	5.7
66	191	18	209	0.086124	0.079940	0.016503	4.8
67	169	18	187	0.096257	0.074702	0.018045	4.1
68	153	11	164	0.067073	0.079705	0.019623	4.1
69	139	6	145	0.041379	0.083840	0.021262	3.9

South Carolina DC men admitted 1996 to 2015, followed to 2016

Last admission only, duplicate IDs removed, admission year errors removed

Exposure for whites only; N=22,081

Mortality rates are smoothed for ≥ 5 deaths (running average of 3 or 5 raw rates, previous age, current age & next age)

Age	Alive	White Dead	Total	Raw Mortality Rate	Smoothed Mortality Rate	US Population Mortality Rate	Mortality Ratios (≥ 5 deaths only)
70	116	14	130	0.107692	0.086566	0.023146	3.7
71	92	11	103	0.106796	0.085347	0.025278	3.4
72	81	10	91	0.109890	0.097071	0.027630	3.5
73	77	5	82	0.060976	0.095204	0.030219	3.2
74	63	7	70	0.100000	0.092364	0.033126	2.8
75	55	6	61	0.098361	0.088990	0.036255	2.5
76	49	5	54	0.092593	0.095477	0.039716	2.4
77	39	4	43	0.093023		0.043757	
78	35	5	40	0.125000		0.048405	
79	30	4	34	0.117647		0.053785	
80	23	3	26	0.115385		0.059839	
81	20	2	22	0.090909		0.066176	
82	14	4	18	0.222222		0.073348	
83	13	1	14	0.071429		0.081302	
84	13	0	13	0.000000		0.090236	
85	12	1	13	0.076923		0.100743	
86	10	1	11	0.090909		0.112235	
87	8	1	9	0.111111		0.124750	
88	6	3	9	0.333333		0.138311	
89	7	0	7	0.000000		0.152931	
90	6	0	6	0.000000		0.168603	
91	5	0	5	0.000000		0.185302	
92	5	0	5	0.000000		0.202980	
93	7	0	7	0.000000		0.221569	
94	8	1	9	0.111111		0.240976	
95	1	0	1	0.000000		0.261085	
96	1	0	1	0.000000		0.281762	
97	1	0	1	0.000000		0.302853	
Total deaths		1,874					

EXHIBIT 5

Table 17. Life table for non-Hispanic black males: United States, 2011

Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/64_11/Table17.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
0-1	0.012502	100,000	1,250	98,927	7,173,820	71.7
1-2	0.000674	98,750	67	98,716	7,074,893	71.6
2-3	0.000494	98,683	49	98,659	6,976,177	70.7
3-4	0.000356	98,634	35	98,617	6,877,518	69.7
4-5	0.000316	98,599	31	98,584	6,778,901	68.8
5-6	0.000258	98,568	25	98,555	6,680,317	67.8
6-7	0.000224	98,543	22	98,532	6,581,762	66.8
7-8	0.000193	98,521	19	98,511	6,483,230	65.8
8-9	0.000161	98,502	16	98,494	6,384,719	64.8
9-10	0.000128	98,486	13	98,480	6,286,225	63.8
10-11	0.000107	98,473	11	98,468	6,187,746	62.8
11-12	0.000118	98,463	12	98,457	6,089,278	61.8
12-13	0.000183	98,451	18	98,442	5,990,821	60.9
13-14	0.000310	98,433	31	98,418	5,892,379	59.9
14-15	0.000481	98,402	47	98,379	5,793,961	58.9
15-16	0.000655	98,355	64	98,323	5,695,583	57.9
16-17	0.000822	98,291	81	98,250	5,597,260	56.9
17-18	0.001004	98,210	99	98,160	5,499,010	56.0
18-19	0.001206	98,111	118	98,052	5,400,849	55.0
19-20	0.001421	97,993	139	97,923	5,302,797	54.1
20-21	0.001654	97,854	162	97,773	5,204,874	53.2
21-22	0.001874	97,692	183	97,600	5,107,101	52.3
22-23	0.002041	97,509	199	97,409	5,009,501	51.4
23-24	0.002134	97,310	208	97,206	4,912,092	50.5
24-25	0.002168	97,102	211	96,997	4,814,886	49.6
25-26	0.002186	96,891	212	96,786	4,717,890	48.7
26-27	0.002212	96,680	214	96,573	4,621,104	47.8
27-28	0.002230	96,466	215	96,358	4,524,531	46.9
28-29	0.002245	96,251	216	96,143	4,428,173	46.0
29-30	0.002259	96,035	217	95,926	4,332,030	45.1
30-31	0.002267	95,818	217	95,709	4,236,104	44.2
31-32	0.002276	95,600	218	95,492	4,140,395	43.3
32-33	0.002300	95,383	219	95,273	4,044,904	42.4
33-34	0.002350	95,163	224	95,052	3,949,631	41.5
34-35	0.002426	94,940	230	94,825	3,854,579	40.6
35-36	0.002527	94,709	239	94,590	3,759,755	39.7
36-37	0.002646	94,470	250	94,345	3,665,165	38.8
37-38	0.002772	94,220	261	94,089	3,570,820	37.9
38-39	0.002896	93,959	272	93,823	3,476,730	37.0
39-40	0.003027	93,687	284	93,545	3,382,908	36.1
40-41	0.003179	93,403	297	93,255	3,289,363	35.2
41-42	0.003369	93,106	314	92,949	3,196,108	34.3
42-43	0.003607	92,793	335	92,625	3,103,159	33.4
43-44	0.003902	92,458	361	92,277	3,010,533	32.6
44-45	0.004251	92,097	392	91,901	2,918,256	31.7
45-46	0.004616	91,706	423	91,494	2,826,355	30.8
46-47	0.005016	91,282	458	91,053	2,734,861	30.0
47-48	0.005513	90,824	501	90,574	2,643,807	29.1
48-49	0.006129	90,324	554	90,047	2,553,233	28.3
49-50	0.006838	89,770	614	89,463	2,463,186	27.4
50-51	0.007586	89,156	676	88,818	2,373,723	26.6
51-52	0.008344	88,480	738	88,111	2,284,905	25.8
52-53	0.009145	87,742	802	87,340	2,196,794	25.0
53-54	0.010011	86,939	870	86,504	2,109,454	24.3
54-55	0.010959	86,069	943	85,597	2,022,950	23.5
55-56	0.011995	85,126	1,021	84,615	1,937,352	22.8
56-57	0.013107	84,105	1,102	83,553	1,852,737	22.0
57-58	0.014274	83,002	1,185	82,410	1,769,184	21.3
58-59	0.015455	81,817	1,264	81,185	1,686,774	20.6
59-60	0.016630	80,553	1,340	79,883	1,605,589	19.9
60-61	0.017888	79,213	1,417	78,505	1,525,705	19.3

See footnotes at end of table.

Table 17. Life table for non-Hispanic black males: United States, 2011—Con.Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/64_11/Table17.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
61-62	0.019207	77,796	1,494	77,049	1,447,201	18.6
62-63	0.020451	76,302	1,560	75,522	1,370,151	18.0
63-64	0.021595	74,742	1,614	73,935	1,294,629	17.3
64-65	0.022717	73,128	1,661	72,297	1,220,695	16.7
65-66	0.023933	71,466	1,710	70,611	1,148,398	16.1
66-67	0.025369	69,756	1,770	68,871	1,077,787	15.5
67-68	0.027104	67,986	1,843	67,065	1,008,915	14.8
68-69	0.029089	66,144	1,924	65,182	941,851	14.2
69-70	0.031191	64,220	2,003	63,218	876,669	13.7
70-71	0.033429	62,216	2,080	61,177	813,451	13.1
71-72	0.035780	60,137	2,152	59,061	752,274	12.5
72-73	0.038397	57,985	2,226	56,872	693,214	12.0
73-74	0.041254	55,759	2,300	54,608	636,342	11.4
74-75	0.044174	53,458	2,361	52,278	581,733	10.9
75-76	0.047704	51,097	2,438	49,878	529,456	10.4
76-77	0.051047	48,659	2,484	47,417	479,578	9.9
77-78	0.054624	46,175	2,522	44,914	432,161	9.4
78-79	0.059628	43,653	2,603	42,352	387,246	8.9
79-80	0.064976	41,050	2,667	39,716	344,895	8.4
80-81	0.070676	38,383	2,713	37,026	305,178	8.0
81-82	0.076651	35,670	2,734	34,303	268,152	7.5
82-83	0.085516	32,936	2,817	31,528	233,849	7.1
83-84	0.092664	30,119	2,791	28,724	202,321	6.7
84-85	0.100307	27,328	2,741	25,958	173,597	6.4
85-86	0.108460	24,587	2,667	23,254	147,639	6.0
86-87	0.117140	21,920	2,568	20,637	124,386	5.7
87-88	0.126357	19,353	2,445	18,130	103,749	5.4
88-89	0.136120	16,907	2,301	15,757	85,619	5.1
89-90	0.146432	14,606	2,139	13,537	69,862	4.8
90-91	0.157294	12,467	1,961	11,487	56,326	4.5
91-92	0.168701	10,506	1,772	9,620	44,839	4.3
92-93	0.180641	8,734	1,578	7,945	35,219	4.0
93-94	0.193099	7,156	1,382	6,465	27,274	3.8
94-95	0.206052	5,774	1,190	5,179	20,809	3.6
95-96	0.219470	4,584	1,006	4,081	15,630	3.4
96-97	0.233321	3,578	835	3,161	11,548	3.2
97-98	0.247561	2,743	679	2,404	8,388	3.1
98-99	0.262144	2,064	541	1,794	5,984	2.9
99-100	0.277019	1,523	422	1,312	4,190	2.8
100 and over	1.000000	1,101	1,101	2,878	2,878	2.6

NOTE: This life table is based on death rates that have been adjusted for race and ethnicity misclassification on death certificates.
 SOURCE: CDC/NCHS, National Vital Statistics System.

Table 14. Life table for non-Hispanic white males: United States, 2011Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/64_11/Table14.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
0-1	0.005524	100,000	552	99,517	7,643,091	76.4
1-2	0.000413	99,448	41	99,427	7,543,575	75.9
2-3	0.000273	99,407	27	99,393	7,444,148	74.9
3-4	0.000229	99,379	23	99,368	7,344,755	73.9
4-5	0.000156	99,357	15	99,349	7,245,387	72.9
5-6	0.000160	99,341	16	99,333	7,146,038	71.9
6-7	0.000146	99,325	14	99,318	7,046,705	70.9
7-8	0.000132	99,311	13	99,304	6,947,387	70.0
8-9	0.000114	99,298	11	99,292	6,848,082	69.0
9-10	0.000095	99,286	9	99,282	6,748,790	68.0
10-11	0.000082	99,277	8	99,273	6,649,509	67.0
11-12	0.000088	99,269	9	99,264	6,550,236	66.0
12-13	0.000125	99,260	12	99,254	6,450,972	65.0
13-14	0.000201	99,248	20	99,238	6,351,718	64.0
14-15	0.000305	99,228	30	99,213	6,252,480	63.0
15-16	0.000414	99,197	41	99,177	6,153,268	62.0
16-17	0.000522	99,156	52	99,130	6,054,091	61.1
17-18	0.000641	99,105	64	99,073	5,954,960	60.1
18-19	0.000773	99,041	77	99,003	5,855,888	59.1
19-20	0.000909	98,964	90	98,920	5,756,885	58.2
20-21	0.001053	98,875	104	98,822	5,657,965	57.2
21-22	0.001185	98,770	117	98,712	5,559,143	56.3
22-23	0.001283	98,653	127	98,590	5,460,431	55.3
23-24	0.001333	98,527	131	98,461	5,361,841	54.4
24-25	0.001349	98,395	133	98,329	5,263,380	53.5
25-26	0.001354	98,263	133	98,196	5,165,051	52.6
26-27	0.001365	98,130	134	98,063	5,066,855	51.6
27-28	0.001379	97,996	135	97,928	4,968,792	50.7
28-29	0.001401	97,860	137	97,792	4,870,864	49.8
29-30	0.001432	97,723	140	97,653	4,773,072	48.8
30-31	0.001467	97,583	143	97,512	4,675,419	47.9
31-32	0.001502	97,440	146	97,367	4,577,907	47.0
32-33	0.001536	97,294	149	97,219	4,480,540	46.1
33-34	0.001570	97,145	153	97,068	4,383,321	45.1
34-35	0.001609	96,992	156	96,914	4,286,252	44.2
35-36	0.001665	96,836	161	96,755	4,189,338	43.3
36-37	0.001742	96,675	168	96,591	4,092,583	42.3
37-38	0.001829	96,506	177	96,418	3,995,992	41.4
38-39	0.001921	96,330	185	96,237	3,899,574	40.5
39-40	0.002023	96,145	195	96,047	3,803,337	39.6
40-41	0.002135	95,950	205	95,848	3,707,290	38.6
41-42	0.002273	95,745	218	95,637	3,611,442	37.7
42-43	0.002459	95,528	235	95,410	3,515,805	36.8
43-44	0.002703	95,293	258	95,164	3,420,395	35.9
44-45	0.002997	95,035	285	94,893	3,325,231	35.0
45-46	0.003309	94,750	313	94,594	3,230,338	34.1
46-47	0.003631	94,437	343	94,266	3,135,744	33.2
47-48	0.003984	94,094	375	93,907	3,041,479	32.3
48-49	0.004366	93,719	409	93,515	2,947,572	31.5
49-50	0.004768	93,310	445	93,088	2,854,058	30.6
50-51	0.005179	92,865	481	92,625	2,760,970	29.7
51-52	0.005596	92,384	517	92,126	2,668,345	28.9
52-53	0.006034	91,867	554	91,590	2,576,220	28.0
53-54	0.006508	91,313	594	91,016	2,484,630	27.2
54-55	0.007026	90,719	637	90,400	2,393,614	26.4
55-56	0.007591	90,081	684	89,739	2,303,214	25.6
56-57	0.008191	89,397	732	89,031	2,213,475	24.8
57-58	0.008812	88,665	781	88,274	2,124,444	24.0
58-59	0.009425	87,884	828	87,470	2,036,169	23.2
59-60	0.010028	87,056	873	86,619	1,948,700	22.4
60-61	0.010645	86,183	917	85,724	1,862,081	21.6

See footnotes at end of table.

Table 14. Life table for non-Hispanic white males: United States, 2011—Con.Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/64_11/Table14.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
61–62	0.011305	85,265	964	84,783	1,776,357	20.8
62–63	0.012031	84,301	1,014	83,794	1,691,574	20.1
63–64	0.012880	83,287	1,073	82,751	1,607,780	19.3
64–65	0.013896	82,214	1,142	81,643	1,525,029	18.5
65–66	0.015110	81,072	1,225	80,459	1,443,386	17.8
66–67	0.016503	79,847	1,318	79,188	1,362,927	17.1
67–68	0.018045	78,529	1,417	77,821	1,283,739	16.3
68–69	0.019623	77,112	1,513	76,355	1,205,919	15.6
69–70	0.021262	75,599	1,607	74,795	1,129,563	14.9
70–71	0.023146	73,991	1,713	73,135	1,054,768	14.3
71–72	0.025278	72,279	1,827	71,365	981,633	13.6
72–73	0.027630	70,452	1,947	69,478	910,268	12.9
73–74	0.030219	68,505	2,070	67,470	840,789	12.3
74–75	0.033126	66,435	2,201	65,335	773,319	11.6
75–76	0.036255	64,234	2,329	63,070	707,985	11.0
76–77	0.039716	61,905	2,459	60,676	644,915	10.4
77–78	0.043757	59,447	2,601	58,146	584,239	9.8
78–79	0.048405	56,845	2,752	55,470	526,093	9.3
79–80	0.053785	54,094	2,909	52,639	470,623	8.7
80–81	0.059839	51,184	3,063	49,653	417,984	8.2
81–82	0.066176	48,122	3,184	46,529	368,331	7.7
82–83	0.073348	44,937	3,296	43,289	321,802	7.2
83–84	0.081302	41,641	3,385	39,948	278,513	6.7
84–85	0.090236	38,256	3,452	36,530	238,565	6.2
85–86	0.100743	34,804	3,506	33,050	202,035	5.8
86–87	0.112235	31,297	3,513	29,541	168,985	5.4
87–88	0.124750	27,785	3,466	26,052	139,444	5.0
88–89	0.138311	24,319	3,364	22,637	113,392	4.7
89–90	0.152931	20,955	3,205	19,353	90,755	4.3
90–91	0.168603	17,750	2,993	16,254	71,402	4.0
91–92	0.185302	14,758	2,735	13,390	55,149	3.7
92–93	0.202980	12,023	2,440	10,803	41,758	3.5
93–94	0.221569	9,583	2,123	8,521	30,955	3.2
94–95	0.240976	7,459	1,798	6,561	22,435	3.0
95–96	0.261085	5,662	1,478	4,923	15,874	2.8
96–97	0.281762	4,184	1,179	3,594	10,951	2.6
97–98	0.302853	3,005	910	2,550	7,357	2.4
98–99	0.324194	2,095	679	1,755	4,807	2.3
99–100	0.345609	1,416	489	1,171	3,052	2.2
100 and over	1.000000	926	926	1,881	1,881	2.0

NOTE: This life table is based on death rates that have been adjusted for race and ethnicity misclassification on death certificates.
SOURCE: CDC/NCHS, National Vital Statistics System.

EXHIBIT 8

Appendix A. 2011 U.S. General Population Male Life Table
Life Expectancies Adjusted for South Carolina DC experience 1996 to 2015, followed to 2016
All races

Age (years)	Basic Mortality q_x	Mortality Risk Factor	Adjusted Mortality q_x	Population at Risk l_x	Deaths d_x	Interval Person-years L_x	Cumulative Person-years T_x	Life Expectancy e_x
0-1	0.006575	1.0	0.0065750	100,000	658	99,427	5,474,009	54.7
1-2	0.000445	1.0	0.0004450	99,342	44	99,320	5,374,582	54.1
2-3	0.000301	1.0	0.0003010	99,298	30	99,283	5,275,262	53.1
3-4	0.000240	1.0	0.0002400	99,268	24	99,256	5,175,979	52.1
4-5	0.000183	1.0	0.0001830	99,244	18	99,235	5,076,723	51.2
5-6	0.000169	1.0	0.0001690	99,226	17	99,218	4,977,488	50.2
6-7	0.000150	1.0	0.0001500	99,209	15	99,202	4,878,271	49.2
7-8	0.000134	1.0	0.0001340	99,194	13	99,188	4,779,069	48.2
8-9	0.000115	1.0	0.0001150	99,181	11	99,176	4,679,882	47.2
9-10	0.000097	1.0	0.0000970	99,170	10	99,165	4,580,706	46.2
10-11	0.000085	1.0	0.0000850	99,160	8	99,156	4,481,541	45.2
11-12	0.000092	1.0	0.0000920	99,152	9	99,148	4,382,385	44.2
12-13	0.000132	1.0	0.0001320	99,143	13	99,137	4,283,238	43.2
13-14	0.000213	1.0	0.0002130	99,130	21	99,120	4,184,101	42.2
14-15	0.000323	1.0	0.0003230	99,109	32	99,093	4,084,982	41.2
15-16	0.000439	1.0	0.0004390	99,077	43	99,056	3,985,889	40.2
16-17	0.000552	1.0	0.0005520	99,034	55	99,007	3,886,833	39.2
17-18	0.000675	1.0	0.0006750	98,979	67	98,946	3,787,827	38.3
18-19	0.000807	3.3	0.0027013	98,912	267	98,779	3,688,881	37.3
19-20	0.000942	3.2	0.0030114	98,645	297	98,497	3,590,103	36.4
20-21	0.001085	3.0	0.0032334	98,348	318	98,189	3,491,606	35.5
21-22	0.001216	3.1	0.0038118	98,030	374	97,843	3,393,417	34.6
22-23	0.001310	3.3	0.0043592	97,656	426	97,443	3,295,574	33.7
23-24	0.001353	4.1	0.0054859	97,230	533	96,964	3,198,131	32.9
24-25	0.001358	4.6	0.0062542	96,697	605	96,395	3,101,168	32.1
25-26	0.001351	4.9	0.0066459	96,092	639	95,773	3,004,773	31.3

Appendix A. 2011 U.S. General Population Male Life Table

Life Expectancies Adjusted for South Carolina DC experience 1996 to 2015, followed to 2016

All races

Age (years)	Basic Mortality q_x	Mortality Risk Factor	Adjusted Mortality q_x	Population at Risk I_x	Deaths d_x	Interval Person-years L_x	Cumulative Person-years T_x	Life Expectancy e_x
26-27	0.001349	5.5	0.0074312	95,453	709	95,099	2,909,001	30.5
27-28	0.001353	5.8	0.0078989	94,744	748	94,370	2,813,902	29.7
28-29	0.001371	6.5	0.0089216	93,996	839	93,577	2,719,532	28.9
29-30	0.001399	6.5	0.0090478	93,157	843	92,736	2,625,956	28.2
30-31	0.001432	6.4	0.0091878	92,314	848	91,890	2,533,220	27.4
31-32	0.001464	6.9	0.0101313	91,466	927	91,003	2,441,330	26.7
32-33	0.001496	7.1	0.0106698	90,539	966	90,056	2,350,328	26.0
33-34	0.001528	7.4	0.0113651	89,573	1,018	89,064	2,260,272	25.2
34-35	0.001563	6.8	0.0106137	88,555	940	88,085	2,171,208	24.5
35-36	0.001613	6.4	0.0103475	87,615	907	87,162	2,083,123	23.8
36-37	0.001682	6.7	0.0112230	86,708	973	86,222	1,995,961	23.0
37-38	0.001764	7.1	0.0125987	85,735	1,080	85,195	1,909,740	22.3
38-39	0.001857	7.7	0.0142256	84,655	1,204	84,053	1,824,545	21.6
39-40	0.001964	7.8	0.0152915	83,451	1,276	82,813	1,740,492	20.9
40-41	0.002083	7.9	0.0164363	82,175	1,351	81,500	1,657,679	20.2
41-42	0.002227	7.7	0.0171008	80,824	1,382	80,133	1,576,179	19.5
42-43	0.002414	7.3	0.0176592	79,442	1,403	78,741	1,496,046	18.8
43-44	0.002653	6.8	0.0180473	78,039	1,408	77,335	1,417,306	18.2
44-45	0.002939	6.5	0.0191735	76,631	1,469	75,897	1,339,971	17.5
45-46	0.003243	6.7	0.0216755	75,162	1,629	74,348	1,264,074	16.8
46-47	0.003563	7.1	0.0252682	73,533	1,858	72,604	1,189,727	16.2
47-48	0.003922	7.1	0.0276631	71,675	1,983	70,684	1,117,123	15.6
48-49	0.004320	7.0	0.0301072	69,692	2,098	68,643	1,046,439	15.0
49-50	0.004749	6.9	0.0329621	67,594	2,228	66,480	977,796	14.5
50-51	0.005193	7.4	0.0383143	65,366	2,504	64,114	911,316	13.9
51-52	0.005647	7.4	0.0416080	62,862	2,616	61,554	847,202	13.5

Appendix A. 2011 U.S. General Population Male Life Table
Life Expectancies Adjusted for South Carolina DC experience 1996 to 2015, followed to 2016
All races

Age (years)	Basic Mortality q_x	Mortality Risk Factor	Adjusted Mortality q_x	Population at Risk l_x	Deaths d_x	Interval Person-years L_x	Cumulative Person-years T_x	Life Expectancy e_x
52-53	0.006122	7.3	0.0447095	60,246	2,694	58,899	785,648	13.0
53-54	0.006630	6.9	0.0458032	57,552	2,636	56,234	726,749	12.6
54-55	0.007181	7.0	0.0504908	54,916	2,773	53,530	670,515	12.2
55-56	0.007779	6.9	0.0535175	52,143	2,791	50,748	616,986	11.8
56-57	0.008415	6.6	0.0551671	49,352	2,723	47,991	566,238	11.5
57-58	0.009074	6.4	0.0577152	46,629	2,691	45,284	518,248	11.1
58-59	0.009727	6.3	0.0614132	43,938	2,698	42,589	472,964	10.8
59-60	0.010371	6.7	0.0697133	41,240	2,875	39,803	430,375	10.4
60-61	0.011034	7.1	0.0785312	38,365	3,013	36,859	390,573	10.2
61-62	0.011738	7.0	0.0823663	35,352	2,912	33,896	353,714	10.0
62-63	0.012489	6.9	0.0863986	32,440	2,803	31,039	319,818	9.9
63-64	0.013335	6.3	0.0838569	29,637	2,485	28,395	288,780	9.7
64-65	0.014319	6.0	0.0856537	27,152	2,326	25,989	260,385	9.6
65-66	0.015482	5.6	0.0871033	24,826	2,162	23,745	234,396	9.4
66-67	0.016824	5.7	0.0967221	22,664	2,192	21,568	210,651	9.3
67-68	0.018330	5.3	0.0977241	20,472	2,001	19,472	189,083	9.2
68-69	0.019900	4.6	0.0916566	18,471	1,693	17,625	169,612	9.2
69-70	0.021539	4.2	0.0895439	16,778	1,502	16,027	151,987	9.1
70-71	0.023396	4.1	0.0956488	15,276	1,461	14,546	135,960	8.9
71-72	0.025476	3.5	0.0901705	13,815	1,246	13,192	121,415	8.8
72-73	0.027794	3.5	0.0962033	12,569	1,209	11,965	108,223	8.6
73-74	0.030350	3.2	0.0979219	11,360	1,112	10,804	96,258	8.5
74-75	0.033204	2.8	0.0915335	10,248	938	9,779	85,454	8.3

Appendix A. 2011 U.S. General Population Male Life Table
Life Expectancies Adjusted for South Carolina DC experience 1996 to 2015, followed to 2016
All races

Age (years)	Basic Mortality q_x	Mortality Risk Factor	Adjusted Mortality q_x	Population at Risk l_x	Deaths d_x	Interval Person-years L_x	Cumulative Person-years T_x	Life Expectancy e_x
75-76	0.036345	2.6	0.0947418	9,310	882	8,869	75,675	8.1
76-77	0.039788	2.7	0.1093784	8,428	922	7,967	66,806	7.9
77-78	0.043720	2.6	0.1118552	7,506	840	7,086	58,839	7.8
78-79	0.048335	2.4	0.1145796	6,666	764	6,284	51,753	7.8
79-80	0.053650	2.2	0.1164621	5,902	687	5,559	45,469	7.7
80-81	0.059565	2.1	0.1253563	5,215	654	4,888	39,911	7.7
81-82	0.065848	1.0	0.0658480	4,561	300	4,411	35,023	7.7
82-83	0.072956	1.0	0.0729560	4,261	311	4,106	30,612	7.2
83-84	0.080741	1.0	0.0807410	3,950	319	3,791	26,506	6.7
84-85	0.089357	1.0	0.0893570	3,631	324	3,469	22,716	6.3
85-86	0.099650	1.0	0.0996500	3,307	330	3,142	19,247	5.8
86-87	0.110901	1.0	0.1109010	2,977	330	2,812	16,105	5.4
87-88	0.123146	1.0	0.1231460	2,647	326	2,484	13,293	5.0
88-89	0.136412	1.0	0.1364120	2,321	317	2,163	10,809	4.7
89-90	0.150710	1.0	0.1507100	2,004	302	1,853	8,646	4.3
90-91	0.166038	1.0	0.1660380	1,702	283	1,561	6,793	4.0
91-92	0.182374	1.0	0.1823740	1,419	259	1,290	5,233	3.7
92-93	0.199676	1.0	0.1996760	1,160	232	1,044	3,943	3.4
93-94	0.217880	1.0	0.2178800	928	202	827	2,899	3.1
94-95	0.236903	1.0	0.2369030	726	172	640	2,072	2.9
95-96	0.256636	1.0	0.2566360	554	142	483	1,432	2.6
96-97	0.276954	1.0	0.2769540	412	114	355	949	2.3
97-98	0.297713	1.0	0.2977130	298	89	254	594	2.0
98-99	0.318755	1.0	0.3187550	209	67	176	341	1.6
99-100	0.339914	1.0	0.3399140	142	48	118	165	1.2
100+	1.00000	1.0	1.0000000	94	94	47	47	0.5

EXHIBIT 9

Appendix B. 2011 U.S. General Population Non-Hispanic Black Male Life Table
Life Expectancies Adjusted for South Carolina DC experience 1996 to 2015, followed to 2016
Black men only

Age (years)	Basic Mortality q_x	Mortality Risk Factor	Adjusted Mortality q_x	Population at Risk I_x	Deaths d_x	Interval Person-years L_x	Cumulative Person-years T_x	Life Expectancy e_x
0-1	0.012502	1.0	0.0125020	100,000	1,250	99,007	5,516,944	55.2
1-2	0.000674	1.0	0.0006740	98,750	67	98,717	5,417,937	54.9
2-3	0.000494	1.0	0.0004940	98,683	49	98,659	5,319,221	53.9
3-4	0.000356	1.0	0.0003560	98,634	35	98,617	5,220,562	52.9
4-5	0.000316	1.0	0.0003160	98,599	31	98,584	5,121,946	51.9
5-6	0.000258	1.0	0.0002580	98,568	25	98,556	5,023,362	51.0
6-7	0.000224	1.0	0.0002240	98,543	22	98,532	4,924,807	50.0
7-8	0.000193	1.0	0.0001930	98,521	19	98,512	4,826,275	49.0
8-9	0.000161	1.0	0.0001610	98,502	16	98,494	4,727,763	48.0
9-10	0.000128	1.0	0.0001280	98,486	13	98,480	4,629,269	47.0
10-11	0.000107	1.0	0.0001070	98,473	11	98,468	4,530,790	46.0
11-12	0.000118	1.0	0.0001180	98,462	12	98,456	4,432,322	45.0
12-13	0.000183	1.0	0.0001830	98,450	18	98,441	4,333,866	44.0
13-14	0.000310	1.0	0.0003100	98,432	31	98,417	4,235,425	43.0
14-15	0.000481	1.0	0.0004810	98,401	47	98,378	4,137,009	42.0
15-16	0.000655	1.0	0.0006550	98,354	64	98,322	4,038,631	41.1
16-17	0.000822	1.0	0.0008220	98,290	81	98,250	3,940,309	40.1
17-18	0.001004	1.0	0.0010040	98,209	99	98,160	3,842,060	39.1
18-19	0.001206	2.5	0.0030332	98,110	298	97,961	3,743,900	38.2
19-20	0.001421	2.4	0.0033507	97,812	328	97,648	3,645,939	37.3
20-21	0.001654	2.0	0.0033826	97,484	330	97,319	3,548,291	36.4
21-22	0.001874	2.2	0.0040591	97,154	394	96,957	3,450,972	35.5
22-23	0.002041	2.1	0.0043329	96,760	419	96,551	3,354,015	34.7
23-24	0.002134	2.4	0.0051386	96,341	495	96,094	3,257,465	33.8
24-25	0.002168	2.6	0.0056559	95,846	542	95,575	3,161,371	33.0
25-26	0.002186	2.7	0.0059428	95,304	566	95,021	3,065,796	32.2

Appendix B. 2011 U.S. General Population Non-Hispanic Black Male Life Table
Life Expectancies Adjusted for South Carolina DC experience 1996 to 2015, followed to 2016
Black men only

Age (years)	Basic Mortality q_x	Mortality Risk Factor	Adjusted Mortality q_x	Population at Risk l_x	Deaths d_x	Interval Person-years L_x	Cumulative Person-years T_x	Life Expectancy e_x
26-27	0.002212	3.0	0.0065743	94,738	623	94,427	2,970,775	31.4
27-28	0.002230	3.3	0.0074117	94,115	698	93,766	2,876,349	30.6
28-29	0.002245	3.6	0.0081778	93,417	764	93,035	2,782,583	29.8
29-30	0.002259	3.7	0.0083570	92,653	774	92,266	2,689,548	29.0
30-31	0.002267	3.5	0.0078932	91,879	725	91,517	2,597,282	28.3
31-32	0.002276	3.9	0.0089569	91,154	816	90,746	2,505,765	27.5
32-33	0.002300	4.2	0.0097525	90,338	881	89,898	2,415,019	26.7
33-34	0.002350	4.5	0.0106481	89,457	953	88,981	2,325,122	26.0
34-35	0.002426	4.3	0.0103458	88,504	916	88,046	2,236,141	25.3
35-36	0.002527	3.9	0.0099009	87,588	867	87,155	2,148,095	24.5
36-37	0.002646	4.0	0.0105482	86,721	915	86,264	2,060,941	23.8
37-38	0.002772	4.4	0.0121608	85,806	1,043	85,285	1,974,677	23.0
38-39	0.002896	4.6	0.0134407	84,763	1,139	84,194	1,889,393	22.3
39-40	0.003027	5.0	0.0151857	83,624	1,270	82,989	1,805,199	21.6
40-41	0.003179	4.8	0.0151330	82,354	1,246	81,731	1,722,210	20.9
41-42	0.003369	4.7	0.0159715	81,108	1,295	80,461	1,640,479	20.2
42-43	0.003607	4.2	0.0150020	79,813	1,197	79,215	1,560,019	19.5
43-44	0.003902	3.8	0.0148330	78,616	1,166	78,033	1,480,804	18.8
44-45	0.004251	3.7	0.0158215	77,450	1,225	76,838	1,402,771	18.1
45-46	0.004616	4.3	0.0198424	76,225	1,512	75,469	1,325,934	17.4
46-47	0.005016	4.9	0.0244018	74,713	1,823	73,802	1,250,465	16.7
47-48	0.005513	4.8	0.0264818	72,890	1,930	71,925	1,176,663	16.1
48-49	0.006129	4.3	0.0266542	70,960	1,891	70,015	1,104,738	15.6
49-50	0.006838	4.2	0.0286250	69,069	1,977	68,081	1,034,724	15.0
50-51	0.007586	4.2	0.0321075	67,092	2,154	66,015	966,643	14.4
51-52	0.008344	4.2	0.0353362	64,938	2,295	63,791	900,628	13.9

Appendix B. 2011 U.S. General Population Non-Hispanic Black Male Life Table
Life Expectancies Adjusted for South Carolina DC experience 1996 to 2015, followed to 2016
Black men only

Age (years)	Basic Mortality q_x	Mortality Risk Factor	Adjusted Mortality q_x	Population at Risk I_x	Deaths d_x	Interval Person-years L_x	Cumulative Person-years T_x	Life Expectancy e_x
52-53	0.009145	4.2	0.0380858	62,643	2,386	61,450	836,838	13.4
53-54	0.010011	4.1	0.0412941	60,257	2,488	59,013	775,388	12.9
54-55	0.010959	4.2	0.0464298	57,769	2,682	56,428	716,375	12.4
55-56	0.011995	4.1	0.0494287	55,087	2,723	53,726	659,947	12.0
56-57	0.013107	3.9	0.0506911	52,364	2,654	51,037	606,221	11.6
57-58	0.014274	4.0	0.0567492	49,710	2,821	48,300	555,184	11.2
58-59	0.015455	4.0	0.0617318	46,889	2,895	45,442	506,885	10.8
59-60	0.016630	4.3	0.0722177	43,994	3,177	42,406	461,443	10.5
60-61	0.017888	4.6	0.0822606	40,817	3,358	39,138	419,038	10.3
61-62	0.019207	4.9	0.0932768	37,459	3,494	35,712	379,900	10.1
62-63	0.020451	4.6	0.0933672	33,965	3,171	32,380	344,188	10.1
63-64	0.021595	4.3	0.0933499	30,794	2,875	29,357	311,808	10.1
64-65	0.022717	4.0	0.0897633	27,919	2,506	26,666	282,452	10.1
65-66	0.023933	4.1	0.0972571	25,413	2,472	24,177	255,786	10.1
66-67	0.025369	4.2	0.1076218	22,941	2,469	21,707	231,609	10.1
67-68	0.027104	4.2	0.1140207	20,472	2,334	19,305	209,902	10.3
68-69	0.029089	4.0	0.1170901	18,138	2,124	17,076	190,597	10.5
69-70	0.031191	3.5	0.1077634	16,014	1,726	15,151	173,521	10.8
70-71	0.033429	3.5	0.1153442	14,288	1,648	13,464	158,370	11.1
71-72	0.035780	3.3	0.1169415	12,640	1,478	11,901	144,906	11.5
72-73	0.038397	1.0	0.0383970	11,162	429	10,948	133,005	11.9
73-74	0.041254	1.0	0.0412540	10,733	443	10,512	122,058	11.4
74-75	0.044174	1.0	0.0441740	10,290	455	10,063	111,546	10.8

Appendix B. 2011 U.S. General Population Non-Hispanic Black Male Life Table
Life Expectancies Adjusted for South Carolina DC experience 1996 to 2015, followed to 2016.
Black men only

Age (years)	Basic Mortality q_x	Mortality Risk Factor	Adjusted Mortality q_x	Population at Risk l_x	Deaths d_x	Interval Person-years L_x	Cumulative Person-years T_x	Life Expectancy e_x
75-76	0.047704	1.0	0.0477040	9,835	469	9,601	101,484	10.3
76-77	0.051047	1.0	0.0510470	9,366	478	9,127	91,883	9.8
77-78	0.054624	1.0	0.0546240	8,888	485	8,646	82,756	9.3
78-79	0.059628	1.0	0.0596280	8,403	501	8,153	74,111	8.8
79-80	0.064976	1.0	0.0649760	7,902	513	7,646	65,958	8.3
80-81	0.070676	1.0	0.0706760	7,389	522	7,128	58,313	7.9
81-82	0.076651	1.0	0.0766510	6,867	526	6,604	51,185	7.5
82-83	0.085516	1.0	0.0855160	6,341	542	6,070	44,581	7.0
83-84	0.092664	1.0	0.0926640	5,799	537	5,531	38,511	6.6
84-85	0.100307	1.0	0.1003070	5,262	528	4,998	32,980	6.3
85-86	0.108460	1.0	0.1084600	4,734	513	4,478	27,982	5.9
86-87	0.117140	1.0	0.1171400	4,221	494	3,974	23,505	5.6
87-88	0.126357	1.0	0.1263570	3,727	471	3,492	19,531	5.2
88-89	0.136120	1.0	0.1361200	3,256	443	3,035	16,039	4.9
89-90	0.146432	1.0	0.1464320	2,813	412	2,607	13,005	4.6
90-91	0.157294	1.0	0.1572940	2,401	378	2,212	10,398	4.3
91-92	0.168701	1.0	0.1687010	2,023	341	1,853	8,186	4.0
92-93	0.180641	1.0	0.1806410	1,682	304	1,530	6,333	3.8
93-94	0.193099	1.0	0.1930990	1,378	266	1,245	4,803	3.5
94-95	0.206052	1.0	0.2060520	1,112	229	998	3,558	3.2
95-96	0.219470	1.0	0.2194700	883	194	786	2,561	2.9
96-97	0.233321	1.0	0.2333210	689	161	609	1,775	2.6
97-98	0.247561	1.0	0.2475610	528	131	463	1,166	2.2
98-99	0.262144	1.0	0.2621440	397	104	345	704	1.8
99-100	0.277019	1.0	0.2770190	293	81	253	359	1.2
100+	1.00000	1.0	1.0000000	212	212	106	106	0.5

EXHIBIT 10

Appendix C. 2011 U.S. General Population Non-Hispanic White Male Life Table
Life Expectancies Adjusted for South Carolina DC experience 1996 to 2015, followed to 2016
White men only

Age (years)	Basic Mortality q_x	Mortality Risk Factor	Adjusted Mortality q_x	Population at Risk l_x	Deaths d_x	Interval Person-years L_x	Cumulative Person-years T_x	Life Expectancy e_x
0-1	0.005524	1.0	0.0055240	100,000	552	99,517	5,349,849	53.5
1-2	0.000413	1.0	0.0004130	99,448	41	99,428	5,250,332	52.8
2-3	0.000273	1.0	0.0002730	99,407	27	99,394	5,150,905	51.8
3-4	0.000229	1.0	0.0002290	99,380	23	99,369	5,051,511	50.8
4-5	0.000156	1.0	0.0001560	99,357	15	99,350	4,952,143	49.8
5-6	0.000160	1.0	0.0001600	99,342	16	99,334	4,852,793	48.8
6-7	0.000146	1.0	0.0001460	99,326	15	99,319	4,753,459	47.9
7-8	0.000132	1.0	0.0001320	99,311	13	99,305	4,654,141	46.9
8-9	0.000114	1.0	0.0001140	99,298	11	99,293	4,554,836	45.9
9-10	0.000095	1.0	0.0000950	99,287	9	99,283	4,455,544	44.9
10-11	0.000082	1.0	0.0000820	99,278	8	99,274	4,356,261	43.9
11-12	0.000088	1.0	0.0000880	99,270	9	99,266	4,256,987	42.9
12-13	0.000125	1.0	0.0001250	99,261	12	99,255	4,157,722	41.9
13-14	0.000201	1.0	0.0002010	99,249	20	99,239	4,058,467	40.9
14-15	0.000305	1.0	0.0003050	99,229	30	99,214	3,959,228	39.9
15-16	0.000414	1.0	0.0004140	99,199	41	99,179	3,860,014	38.9
16-17	0.000522	1.0	0.0005220	99,158	52	99,132	3,760,835	37.9
17-18	0.000641	1.0	0.0006410	99,106	64	99,074	3,661,703	36.9
18-19	0.000773	1.0	0.0007730	99,042	77	99,004	3,562,629	36.0
19-20	0.000909	1.0	0.0009090	98,965	90	98,920	3,463,626	35.0
20-21	0.001053	3.0	0.0031812	98,875	315	98,718	3,364,706	34.0
21-22	0.001185	3.0	0.0035003	98,560	345	98,388	3,265,988	33.1
22-23	0.001283	3.7	0.0048065	98,215	472	97,979	3,167,601	32.3
23-24	0.001333	5.2	0.0069188	97,743	676	97,405	3,069,622	31.4
24-25	0.001349	6.3	0.0084401	97,067	819	96,658	2,972,217	30.6
25-26	0.001354	6.7	0.0090557	96,248	872	95,812	2,875,559	29.9

Appendix C. 2011 U.S. General Population Non-Hispanic White Male Life Table
 Life Expectancies Adjusted for South Carolina DC experience 1996 to 2015, followed to 2016
 White men only

Age (years)	Basic Mortality q_x	Mortality Risk Factor	Adjusted Mortality q_x	Population at Risk l_x	Deaths d_x	Interval Person-years L_x	Cumulative Person-years T_x	Life Expectancy e_x
26-27	0.001365	7.6	0.0103911	95,376	991	94,881	2,779,747	29.1
27-28	0.001379	7.2	0.0099736	94,385	941	93,915	2,684,867	28.4
28-29	0.001401	8.5	0.0118636	93,444	1,109	92,890	2,590,952	27.7
29-30	0.001432	8.2	0.0117347	92,335	1,084	91,793	2,498,063	27.1
30-31	0.001467	9.1	0.0133350	91,251	1,217	90,643	2,406,270	26.4
31-32	0.001502	9.2	0.0138762	90,034	1,249	89,410	2,315,627	25.7
32-33	0.001536	9.0	0.0137534	88,785	1,221	88,175	2,226,218	25.1
33-34	0.001570	8.9	0.0139552	87,564	1,222	86,953	2,138,043	24.4
34-35	0.001609	7.5	0.0121357	86,342	1,048	85,818	2,051,090	23.8
35-36	0.001665	7.2	0.0119280	85,294	1,017	84,786	1,965,272	23.0
36-37	0.001742	7.5	0.0131122	84,277	1,105	83,725	1,880,487	22.3
37-38	0.001829	7.7	0.0141275	83,172	1,175	82,585	1,796,762	21.6
38-39	0.001921	8.5	0.0163393	81,997	1,340	81,327	1,714,178	20.9
39-40	0.002023	8.0	0.0161387	80,657	1,302	80,006	1,632,851	20.2
40-41	0.002135	9.0	0.0191327	79,355	1,518	78,596	1,552,845	19.6
41-42	0.002273	8.5	0.0193702	77,837	1,508	77,083	1,474,249	18.9
42-43	0.002459	9.1	0.0222673	76,329	1,700	75,479	1,397,166	18.3
43-44	0.002703	8.6	0.0233308	74,629	1,741	73,759	1,321,687	17.7
44-45	0.002997	8.3	0.0247547	72,888	1,804	71,986	1,247,928	17.1
45-46	0.003309	7.6	0.0251269	71,084	1,786	70,191	1,175,942	16.5
46-47	0.003631	7.5	0.0272227	69,298	1,886	68,355	1,105,751	16.0
47-48	0.003984	7.6	0.0300949	67,412	2,029	66,398	1,037,396	15.4
48-49	0.004366	8.1	0.0354544	65,383	2,318	64,224	970,999	14.9
49-50	0.004768	8.2	0.0392386	63,065	2,475	61,828	906,775	14.4
50-51	0.005179	9.1	0.0469414	60,590	2,844	59,168	844,947	13.9
51-52	0.005596	9.0	0.0502853	57,746	2,904	56,294	785,779	13.6

Appendix C. 2011 U.S. General Population Non-Hispanic White Male Life Table
Life Expectancies Adjusted for South Carolina DC experience 1996 to 2015, followed to 2016
White men only

Age (years)	Basic Mortality q_x	Mortality Risk Factor	Adjusted Mortality q_x	Population at Risk l_x	Deaths d_x	Interval Person-years L_x	Cumulative Person-years T_x	Life Expectancy e_x
52-53	0.006034	9.0	0.0543075	54,842	2,978	53,353	729,485	13.3
53-54	0.006508	8.1	0.0527141	51,864	2,734	50,497	676,132	13.0
54-55	0.007026	8.1	0.0570244	49,130	2,802	47,729	625,635	12.7
55-56	0.007591	7.9	0.0600728	46,328	2,783	44,937	577,906	12.5
56-57	0.008191	7.6	0.0623023	43,545	2,713	42,189	532,970	12.2
57-58	0.008812	6.8	0.0603584	40,832	2,465	39,600	490,781	12.0
58-59	0.009425	6.6	0.0625852	38,367	2,401	37,167	451,182	11.8
59-60	0.010028	6.8	0.0683332	35,966	2,458	34,737	414,015	11.5
60-61	0.010645	7.2	0.0761226	33,508	2,551	32,233	379,278	11.3
61-62	0.011305	6.4	0.0722265	30,957	2,236	29,839	347,046	11.2
62-63	0.012031	6.6	0.0795687	28,721	2,285	27,579	317,207	11.0
63-64	0.012880	5.8	0.0746940	26,436	1,975	25,449	289,628	11.0
64-65	0.013896	5.9	0.0823396	24,461	2,014	23,454	264,180	10.8
65-66	0.015110	5.7	0.0858800	22,447	1,928	21,483	240,726	10.7
66-67	0.016503	4.8	0.0799398	20,519	1,640	19,699	219,243	10.7
67-68	0.018045	4.1	0.0747021	18,879	1,410	18,174	199,544	10.6
68-69	0.019623	4.1	0.0797052	17,469	1,392	16,773	181,370	10.4
69-70	0.021262	3.9	0.0838395	16,077	1,348	15,403	164,597	10.2
70-71	0.023146	3.7	0.0865662	14,729	1,275	14,092	149,194	10.1
71-72	0.025278	3.4	0.0853467	13,454	1,148	12,880	135,102	10.0
72-73	0.027630	3.5	0.0970708	12,306	1,195	11,709	122,222	9.9
73-74	0.030219	3.2	0.0952045	11,111	1,058	10,582	110,514	9.9
74-75	0.033126	2.8	0.0923638	10,053	929	9,589	99,932	9.9

Appendix C. 2011 U.S. General Population Non-Hispanic White Male Life Table
Life Expectancies Adjusted for South Carolina DC experience 1996 to 2015, followed to 2016
White men only

Age (years)	Basic Mortality q_x	Mortality Risk Factor	Adjusted Mortality q_x	Population at Risk l_x	Deaths d_x	Interval Person-years L_x	Cumulative Person-years T_x	Life Expectancy e_x
75-76	0.036255	2.5	0.0889904	9,124	812	8,718	90,343	9.9
76-77	0.039716	2.4	0.0954766	8,312	794	7,915	81,625	9.8
77-78	0.043757	1.0	0.0437570	7,518	329	7,354	73,710	9.8
78-79	0.048405	1.0	0.0484050	7,189	348	7,015	66,357	9.2
79-80	0.053785	1.0	0.0537850	6,841	368	6,657	59,342	8.7
80-81	0.059839	1.0	0.0598390	6,473	387	6,280	52,685	8.1
81-82	0.066176	1.0	0.0661760	6,086	403	5,885	46,405	7.6
82-83	0.073348	1.0	0.0733480	5,683	417	5,475	40,521	7.1
83-84	0.081302	1.0	0.0813020	5,266	428	5,052	35,046	6.7
84-85	0.090236	1.0	0.0902360	4,838	437	4,620	29,994	6.2
85-86	0.100743	1.0	0.1007430	4,401	443	4,180	25,375	5.8
86-87	0.112235	1.0	0.1122350	3,958	444	3,736	21,195	5.4
87-88	0.124750	1.0	0.1247500	3,514	438	3,295	17,459	5.0
88-89	0.138311	1.0	0.1383110	3,076	425	2,864	14,164	4.6
89-90	0.152931	1.0	0.1529310	2,651	405	2,449	11,301	4.3
90-91	0.168603	1.0	0.1686030	2,246	379	2,057	8,852	3.9
91-92	0.185302	1.0	0.1853020	1,867	346	1,694	6,796	3.6
92-93	0.202980	1.0	0.2029800	1,521	309	1,367	5,102	3.4
93-94	0.221569	1.0	0.2215690	1,212	269	1,078	3,735	3.1
94-95	0.240976	1.0	0.2409760	943	227	830	2,658	2.8
95-96	0.261085	1.0	0.2610850	716	187	623	1,828	2.6
96-97	0.281762	1.0	0.2817620	529	149	455	1,206	2.3
97-98	0.302853	1.0	0.3028530	380	115	323	751	2.0
98-99	0.324194	1.0	0.3241940	265	86	222	429	1.6
99-100	0.345609	1.0	0.3456090	179	62	148	207	1.2
100+	1.00000	1.0	1.0000000	117	117	59	59	0.5

Exhibit 1

Vera F. Dolan

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EDUCATION and PROFESSIONAL CERTIFICATIONS

MSPH University of North Carolina at Chapel Hill, Epidemiology, 1981

BA The Johns Hopkins University, Public Health, 1979

FALU Fellow of the Academy of Life Underwriting, 1998

ELS Editor in the Life Sciences, 2003

EXPERIENCE

Principal, VFD Consulting, Inc., 1989 to Present

Providing life and health insurance and related industries mortality and underwriting research, market research, product development, business development and technology, underwriting education and training, and litigation support to multinational clients, including:

AIG American General Life Cos.
American Family Life Insurance Co.
AVS Underwriting
Bank of America
Calypse Biomedical
Canada Life Reinsurance
Charles Schwab & Co.
Clinical Reference Laboratory
decydeWARE
Drinker, Biddle & Reath
Edwards Lifesciences
EMSI (formerly PMSI)
Farmers Mutual Insurance Co.
FaxWatch
Federal Home Loan Bank (San Francisco)
First Financial Underwriting Services
General American Life Insurance Co.
Golden Gateway Financial
Hank George, Inc.
Health Net of California
Heritage Labs
HSBC Insurance Services
Independent Order of Foresters
Insure.com

LabOne
Life Settlement Consulting & Management
Los Angeles County Crime Laboratories
MetLife Canada
MIB Group
Millennium Pharmaceuticals
Mutual of Omaha
North Coast Opportunities
On The Risk – The Journal of the Academy of Life Underwriting
PartnerRe Life (formerly Winterthur Life Reinsurance)
Pacific Blue Cross
PPO Oklahoma
Protective Life Insurance Co.
Safe Harbor Resources
Sagcor Financial Corporation
Society of Actuaries
Thomson Management Solutions
21st Services
Wells Fargo Bank
Western Reserve Life Assurance Co. of Ohio
Xcelerate Corporation

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Curriculum Vitae, continued

Expert witness services provided to the following:

Multiple retentions:

Andres, Andres & Moore, Santa Ana, CA
 Barger & Wolen, Irvine, CA and New York, NY
 County of Hawaii, Hilo, HI
 Donahue Horrow, El Segundo, CA
 Lewis & Roca, Phoenix, AZ

McCue-Pauley & Associates, Dallas, TX
 Taylor Anderson, Denver, CO
 U.S. Department of Justice
 Wilson Elser Moskowitz Edelman & Dicker, Los Angeles and
 San Diego, CA

Expert witness brokers:

AMFS / Medical Experts Nationwide
 Consolidated Consultants
 Insurance Expert Network
 ForensisGroup
 LITILI

Medical Advisors, Inc
 Medical Consultant Services
 The TASA Group
 Thomson Reuters Expert Witness Service

Single cases:

Andrews Kurth, Dallas, TX
 Bolt Keenley Kim, Berkeley, CA
 Campano Law Group, Lancaster, CA
 Carlin & Buchsbaum, Long Beach, CA
 Carmody Torrance Sandak Hennessey, Waterbury, CT
 City of Torrance, Torrance, CA
 Corr Cronin Michelson Baumgardner Preece, Seattle, WA
 Coughlin Law Firm, San Diego, CA
 Cozen O'Connor, Wilmington, DE
 Deitchman & Deitchman, Placerville, CA
 Dressler Law Office, New Haven, CT
 Egan & Pechtel, Kennewick, WA
 Epstein Becker & Green, Los Angeles, CA
 Evan Freirich, Boulder, CO
 Fairchild, Price, Haley & Smith, Nacogdoches, TX
 Fallgatter Farmand & Catlin, Jacksonville, FL
 Ferguson, Skipper, Shaw, Keyser, Baron & Tirabassi, Sarasota, FL
 Friedman, Rubin & White, Anchorage, AL
 Gilchrist & Rutter, Santa Monica, CA
 Graves & King, Riverside, CA
 Greenberg Traurig, Denver, CO
 Greene Broillet & Wheeler, Santa Monica, CA
 The Healy Law Firm, Chicago, IL
 Hinshaw & Culbertson, Los Angeles, CA
 Hoagland, Fitzgerald & Pranaitis, Alton, IL
 Diana Holt, LLC, Columbia, SC
 Jardine Law Office, DeForest, WI
 Kent D. Jensen Law Office, Burley, ID
 Johnson Schachter & Lewis, Sacramento, CA
 Kantor & Kantor, Northridge, CA
 Katten Muchin Rosenman, Los Angeles, CA
 Kirch Druchbas Wagner Valitutti & Sherbrook, Detroit, MI
 Knapp Petersen Clarke, Glendale, CA
 Koch Degen & Gomez, Visalia, CA
 Law Office of Andy Basseri, Beverly Hills, CA
 Law Offices of Benjamin Blakeman, Los Angeles, CA
 Law Offices of Robert A. Brenner, Woodland Hills, CA
 Law Office of Sean Brew, San Diego, CA

Law Offices of James Matthew Brown, San Diego, CA
 Law Offices of Clyde I. Butts, Walnut Creek, CA
 Law Offices of Michael Jay Green, Honolulu, HI
 Law Office of Katherine MacKinnon, St. Louis Park, MN
 Law Office of Stephen W. Penn, Morgan Hill, CA
 Law Office of Charles M. Ray, Newport Beach, CA
 Law Office of Kenneth U. Reyes, Los Angeles, CA
 Law Offices of Cary T. Tanaka, Honolulu, HI
 Law Office of Edward J. Thomas, Bakersfield, CA
 Litrler Mendelson, San Jose, CA
 MacMorris & Carbone, Stockton, CA
 McArdle, Frost & Brinton, Chicago, IL
 McDowell & Osburn, Manchester, NH
 McFall Burnett & Brinton, Manteca, CA
 Meyers McConnell Reisz Siderman, Los Angeles, CA
 Milavetz Gallop & Milavetz, Edina, MN
 Morris Polich & Purdy, San Francisco, CA
 Myers & Gomel, Las Vegas, NV
 Nicholas & Tomasevic, San Diego, CA
 Norton Rose Fulbright US, Houston, TX
 Ogden Murphy Wallace, Seattle, WA
 Renaud Cook Drury Mesaros, Phoenix, AZ
 Saur Law Office, Laguna Hills, CA
 Schumacher Francis & Nelson, Charleston, WV
 Segal and Kirby, Sacramento, CA
 Seyfarth Shaw, Chicago, IL
 SGH Martineau, London, England
 Shook Hardy & Bacon, Kansas City, MO
 Sigelman Law Corporation, Beverly Hills, CA
 Snell & Wilmer, Phoenix, AZ
 Stanley Law Offices, Syracuse, NY
 Stennett & Casino, San Diego, CA
 Vaka Law Group, Tampa, FL
 Webb Bordson Law Group, San Diego, CA
 David K. Wilson & Associates, Sherman, TX
 Whirfield & Eddy, Des Moines, IA
 Winters & Associates, San Diego, CA

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Curriculum Vitae, continued

Consulting Projects – Underwriting

- Life Underwriting Requirements Research, 2004 to Present Providing methodologies, analysis and write-up of insurance testing laboratory data to initiate new products and services. Conducting cohort mortality studies to improve life underwriting risk assessment.
- Life Policy and Procedures Manual, 2014 Revised and updated life insurance policy and procedures manual based on current underwriting and business operations.
- Health Medical Underwriting Manual, 2010 Adapted medical underwriting manual for supplemental health insurance products.
- Structured Settlement Underwriting Manual, 2008 Developed underwriting manual for structured settlements based on current processes.
- Life Claims Audit, 2007 Performed random selection of cases and designed case data extraction sheet for large life insurance claims study.
- Critical Illness and Disability Income Training, 2006 Prepared and presented training to life underwriters in critical illness and disability income underwriting.
- Underwriting Manual Research and Writing, 2006 Adapted traditional life underwriting manual for simplified life, disability and waiver of premium products.
- Life Settlement Experience Analysis, 2006 Analysis of life settlement mortality to determine predictive factors.
- Life Underwriting Research, 2001 to 2003 Constructed life tables from medical literature to validate life underwriting guidelines. Produced quantitative and qualitative life underwriting manual guidance.
- Life Settlement Underwriting Research, 1998 to 2004 Provided model and design of automated life expectancy calculation system, data collection instruments, evaluation scoring and impairment risk factor weights.
- Insurance Services Product Development, 1997 to 1998 Provided analysis of disease mortality, incidence and prevalence to develop new insurance services product.
- Pension Underwriting Research, 1994 Provided biostatistical research basis to a multinational consortium for a new type of impaired risk European pension product.

Consulting Projects - Business Development and Technology

- Simplified Products Survey and Report, 2005 Conducted survey of top-selling simplified products for underwriting and business process lessons learned.
- New Business Process Review and Optimization, 2004 to 2005 Examined current life new business processes to identify opportunities for decreasing redundancies, handoffs, and inefficiencies.
- Underwriting Decision Software Development, 2004 to 2005 Product and market development of life underwriting software that uses advanced logic engine
- Freelance Writing and Editing, 2004 Editing and writing summaries of medical articles, medical conferences, and insurance topics for physicians and consumers.
- Underwriting Operations Annual Report, 2004 Assisted in editing, writing and analysis of metrics presented in life underwriting operations report for 2003.
- Business Process Improvement, 2003 Interviewed underwriting and business support staff to prepare future improvement in life insurance business process workflow.

Vera F. Dolan

Curriculum Vitae, continued

Consulting Projects - Banking

- Enterprise Technology Plan, 2000 Collaborated on design of three-year technology plan for a Federal bank.
- Financial Services Experience Analysis and Strategy, 1995 to 1998 Provided statistical analysis and models to select business and consumer customers for acquisition and retention programs. Estimated bank account life expectancies using actuarial life table methods.
- Human Resources Automation Plan, 1993 Collaborated in development of plan and prototype for automated human resources management.

Certificate of Appreciation for 30 Years of Contribution, *On The Risk - Journal of the Academy of Life Underwriting*, May 4, 2016

Associate Editor, *On The Risk - Journal of the Academy of Life Underwriting*, 2004-Present

Contributing Editor, *On The Risk - Journal of the Academy of Life Underwriting*, 1994-1997

Kaiser Foundation Health Plan, Oakland, California

Medical Economics and Statistics, 1988 to 1989

Converted community-based pricing approach to experience-based rating for a \$2.5 billion premium enterprise. Conducted underwriting market study of 20,000 employers. Conducted analyses to determine competitive pricing for 2+ million member optical and pharmaceutical programs.

Transamerica Occidental Life Insurance Company, Los Angeles, California

New Business Underwriting Research, 1985 to 1988

Provided analysis of company data and medical literature to support management and underwriting decisions. Developed original methods for actuarial analyses now used for automated systems underwriting \$1.5 billion in annual business.

Lincoln National Reinsurance, Ft. Wayne, Indiana

Underwriting Research, 1982 to 1985

Provided analysis of company data and medical literature to support management and underwriting decisions.

University of North Carolina, Chapel Hill, North Carolina

Department of Biostatistics, 1981 to 1982

Performed statistical analyses for multinational clinical trials.

National Institute of Occupational Safety and Health, Cincinnati, Ohio

Industrywide Studies Branch, Biometry Section, Summer 1980

Performed proportionate mortality analysis of death certificate data for evidence of excess brain tumors among petrochemical workers. Performed analysis of medical records for evidence of excess birth anomalies among railroad workers exposed to dioxin.

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Curriculum Vitae, continued

PUBLICATIONS - INSURANCE

"Advantages of a Life Expectancy Using Life Insurance Underwriting and Life Settlement Methods in the Legal Setting" VFD Consulting, Inc.

"Highlights of the 2016 CLIMOA Annual Scientific Meeting" On The Risk - Journal of the Academy of Life Underwriting, Vol. 32, No. 4, 2016

"Hemoglobin Screening Independently Predicts All-Cause Mortality" J. Insurance Medicine, Vol. 45, No. 2, 2015, with Michael Fulks and Robert L. Stout

"Adjusting Measured Creatinine for Low Serum Glucose to Improve Mortality Prediction" On The Risk - Journal of the Academy of Life Underwriting, Vol. 31, No. 3, 2015, with Michael Fulks and Robert L. Stout

"Changing the 'Normal Range' for Blood Pressure from 140/90 to 130/any Improves Risk Assessment" J. Insurance Medicine, Vol. 45, No. 1, 2015, with Michael Fulks and Robert L. Stout

"2014 CRL Blood Pressure Study of Life Insurance Applicants" J. Insurance Medicine, Vol. 45, No. 1, 2015, with Michael Fulks and Robert L. Stout

"Which eGFR Calculation Offers the Best Mortality Prediction for Insurance?" On The Risk - Journal of the Academy of Life Underwriting, Vol. 31, No. 2, 2015, with Michael Fulks and Robert L. Stout

"Using Urine Protein Creatinine Ratio Alone or Reflexing to Urine Albumin in the Applicant with HbA1c Elevation" On The Risk - Journal of the Academy of Life Underwriting, Vol. 31, No. 1, 2015, with Michael Fulks and Robert L. Stout

"Basic Laboratory Testing" In: Basic Life Insurance Underwriting, ALU 101 Textbook, Sixth Ed. Academy of Life Underwriting, 2014, with Michael Fulks and Robert L. Stout

"Evaluating the Risk of Renal Disease Using Urine Proteinuria or Urine Albuminuria in the Applicant with HbA1c Elevation" On The Risk - Journal of the Academy of Life Underwriting, Vol. 30, No. 4, 2014, with Michael Fulks and Robert L. Stout

"Advantages of a Life Expectancy Using Life Insurance Underwriting and Life Settlement Methods in the Legal Setting" Defense Research Institute Life, Health and Disability Newsletter, Vol. 25, Issue 2, June 26, 2014

"Serum Globulin Predicts All-Cause Mortality for Life Insurance Applicants" J. Insurance Medicine, Vol. 44, No. 2, 2014, with Michael Fulks and Robert L. Stout

"NT-proBNP as a Predictor of All-Cause Mortality in a Population of Insurance Applicants" On The Risk - Journal of the Academy of Life Underwriting, Vol. 30, No. 2, 2014, with Michael Clark, Valerie Kaufman, Michael Fulks and Robert L. Stout

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Curriculum Vitae, continued

PUBLICATIONS - INSURANCE, continued

"Beware That Low Urine Creatinine!" On The Risk - Journal of the Academy of Life Underwriting, Vol. 30, No. 1, 2014, with Michael Fulks and Robert L. Stout

"NT-proBNP as a Predictor of All-Cause Mortality in a Population of Insurance Applicants" J. Insurance Medicine, Vol. 44, No. 1, 2014, with Michael Clark, Valerie Kaufman, Michael Fulks and Robert L. Stout

"Scoring Life Insurance Applicants' Laboratory Results, Blood Pressure and Build to Predict All-Cause Mortality Risk" J. Insurance Medicine, Vol. 43, No. 3, 2012, with Michael Fulks and Robert L. Stout

"Urine Protein/Creatinine Ratio as a Risk Predictor in Non-Diabetics with Normal Renal Function" J. Insurance Medicine, Vol. 43, No. 2, 2012, with Michael Fulks and Robert L. Stout

"Trends in Mortality of Insurance Applicants with HIV Infection" J. Insurance Medicine, Vol. 43, No. 2, 2012, with Robert L. Stout and Michael Fulks

"PSA: What Values Predict Increased Mortality Risk?" On The Risk - Journal of the Academy of Life Underwriting, Vol. 27, No. 3, 2011, with Michael Fulks and Robert L. Stout

"Letter to the Editor: The Use of Modeling for Associating Test Values and Mortality Risk" J. Insurance Medicine, Vol. 43, No. 1, 2012, with Michael Fulks and Robert L. Stout

"Isolated Hematuria as a Mortality Risk Predictor" On The Risk - Journal of the Academy of Life Underwriting, Vol. 27, No. 4, 2011, with Michael Fulks and Robert L. Stout

"Highlights of the 2011 AHOU Annual Conference" On The Risk - Journal of the Academy of Life Underwriting, Vol. 27, No. 3, 2011

"Correction to article: Association of Cholesterol, LDL, HDL, Cholesterol/HDL and Triglyceride with All-Cause Mortality in Life Insurance Applicants" J. Insurance Medicine, Vol. 42, No. 2-4, 2011, with Michael Fulks and Robert L. Stout

"CDT and Serum Alcohol: What Is the Risk?" On The Risk - Journal of the Academy of Life Underwriting, Vol. 27, No. 1, 2011, with Robert L. Stout and Michael Fulks

"Albumin and All-Cause Mortality Risk in Insurance Applicants" J. Insurance Medicine, Vol. 42, No. 1, 2010, with Michael Fulks and Robert L. Stout

"Mortality Associated with Positive Hepatitis C and B Test Results" On The Risk - Journal of the Academy of Life Underwriting, Vol. 26, No. 3, 2010, with Robert L. Stout and Michael Fulks

"Glucosuria as a Mortality Risk Predictor When Blood Is Not Collected" On The Risk - Journal of the Academy of Life Underwriting, Vol. 26, No. 2, 2010, with Robert L. Stout and Michael Fulks

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Curriculum Vitae, continued

PUBLICATIONS - INSURANCE, continued

"Mortality Associated with Positive Cocaine Test Results" On The Risk - Journal of the Academy of Life Underwriting, Vol. 26, No. 1, 2010, with Robert L. Stout and Michael Fulks

"Association of Cholesterol, LDL, HDL, Cholesterol/HDL and Triglyceride with All-Cause Mortality in Life Insurance Applicants" J. Insurance Medicine, Vol. 41, No. 4, 2009, with Michael Fulks and Robert L. Stout

"Letter to the Editor: The Authors Reply" J. Insurance Medicine, Vol. 41, No. 3, 2009, with Michael Fulks and Robert L. Stout

"Underwriting Implications of Elevated Carcinoembryonic Antigen" On The Risk - Journal of the Academy of Life Underwriting, Vol. 25, No. 3, 2009, with Robert L. Stout and Michael Fulks

"Mortality Associated with Bilirubin Levels in Insurance Applicants" J. Insurance Medicine, Vol. 41, No. 1, 2009, with Michael Fulks and Robert L. Stout

"Non-Cigarette Tobacco Use – What is the Risk?" On The Risk - Journal of the Academy of Life Underwriting, Vol. 25, No. 2, 2009, with Robert L. Stout and Michael Fulks

"Hemoglobin A1c and Mortality in Insurance Applicants: A 5-Year Follow-Up Study", On The Risk - Journal of the Academy of Life Underwriting, Vol. 25, No. 1, 2009, with Robert L. Stout and Michael Fulks

"Using Liver Enzymes as Screening Tests to Predict Mortality Risk" J. Insurance Medicine, Vol. 40, No. 4, 2008, with Michael Fulks and Robert L. Stout

"Underwriting Integrity: Lessons from the Subprime Mortgage Crisis" On The Risk - Journal of the Academy of Life Underwriting, Vol. 24, No. 4, 2008

"Highlights from the 2007 AHOU Meeting" On The Risk - Journal of the Academy of Life Underwriting, Vol. 24, No. 1, 2008

"Increased Mortality Associated with Elevated Carcinoembryonic Antigen in Insurance Applicants" J. Insurance Medicine, Vol. 39, No. 4, 2007, with Robert L. Stout, Michael Fulks, Mark E. Magee and Luis Suarez

"Relationship of Hemoglobin A1c to Mortality in Nonsmoking Insurance Applicants" J. Insurance Medicine, Vol. 39, No. 3, 2007, with Robert L. Stout, Michael Fulks, Mark E. Magee and Luis Suarez

"Highlights from the 2006 AHOU Meeting" On The Risk - Journal of the Academy of Life Underwriting, Vol. 23, No. 1, 2007

"The Reproductive System" In: Intermediate Medical Life Insurance Underwriting ALU 201, 1st ed., Education Committee of the Academy of Life Underwriting, chapter 4, 2006

Vera F. Dolan

Curriculum Vitae, continued

PUBLICATIONS - INSURANCE, continued

"Highlights from the 2006 CIU Meeting" On The Risk - Journal of the Academy of Life Underwriting, Vol. 22, No. 3, 2006

"Improvements in Cotinine Testing of Insurance Applicants" On The Risk - Journal of the Academy of Life Underwriting, Vol. 22, No. 2, 2006 with Robert L. Stout and Mark Magee

"Highlights from the LOMA Emerging Technology Conference: Understanding How to Use New Technology" On The Risk - Journal of the Academy of Life Underwriting, Vol. 22, No. 2, 2006

Panelist, "Contemplating Pandemic Risk" by Steven C. Siegel, The Actuary, Vol. 3, Issue 3, 2006

"Highlights of the 2005 AHOU Conference" On The Risk - Journal of the Academy of Life Underwriting, Vol. 22, No. 1, 2006

"Simplified Products: Something Old, Something New, and Something That May Just Make You Blue!" On The Risk - Journal of the Academy of Life Underwriting, with Ernest A. Testa, Vol. 22, No. 1, 2006

"2005 Simplified Product Survey: Final Report" for MIB Group, with Ernest A. Testa, January 2006

"Highlights of the 2005 CIU Conference" On The Risk - Journal of the Academy of Life Underwriting, Vol. 21, No. 4, 2005

"Underwriting for the New Millennium: Simplified Product Survey" NewsDirect, September 2005

"Sleep Problems and Accidents" On The Risk - Journal of the Academy of Life Underwriting, Vol. 21, No. 1, 2005

"Customer Relationship Management: A Reinsurer's Experience" On The Risk - Journal of the Academy of Life Underwriting, Vol. 20, No. 2, 2004

"Current Concepts in the Insulin Resistance Syndrome" On The Risk - Journal of the Academy of Life Underwriting, with Robert Weir, Vol. 20, No. 1, 2004

"Highlights of the 2003 AAIM" On The Risk - Journal of the Academy of Life Underwriting, Vol. 20, No. 1, 2004

"Current Concepts in Multiple Sclerosis" On The Risk - Journal of the Academy of Life Underwriting, with Robert Weir, Vol. 19, No. 4, 2003

"Multiple Sclerosis" Canada Life Review Online, Third Quarter 2003, with Robert Weir

"Highlights of the 2003 CIU Meeting" On The Risk - Journal of the Academy of Life Underwriting, Vol. 19, No. 3, 2003

Vera F. Dolan

Curriculum Vitae, continued

PUBLICATIONS - INSURANCE, continued

"Web-Assisted Inspection Reports: Part 2 of 2" On The Risk - Journal of the Academy of Life Underwriting, Vol. 19, No. 3, 2003

"Keynote Presentation to the Annual Meeting, Canadian Institute of Underwriters" Canada Life Review Online, Second Quarter 2003

"Web-Assisted Inspection Reports: Part 1 of 2" On The Risk - Journal of the Academy of Life Underwriting, On The Risk - Journal of the Academy of Life Underwriting, Vol. 19, No. 2, 2003

"Highlights of the 2002 AAIM" On The Risk - Journal of the Academy of Life Underwriting, Vol. 19, No. 1, 2003

Project Manager, "Report of the 2002 Automated Risk Assessment System Study" Thomson Management Solutions, February 2003

"Insulin Resistance Syndrome" Canada Life Review Online, Fourth Quarter 2002

"The New Paradigm of Coronary Artery Disease: Part 1. The Pathophysiology of Vulnerable Plaque" On The Risk - Journal of the Academy of Life Underwriting, with Robert Weir, Vol. 18, No. 4, 2002

"Orthostatic Hypotension" On The Risk - Journal of the Academy of Life Underwriting, with Robert Weir, Vol. 18, No. 3, 2002

"Highlights of the 2002 CLIMOA" On The Risk - Journal of the Academy of Life Underwriting, Vol. 18, No. 3, 2002

"Treatment of Localized Prostate Cancer" On The Risk - Journal of the Academy of Life Underwriting, Vol. 18, No. 2, 2002

"Privacy Rules and Regulations: An Interview with Linda S. Kaiser, Esq." On The Risk - Journal of the Academy of Life Underwriting, Vol. 18, No. 1, 2002

"Treated Cholesterol; A Preferred Risk?" Canada Life Review Online, First Quarter 2002, with Robert Weir

"Body Mass Index and Mortality" On The Risk - Journal of the Academy of Life Underwriting, Vol. 17, No. 4, 2001, with Robert Weir

"Innovations in Underwriting Build" Canada Life Review No. 2, 2001

"Honoring Past HOLUA Presidents" On The Risk - Journal of the Academy of Life Underwriting, Vol. 17, No. 3, 2001

Vera F. Dolan

Curriculum Vitae, continued

PUBLICATIONS - INSURANCE, continued

"Highlights of the 2001 HOLUA: An Underwriter's Odyssey" On The Risk - Journal of the Academy of Life Underwriting, Vol. 17, No. 3, 2001

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"Highlights of the Spring 2001 Risk Appraisal Forum" On The Risk - Journal of the Academy of Life Underwriting, Vol. 17, No. 2, 2001

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Vera F. Dolan

Curriculum Vitae, continued

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Vera F. Dolan

Curriculum Vitae, continued

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Vera F. Dolan

Curriculum Vitae, continued

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Vera F. Dolan

Curriculum Vitae, continued

PUBLICATIONS - INSURANCE, continued

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PRESENTATIONS

"Juvenile Life Without Parole Sentencing and Resentencing Case Update" CLE presentation (4.5 hours, course no. 168516), University of South Carolina School of Law, Columbia, South Carolina, December 16, 2016

"Isolated Hematuria: What Is the Risk?" Northern California Life Insurance Association, Walnut Creek, California, May 10, 2012

"Positive Cocaine Tests and Mortality" Northern California Life Insurance Association, Berkeley, California, September 17, 2009

"Actuaries and Public Health: From Analysis to Action" Society of Actuaries Health Spring Meeting, Los Angeles, California, May 28, 2008, with Grady Carterall and Dana Goldman

Vera F. Dolan

Curriculum Vitae, continued

PRESENTATIONS, continued

"Research Results: Potential Impact of a Pandemic on the U.S. Health Insurance System" Society of Actuaries Health Spring Meeting, Los Angeles, California, May 28, 2008, with Jim Toole and Jim Walbridge

"How the World Has Changed, and How Medical Underwriting Will Benefit Your Applicants and Your Companies' Bottom Line" Annual Product Development Actuary Symposium, Denver, Colorado, June 26, 2007, with Robert L. Stout

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"Pandemics and Extreme Events" Actuarial Society of Greater New York Annual Meeting, New York City, New York, November 9, 2006, with Janet Carstens

"Underwriting Simplified Issue Life Insurance Products" Group Underwriting Association of America, San Diego, California, October 31, 2006, with Ernie Testa

"The Life Settlements Market" Society of Actuaries Annual Meeting, Chicago, Illinois, October 18, 2006, with Tony Duscio and Jay Vadiveloo

"Preparing for Extreme Events" Society of Actuaries Annual Meeting, Chicago, Illinois, October 18, 2006, with Janet Carstens and Max Rudolph

"Pandemic Exposure and Risk Management Strategies in Asia as Compared to the United States" Society of Actuaries Life Spring Meeting, Hollywood, Florida, May 24, 2006, with Ronald Klein

"Current Trends in Distribution Channels: New Underwriting for a New Millennium" Society of Actuaries Life Spring Meeting, New Orleans, Louisiana, May 23, 2005, with Jim McArdle and Ernie Testa

"Gynecologic and Obstetric Disorders" Institute of Caribbean Home Office Underwriters, Almond Beach Resort, Barbados, September 14, 2004

"Sleep Dysfunction and Disorders" Institute of Caribbean Home Office Underwriters, Almond Beach Resort, Barbados, September 13, 2004

"Sleep Dysfunction and Disorders" Western Home Office Underwriters Association, Colorado Springs, Colorado, June 3, 2004

"Nail a Front Door on Your Back Room" Social Enterprise Alliance, San Francisco, California, March 5, 2004, with David Allburn and Russ Combs

"Multiple Sclerosis" Northern California Life Insurance Association, Emeryville, California, October 22, 2003

Vera F. Dolan

Curriculum Vitae, continued

PRESENTATIONS, continued

"Post-Stroke Morbidity" Northern California Life Insurance Association, San Rafael, California, March 21, 2001

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"They Came for AIDS; They Stayed for Liver" Society of Actuaries, Orlando, Florida, October 28, 1996, with Rick Bergstrom and Hank George

"Detecting and Evaluating Marital Violence" Western Home Office Underwriters Association, Squaw Valley, California, June 9, 1995

Last update February 6, 2017

Exhibit 2

South Carolina DC men admitted 1996 to 2015, followed to 2016

Last admission only, duplicate IDs removed, admission year errors removed

Exposure for all races; N=64,204

Mortality rates are smoothed for ≥ 5 deaths (running average of 3 or 5 raw rates, previous age, current age & next age)

Age	Alive	All races Dead	Total	Mortality Rate	Smoothed Mortality Rate	US Population Mortality Rate	Mortality Ratios (≥ 5 deaths only)
15	3	0	3	0.000000		0.000439	
16	90	0	90	0.000000		0.000552	
17	831	0	831	0.000000		0.000675	
18	2,272	6	2,278	0.002634	0.002701	0.000807	3.3
19	4,322	12	4,334	0.002769	0.003011	0.000942	3.2
20	6,585	24	6,609	0.003631	0.003233	0.001085	3.0
21	8,457	28	8,485	0.003300	0.003812	0.001216	3.1
22	9,725	44	9,769	0.004504	0.004359	0.001310	3.3
23	10,374	55	10,429	0.005274	0.005486	0.001353	4.1
24	10,409	70	10,479	0.006680	0.006254	0.001358	4.6
25	10,065	69	10,134	0.006809	0.006646	0.001351	4.9
26	9,552	62	9,614	0.006449	0.007431	0.001349	5.5
27	8,993	82	9,075	0.009036	0.007899	0.001353	5.8
28	8,454	70	8,524	0.008212	0.008922	0.001371	6.5
29	8,014	77	8,091	0.009517	0.009048	0.001399	6.5
30	7,681	73	7,754	0.009414	0.009188	0.001432	6.4
31	7,465	65	7,530	0.008632	0.010131	0.001464	6.9
32	7,199	90	7,289	0.012347	0.010670	0.001496	7.1
33	6,904	77	6,981	0.011030	0.011365	0.001528	7.4
34	6,738	73	6,811	0.010718	0.010614	0.001563	6.8
35	6,473	66	6,539	0.010093	0.010348	0.001613	6.4
36	6,288	65	6,353	0.010231	0.011223	0.001682	6.7
37	5,989	81	6,070	0.013344	0.012599	0.001764	7.1
38	5,823	84	5,907	0.014220	0.014226	0.001857	7.7
39	5,670	87	5,757	0.015112	0.015292	0.001964	7.8
40	5,529	93	5,622	0.016542	0.016436	0.002083	7.9
41	5,286	95	5,381	0.017655	0.017101	0.002227	7.7
42	5,114	89	5,203	0.017106	0.017659	0.002414	7.3
43	5,012	93	5,105	0.018217	0.018047	0.002653	6.8
44	4,901	94	4,995	0.018819	0.019173	0.002939	6.5
45	4,734	99	4,833	0.020484	0.021675	0.003243	6.7
46	4,545	120	4,665	0.025723	0.025268	0.003563	7.1
47	4,164	127	4,291	0.029597	0.027663	0.003922	7.1
48	3,971	113	4,084	0.027669	0.030107	0.004320	7.0
49	3,715	127	3,842	0.033056	0.032962	0.004749	6.9
50	3,453	137	3,590	0.038162	0.038314	0.005193	7.4
51	3,193	146	3,339	0.043726	0.041608	0.005647	7.4
52	2,920	131	3,051	0.042937	0.044710	0.006122	7.3
53	2,669	133	2,802	0.047466	0.045803	0.006630	6.9
54	2,372	117	2,489	0.047007	0.050491	0.007181	7.0
55	2,068	125	2,193	0.057000	0.053517	0.007779	6.9
56	1,852	111	1,963	0.056546	0.055167	0.008415	6.6
57	1,624	89	1,713	0.051956	0.057715	0.009074	6.4
58	1,418	98	1,516	0.064644	0.061413	0.009727	6.3
59	1,213	88	1,301	0.067640	0.069713	0.010371	6.7
60	1,057	88	1,145	0.076856	0.078531	0.011034	7.1
61	878	88	966	0.091097	0.082366	0.011738	7.0
62	733	63	796	0.079146	0.086399	0.012489	6.9
63	635	62	697	0.088953	0.083857	0.013335	6.3
64	549	50	599	0.083472	0.085654	0.014319	6.0
65	444	41	485	0.084536	0.087103	0.015482	5.6
66	379	39	418	0.093301	0.096722	0.016824	5.7
67	324	41	365	0.112329	0.097724	0.018330	5.3
68	271	26	297	0.087542	0.091657	0.019900	4.6
69	234	19	253	0.075099	0.089544	0.021539	4.2

South Carolina DC men admitted 1996 to 2015, followed to 2016

Last admission only, duplicate IDs removed, admission year errors removed

Exposure for all races; N=64,204

Mortality rates are smoothed for ≥ 5 deaths (running average of 3 or 5 raw rates, previous age, current age & next age)

Age	Alive	All races Dead	Total	Mortality Rate	Smoothed Mortality Rate	US Population Mortality Rate	Mortality Ratios (≥ 5 deaths only)
70	194	23	217	0.105991	0.095649	0.023396	4.1
71	152	20	172	0.116279	0.090170	0.025476	3.5
72	136	14	150	0.093333	0.096203	0.027794	3.5
73	125	8	133	0.060150	0.097922	0.030350	3.2
74	102	12	114	0.105263	0.091534	0.033204	2.8
75	85	11	96	0.114583	0.094742	0.036345	2.6
76	76	7	83	0.084337	0.109378	0.039788	2.7
77	57	7	64	0.109375	0.111855	0.043720	2.6
78	52	8	60	0.133333	0.114580	0.048335	2.4
79	45	6	51	0.117647	0.116462	0.053650	2.2
80	34	5	39	0.128205	0.125356	0.059565	2.1
81	29	3	32	0.093750		0.065848	
82	22	4	26	0.153846		0.072956	
83	20	1	21	0.047619		0.080741	
84	19	0	19	0.000000		0.089357	
85	17	1	18	0.055556		0.099650	
86	14	2	16	0.125000		0.110901	
87	13	1	14	0.071429		0.123146	
88	10	3	13	0.230769		0.136412	
89	13	0	13	0.000000		0.150710	
90	9	0	9	0.000000		0.166038	
91	8	0	8	0.000000		0.182374	
92	7	0	7	0.000000		0.199676	
93	10	0	10	0.000000		0.217880	
94	15	1	16	0.062500		0.236903	
95	2	0	2	0.000000		0.256636	
96	2	0	2	0.000000		0.276954	
97	2	0	2	0.000000		0.297713	

Total deaths 4,239

Exhibit 3

South Carolina DC men admitted 1996 to 2015, followed to 2016

Last admission only, duplicate IDs removed; admission year errors removed

Exposure for blacks only; N=40,454

Mortality rates are smoothed for ≥ 5 deaths (running average of 3 or 5 raw rates, previous age, current age & next age)

Age	Alive	Black Dead	Total	Raw Mortality Rate	Smoothed Mortality Rate	US Population Mortality Rate	Mortality Ratios (≥ 5 deaths only)
15	2	0	2	0.000000		0.000655	
16	60	0	60	0.000000		0.000822	
17	543	0	543	0.000000		0.001004	
18	1,504	5	1,509	0.003313	0.003033	0.001206	2.5
19	2,898	8	2,906	0.002753	0.003351	0.001421	2.4
20	4,498	18	4,516	0.003986	0.003383	0.001654	2.0
21	5,847	20	5,867	0.003409	0.004059	0.001874	2.2
22	6,867	33	6,900	0.004783	0.004333	0.002041	2.1
23	7,453	36	7,489	0.004807	0.005139	0.002134	2.4
24	7,508	44	7,552	0.005826	0.005656	0.002168	2.6
25	7,216	46	7,262	0.006334	0.005943	0.002186	2.7
26	6,842	39	6,881	0.005668	0.006574	0.002212	3.0
27	6,426	50	6,476	0.007721	0.007412	0.002230	3.3
28	5,938	53	5,991	0.008847	0.008178	0.002245	3.6
29	5,604	45	5,649	0.007966	0.008357	0.002259	3.7
30	5,284	44	5,328	0.008258	0.007893	0.002267	3.5
31	5,059	38	5,097	0.007455	0.008957	0.002276	3.9
32	4,786	54	4,840	0.011157	0.009753	0.002300	4.2
33	4,554	49	4,603	0.010645	0.010648	0.002350	4.5
34	4,392	45	4,437	0.010142	0.010346	0.002426	4.3
35	4,152	43	4,195	0.010250	0.009901	0.002527	3.9
36	3,937	37	3,974	0.009311	0.010548	0.002646	4.0
37	3,679	45	3,724	0.012084	0.012161	0.002772	4.4
38	3,525	54	3,579	0.015088	0.013441	0.002896	4.6
39	3,452	46	3,498	0.013150	0.015186	0.003027	5.0
40	3,291	58	3,349	0.017319	0.015133	0.003179	4.8
41	3,101	47	3,148	0.014930	0.015972	0.003369	4.7
42	3,016	48	3,064	0.015666	0.015002	0.003607	4.2
43	2,941	43	2,984	0.014410	0.014833	0.003902	3.8
44	2,870	42	2,912	0.014423	0.015822	0.004251	3.7
45	2,739	52	2,791	0.018631	0.019842	0.004616	4.3
46	2,611	71	2,682	0.026473	0.024402	0.005016	4.9
47	2,421	70	2,491	0.028101	0.026482	0.005513	4.8
48	2,274	58	2,332	0.024871	0.026654	0.006129	4.3
49	2,127	59	2,186	0.026990	0.028625	0.006838	4.2
50	1,988	70	2,058	0.034014	0.032107	0.007586	4.2
51	1,830	67	1,897	0.035319	0.035336	0.008344	4.2
52	1,681	64	1,745	0.036676	0.038086	0.009145	4.2
53	1,541	68	1,609	0.042262	0.041294	0.010011	4.1
54	1,360	64	1,424	0.044944	0.046430	0.010959	4.2
55	1,183	65	1,248	0.052083	0.049429	0.011995	4.1
56	1,055	57	1,112	0.051259	0.050691	0.013107	3.9
57	937	48	985	0.048731	0.056749	0.014274	4.0
58	794	60	854	0.070258	0.061732	0.015455	4.0
59	677	48	725	0.066207	0.072218	0.016630	4.3
60	585	51	636	0.080189	0.082261	0.017888	4.6
61	466	52	518	0.100386	0.093277	0.019207	4.9
62	363	40	403	0.099256	0.093367	0.020451	4.6
63	320	28	348	0.080460	0.093350	0.021595	4.3
64	269	30	299	0.100334	0.089763	0.022717	4.0
65	206	20	226	0.088496	0.097257	0.023933	4.1
66	183	21	204	0.102941	0.107622	0.025369	4.2
67	152	23	175	0.131429	0.114021	0.027104	4.2
68	116	14	130	0.107692	0.117090	0.029089	4.0
69	95	12	107	0.112150	0.107763	0.031191	3.5

South Carolina DC men admitted 1996 to 2015, followed to 2016

Last admission only, duplicate IDs removed, admission year errors removed

Exposure for blacks only; N=40,454

Mortality rates are smoothed for ≥ 5 deaths (running average of 3 or 5 raw rates, previous age, current age & next age)

Age	Alive	Black Dead	Total	Raw Mortality Rate	Smoothed Mortality Rate	US Population Mortality Rate	Mortality Ratios (≥ 5 deaths only)
70	78	9	87	0.103448	0.115344	0.033429	3.5
71	60	9	69	0.130435	0.116942	0.035780	3.3
72	55	4	59	0.067797		0.038397	
73	48	3	51	0.058824		0.041254	
74	39	5	44	0.113636		0.044174	
75	30	5	35	0.142857		0.047704	
76	27	2	29	0.068966		0.051047	
77	18	3	21	0.142857		0.054624	
78	17	3	20	0.150000		0.059628	
79	15	2	17	0.117647		0.064976	
80	11	2	13	0.153846		0.070676	
81	9	1	10	0.100000		0.076651	
82	8	0	8	0.000000		0.085516	
83	7	0	7	0.000000		0.092664	
84	6	0	6	0.000000		0.100307	
85	5	0	5	0.000000		0.108460	
86	4	1	5	0.200000		0.117140	
87	5	0	5	0.000000		0.126357	
88	4	0	4	0.000000		0.136120	
89	3	0	3	0.000000		0.146432	
90	2	0	2	0.000000		0.157294	
91	3	0	3	0.000000		0.168701	
92	2	0	2	0.000000		0.180641	
93	3	0	3	0.000000		0.193099	
94	7	0	7	0.000000		0.206052	
95	1	0	1	0.000000		0.219470	
96	1	0	1	0.000000		0.233321	
97	1	0	1	0.000000		0.247561	
Total deaths		2,351					

Exhibit 4

South Carolina DC men admitted 1996 to 2015, followed to 2016

Last admission only, duplicate IDs removed, admission year errors removed

Exposure for whites only; N=22,081

Mortality rates are smoothed for ≥ 5 deaths (running average of 3 or 5 raw rates, previous age, current age & next age)

Age	Alive	White Dead	Total	Raw Mortality Rate	Smoothed Mortality Rate	US Population Mortality Rate	Mortality Ratios (≥ 5 deaths only)
15	1	0	1	0.000000		0.000414	
16	28	0	28	0.000000		0.000522	
17	268	0	268	0.000000		0.000641	
18	717	1	718	0.001393		0.000773	
19	1,325	4	1,329	0.003010		0.000909	
20	1,944	6	1,950	0.003077	0.003181	0.001053	3.0
21	2,427	8	2,435	0.003285	0.003500	0.001185	3.0
22	2,647	11	2,658	0.004138	0.004806	0.001283	3.7
23	2,697	19	2,716	0.006996	0.006919	0.001333	5.2
24	2,676	26	2,702	0.009623	0.008440	0.001349	6.3
25	2,620	23	2,643	0.008702	0.009056	0.001354	6.7
26	2,466	22	2,488	0.008842	0.010391	0.001365	7.6
27	2,316	32	2,348	0.013629	0.009974	0.001379	7.2
28	2,265	17	2,282	0.007450	0.011864	0.001401	8.5
29	2,173	32	2,205	0.014512	0.011735	0.001432	8.2
30	2,161	29	2,190	0.013242	0.013335	0.001467	9.1
31	2,177	27	2,204	0.012250	0.013876	0.001502	9.2
32	2,195	36	2,231	0.016136	0.013753	0.001536	9.0
33	2,147	28	2,175	0.012874	0.013955	0.001570	8.9
34	2,150	28	2,178	0.012856	0.012136	0.001609	7.5
35	2,131	23	2,154	0.010678	0.011928	0.001665	7.2
36	2,177	27	2,204	0.012250	0.013112	0.001742	7.5
37	2,158	36	2,194	0.016408	0.014128	0.001829	7.7
38	2,156	30	2,186	0.013724	0.016339	0.001921	8.5
39	2,078	40	2,118	0.018886	0.016139	0.002023	8.0
40	2,117	34	2,151	0.015807	0.019133	0.002135	9.0
41	2,066	48	2,114	0.022706	0.019370	0.002273	8.5
42	2,001	40	2,041	0.019598	0.022267	0.002459	9.1
43	1,991	50	2,041	0.024498	0.023331	0.002703	8.6
44	1,956	52	2,008	0.025896	0.024755	0.002997	8.3
45	1,922	47	1,969	0.023870	0.025127	0.003309	7.6
46	1,864	49	1,913	0.025614	0.027223	0.003631	7.5
47	1,684	56	1,740	0.032184	0.030095	0.003984	7.6
48	1,638	55	1,693	0.032487	0.035454	0.004366	8.1
49	1,540	67	1,607	0.041693	0.039239	0.004768	8.2
50	1,428	65	1,493	0.043537	0.046941	0.005179	9.1
51	1,325	78	1,403	0.055595	0.050285	0.005596	9.0
52	1,210	66	1,276	0.051724	0.054307	0.006034	9.0
53	1,104	65	1,169	0.055603	0.052714	0.006508	8.1
54	990	53	1,043	0.050815	0.057024	0.007026	8.1
55	868	60	928	0.064655	0.060073	0.007591	7.9
56	780	54	834	0.064748	0.062302	0.008191	7.6
57	672	41	713	0.057504	0.060358	0.008812	6.8
58	608	38	646	0.058824	0.062585	0.009425	6.6
59	520	40	560	0.071429	0.068333	0.010028	6.8
60	458	37	495	0.074747	0.076123	0.010645	7.2
61	402	36	438	0.082192	0.072227	0.011305	6.4
62	362	23	385	0.059740	0.079569	0.012031	6.6
63	308	33	341	0.096774	0.074694	0.012880	5.8
64	276	20	296	0.067568	0.082340	0.013896	5.9
65	233	21	254	0.082677	0.085880	0.015110	5.7
66	191	18	209	0.086124	0.079940	0.016503	4.8
67	169	18	187	0.096257	0.074702	0.018045	4.1
68	153	11	164	0.067073	0.079705	0.019623	4.1
69	139	6	145	0.041379	0.083840	0.021262	3.9

South Carolina DC men admitted 1996 to 2015, followed to 2016

Last admission only, duplicate IDs removed, admission year errors removed

Exposure for whites only; N=22,081

Mortality rates are smoothed for ≥ 5 deaths (running average of 3 or 5 raw rates, previous age, current age & next age)

Age	Alive	White Dead	Total	Raw Mortality Rate	Smoothed Mortality Rate	US Population Mortality Rate	Mortality Ratios (≥ 5 deaths only)
70	116	14	130	0.107692	0.086566	0.023146	3.7
71	92	11	103	0.106796	0.085347	0.025278	3.4
72	81	10	91	0.109890	0.097071	0.027630	3.5
73	77	5	82	0.060976	0.095204	0.030219	3.2
74	63	7	70	0.100000	0.092364	0.033126	2.8
75	55	6	61	0.098361	0.088990	0.036255	2.5
76	49	5	54	0.092593	0.095477	0.039716	2.4
77	39	4	43	0.093023		0.043757	
78	35	5	40	0.125000		0.048405	
79	30	4	34	0.117647		0.053785	
80	23	3	26	0.115385		0.059839	
81	20	2	22	0.090909		0.066176	
82	14	4	18	0.222222		0.073348	
83	13	1	14	0.071429		0.081302	
84	13	0	13	0.000000		0.090236	
85	12	1	13	0.076923		0.100743	
86	10	1	11	0.090909		0.112235	
87	8	1	9	0.111111		0.124750	
88	6	3	9	0.333333		0.138311	
89	7	0	7	0.000000		0.152931	
90	6	0	6	0.000000		0.168603	
91	5	0	5	0.000000		0.185302	
92	5	0	5	0.000000		0.202980	
93	7	0	7	0.000000		0.221569	
94	8	1	9	0.111111		0.240976	
95	1	0	1	0.000000		0.261085	
96	1	0	1	0.000000		0.281762	
97	1	0	1	0.000000		0.302853	
Total deaths		1,874					

EXHIBIT 5

Table 2. Life table for males: United States, 2011

Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/64_11/Table02.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
0-1	0.006575	100,000	658	99,427	7,629,389	76.3
1-2	0.000445	99,342	44	99,320	7,529,961	75.8
2-3	0.000301	99,298	30	99,283	7,430,641	74.8
3-4	0.000240	99,268	24	99,256	7,331,358	73.9
4-5	0.000183	99,244	18	99,235	7,232,101	72.9
5-6	0.000169	99,226	17	99,218	7,132,866	71.9
6-7	0.000150	99,210	15	99,202	7,033,648	70.9
7-8	0.000134	99,195	13	99,188	6,934,446	69.9
8-9	0.000115	99,181	11	99,176	6,835,258	68.9
9-10	0.000097	99,170	10	99,165	6,736,082	67.9
10-11	0.000085	99,160	8	99,156	6,636,917	66.9
11-12	0.000092	99,152	9	99,147	6,537,761	65.9
12-13	0.000132	99,143	13	99,136	6,438,613	64.9
13-14	0.000213	99,130	21	99,119	6,339,477	64.0
14-15	0.000323	99,109	32	99,093	6,240,358	63.0
15-16	0.000439	99,077	43	99,055	6,141,265	62.0
16-17	0.000552	99,033	55	99,006	6,042,210	61.0
17-18	0.000675	98,979	67	98,945	5,943,204	60.0
18-19	0.000807	98,912	80	98,872	5,844,259	59.1
19-20	0.000942	98,832	93	98,785	5,745,387	58.1
20-21	0.001085	98,739	107	98,685	5,646,602	57.2
21-22	0.001216	98,632	120	98,572	5,547,917	56.2
22-23	0.001310	98,512	129	98,447	5,449,345	55.3
23-24	0.001353	98,383	133	98,316	5,350,898	54.4
24-25	0.001358	98,250	133	98,183	5,252,582	53.5
25-26	0.001351	98,116	133	98,050	5,154,399	52.5
26-27	0.001349	97,984	132	97,918	5,056,349	51.6
27-28	0.001353	97,852	132	97,785	4,958,431	50.7
28-29	0.001371	97,719	134	97,652	4,860,646	49.7
29-30	0.001399	97,585	137	97,517	4,762,994	48.8
30-31	0.001432	97,449	140	97,379	4,665,477	47.9
31-32	0.001464	97,309	143	97,238	4,568,098	46.9
32-33	0.001496	97,167	145	97,094	4,470,860	46.0
33-34	0.001528	97,021	148	96,947	4,373,766	45.1
34-35	0.001563	96,873	151	96,797	4,276,819	44.1
35-36	0.001613	96,722	156	96,643	4,180,022	43.2
36-37	0.001682	96,565	162	96,484	4,083,378	42.3
37-38	0.001764	96,403	170	96,318	3,986,894	41.4
38-39	0.001857	96,233	179	96,144	3,890,576	40.4
39-40	0.001964	96,054	189	95,960	3,794,432	39.5
40-41	0.002083	95,866	200	95,766	3,698,472	38.6
41-42	0.002227	95,666	213	95,560	3,602,706	37.7
42-43	0.002414	95,453	230	95,338	3,507,147	36.7
43-44	0.002653	95,223	253	95,096	3,411,809	35.8
44-45	0.002939	94,970	279	94,830	3,316,713	34.9
45-46	0.003243	94,691	307	94,537	3,221,882	34.0
46-47	0.003563	94,384	336	94,216	3,127,345	33.1
47-48	0.003922	94,047	369	93,863	3,033,129	32.3
48-49	0.004320	93,679	405	93,476	2,939,266	31.4
49-50	0.004749	93,274	443	93,052	2,845,790	30.5
50-51	0.005193	92,831	482	92,590	2,752,738	29.7
51-52	0.005647	92,349	522	92,088	2,660,148	28.8
52-53	0.006122	91,827	562	91,546	2,568,060	28.0
53-54	0.006630	91,265	605	90,963	2,476,514	27.1
54-55	0.007181	90,660	651	90,335	2,385,551	26.3
55-56	0.007779	90,009	700	89,659	2,295,216	25.5
56-57	0.008415	89,309	752	88,933	2,205,557	24.7
57-58	0.009074	88,557	804	88,156	2,116,624	23.9
58-59	0.009727	87,754	854	87,327	2,028,469	23.1
59-60	0.010371	86,900	901	86,450	1,941,141	22.3
60-61	0.011034	85,999	949	85,525	1,854,692	21.6

See footnote at end of table.

Table 2. Life table for males: United States, 2011—Con.Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/64_11/Table02.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
61-62	0.011738	85,050	998	84,551	1,769,167	20.8
62-63	0.012489	84,052	1,050	83,527	1,684,616	20.0
63-64	0.013335	83,002	1,107	82,449	1,601,089	19.3
64-65	0.014319	81,895	1,173	81,309	1,518,641	18.5
65-66	0.015482	80,723	1,250	80,098	1,437,332	17.8
66-67	0.016824	79,473	1,337	78,804	1,357,234	17.1
67-68	0.018330	78,136	1,432	77,420	1,278,430	16.4
68-69	0.019900	76,703	1,526	75,940	1,201,010	15.7
69-70	0.021539	75,177	1,619	74,367	1,125,070	15.0
70-71	0.023396	73,558	1,721	72,697	1,050,702	14.3
71-72	0.025476	71,837	1,830	70,922	978,005	13.6
72-73	0.027794	70,007	1,946	69,034	907,083	13.0
73-74	0.030350	68,061	2,066	67,028	838,049	12.3
74-75	0.033204	65,995	2,191	64,900	771,021	11.7
75-76	0.036345	63,804	2,319	62,645	706,121	11.1
76-77	0.039788	61,485	2,446	60,262	643,477	10.5
77-78	0.043720	59,039	2,581	57,748	583,215	9.9
78-79	0.048335	56,458	2,729	55,093	525,467	9.3
79-80	0.053650	53,729	2,883	52,287	470,374	8.8
80-81	0.059565	50,846	3,029	49,332	418,086	8.2
81-82	0.065848	47,817	3,149	46,243	368,754	7.7
82-83	0.072956	44,669	3,259	43,039	322,511	7.2
83-84	0.080741	41,410	3,343	39,738	279,472	6.7
84-85	0.089357	38,066	3,402	36,366	239,734	6.3
85-86	0.099650	34,665	3,454	32,938	203,368	5.9
86-87	0.110901	31,211	3,461	29,480	170,430	5.5
87-88	0.123146	27,749	3,417	26,041	140,950	5.1
88-89	0.136412	24,332	3,319	22,672	114,910	4.7
89-90	0.150710	21,013	3,167	19,429	92,237	4.4
90-91	0.166038	17,846	2,963	16,364	72,808	4.1
91-92	0.182374	14,883	2,714	13,526	56,443	3.8
92-93	0.199676	12,169	2,430	10,954	42,918	3.5
93-94	0.217880	9,739	2,122	8,678	31,964	3.3
94-95	0.236903	7,617	1,804	6,715	23,286	3.1
95-96	0.256636	5,812	1,492	5,067	16,571	2.9
96-97	0.276954	4,321	1,197	3,722	11,505	2.7
97-98	0.297713	3,124	930	2,659	7,782	2.5
98-99	0.318755	2,194	699	1,844	5,123	2.3
99-100	0.339914	1,495	508	1,241	3,279	2.2
100 and over	1.000000	987	987	2,038	2,038	2.1

SOURCE: CDC/NCHS, National Vital Statistics System.

EXHIBIT 6

Table 17. Life table for non-Hispanic black males: United States, 2011Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/64_11/Table17.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
0-1	0.012502	100,000	1,250	98,927	7,173,820	71.7
1-2	0.000674	98,750	67	98,716	7,074,893	71.6
2-3	0.000494	98,683	49	98,659	6,976,177	70.7
3-4	0.000356	98,634	35	98,617	6,877,518	69.7
4-5	0.000316	98,599	31	98,584	6,778,901	68.8
5-6	0.000258	98,568	25	98,555	6,680,317	67.8
6-7	0.000224	98,543	22	98,532	6,581,762	66.8
7-8	0.000193	98,521	19	98,511	6,483,230	65.8
8-9	0.000161	98,502	16	98,494	6,384,719	64.8
9-10	0.000128	98,486	13	98,480	6,286,225	63.8
10-11	0.000107	98,473	11	98,468	6,187,746	62.8
11-12	0.000118	98,463	12	98,457	6,089,278	61.8
12-13	0.000183	98,451	18	98,442	5,990,821	60.9
13-14	0.000310	98,433	31	98,418	5,892,379	59.9
14-15	0.000481	98,402	47	98,379	5,793,961	58.9
15-16	0.000655	98,355	64	98,323	5,695,583	57.9
16-17	0.000822	98,291	81	98,250	5,597,260	56.9
17-18	0.001004	98,210	99	98,160	5,499,010	56.0
18-19	0.001206	98,111	118	98,052	5,400,849	55.0
19-20	0.001421	97,993	139	97,923	5,302,797	54.1
20-21	0.001654	97,854	162	97,773	5,204,874	53.2
21-22	0.001874	97,692	183	97,600	5,107,101	52.3
22-23	0.002041	97,509	199	97,409	5,009,501	51.4
23-24	0.002134	97,310	208	97,206	4,912,092	50.5
24-25	0.002168	97,102	211	96,997	4,814,886	49.6
25-26	0.002186	96,891	212	96,786	4,717,890	48.7
26-27	0.002212	96,680	214	96,573	4,621,104	47.8
27-28	0.002230	96,466	215	96,358	4,524,531	46.9
28-29	0.002245	96,251	216	96,143	4,428,173	46.0
29-30	0.002259	96,035	217	95,926	4,332,030	45.1
30-31	0.002267	95,818	217	95,709	4,236,104	44.2
31-32	0.002276	95,600	218	95,492	4,140,395	43.3
32-33	0.002300	95,383	219	95,273	4,044,904	42.4
33-34	0.002350	95,163	224	95,052	3,949,631	41.5
34-35	0.002426	94,940	230	94,825	3,854,579	40.6
35-36	0.002527	94,709	239	94,590	3,759,755	39.7
36-37	0.002646	94,470	250	94,345	3,665,165	38.8
37-38	0.002772	94,220	261	94,089	3,570,820	37.9
38-39	0.002896	93,959	272	93,823	3,476,730	37.0
39-40	0.003027	93,687	284	93,545	3,382,908	36.1
40-41	0.003179	93,403	297	93,255	3,289,363	35.2
41-42	0.003369	93,106	314	92,949	3,196,108	34.3
42-43	0.003607	92,793	335	92,625	3,103,159	33.4
43-44	0.003902	92,458	361	92,277	3,010,533	32.6
44-45	0.004251	92,097	392	91,901	2,918,256	31.7
45-46	0.004616	91,706	423	91,494	2,826,355	30.8
46-47	0.005016	91,282	458	91,053	2,734,861	30.0
47-48	0.005513	90,824	501	90,574	2,643,807	29.1
48-49	0.006129	90,324	554	90,047	2,553,233	28.3
49-50	0.006838	89,770	614	89,463	2,463,186	27.4
50-51	0.007586	89,156	676	88,818	2,373,723	26.6
51-52	0.008344	88,480	738	88,111	2,284,905	25.8
52-53	0.009145	87,742	802	87,340	2,196,794	25.0
53-54	0.010011	86,939	870	86,504	2,109,454	24.3
54-55	0.010959	86,069	943	85,597	2,022,950	23.5
55-56	0.011995	85,126	1,021	84,615	1,937,352	22.8
56-57	0.013107	84,105	1,102	83,553	1,852,737	22.0
57-58	0.014274	83,002	1,185	82,410	1,769,184	21.3
58-59	0.015455	81,817	1,264	81,185	1,686,774	20.6
59-60	0.016630	80,553	1,340	79,883	1,605,589	19.9
60-61	0.017888	79,213	1,417	78,505	1,525,705	19.3

See footnotes at end of table.

Table 17. Life table for non-Hispanic black males: United States, 2011—Con.Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/64_11/Table17.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
61-62	0.019207	77,796	1,494	77,049	1,447,201	18.6
62-63	0.020451	76,302	1,560	75,522	1,370,151	18.0
63-64	0.021595	74,742	1,614	73,935	1,294,629	17.3
64-65	0.022717	73,128	1,661	72,297	1,220,695	16.7
65-66	0.023933	71,466	1,710	70,611	1,148,398	16.1
66-67	0.025369	69,756	1,770	68,871	1,077,787	15.5
67-68	0.027104	67,986	1,843	67,065	1,008,915	14.8
68-69	0.029089	66,144	1,924	65,182	941,851	14.2
69-70	0.031191	64,220	2,003	63,218	876,669	13.7
70-71	0.033429	62,216	2,080	61,177	813,451	13.1
71-72	0.035780	60,137	2,152	59,061	752,274	12.5
72-73	0.038397	57,985	2,226	56,872	693,214	12.0
73-74	0.041254	55,759	2,300	54,608	636,342	11.4
74-75	0.044174	53,458	2,361	52,278	581,733	10.9
75-76	0.047704	51,097	2,438	49,878	529,456	10.4
76-77	0.051047	48,659	2,484	47,417	479,578	9.9
77-78	0.054624	46,175	2,522	44,914	432,161	9.4
78-79	0.059628	43,653	2,603	42,352	387,246	8.9
79-80	0.064976	41,050	2,667	39,716	344,895	8.4
80-81	0.070676	38,383	2,713	37,026	305,178	8.0
81-82	0.076651	35,670	2,734	34,303	268,152	7.5
82-83	0.085516	32,936	2,817	31,528	233,849	7.1
83-84	0.092664	30,119	2,791	28,724	202,321	6.7
84-85	0.100307	27,328	2,741	25,958	173,597	6.4
85-86	0.108460	24,587	2,667	23,254	147,639	6.0
86-87	0.117140	21,920	2,568	20,637	124,386	5.7
87-88	0.126357	19,353	2,445	18,130	103,749	5.4
88-89	0.136120	16,907	2,301	15,757	85,619	5.1
89-90	0.146432	14,606	2,139	13,537	69,862	4.8
90-91	0.157294	12,467	1,961	11,487	56,326	4.5
91-92	0.168701	10,506	1,772	9,620	44,839	4.3
92-93	0.180641	8,734	1,578	7,945	35,219	4.0
93-94	0.193099	7,156	1,382	6,465	27,274	3.8
94-95	0.206052	5,774	1,190	5,179	20,809	3.6
95-96	0.219470	4,584	1,006	4,081	15,630	3.4
96-97	0.233321	3,578	835	3,161	11,548	3.2
97-98	0.247561	2,743	679	2,404	8,388	3.1
98-99	0.262144	2,064	541	1,794	5,984	2.9
99-100	0.277019	1,523	422	1,312	4,190	2.8
100 and over	1.000000	1,101	1,101	2,878	2,878	2.6

NOTE: This life table is based on death rates that have been adjusted for race and ethnicity misclassification on death certificates.
SOURCE: CDC/NCHS, National Vital Statistics System.

EXHIBIT 7

Table 14. Life table for non-Hispanic white males: United States, 2011Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/64_11/Table14.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
0-1	0.005524	100,000	552	99,517	7,643,091	76.4
1-2	0.000413	99,448	41	99,427	7,543,575	75.9
2-3	0.000273	99,407	27	99,393	7,444,148	74.9
3-4	0.000229	99,379	23	99,368	7,344,755	73.9
4-5	0.000156	99,357	15	99,349	7,245,387	72.9
5-6	0.000160	99,341	16	99,333	7,146,038	71.9
6-7	0.000146	99,325	14	99,318	7,046,705	70.9
7-8	0.000132	99,311	13	99,304	6,947,387	70.0
8-9	0.000114	99,298	11	99,292	6,848,082	69.0
9-10	0.000095	99,286	9	99,282	6,748,790	68.0
10-11	0.000082	99,277	8	99,273	6,649,509	67.0
11-12	0.000088	99,269	9	99,264	6,550,236	66.0
12-13	0.000125	99,260	12	99,254	6,450,972	65.0
13-14	0.000201	99,248	20	99,238	6,351,718	64.0
14-15	0.000305	99,228	30	99,213	6,252,480	63.0
15-16	0.000414	99,197	41	99,177	6,153,268	62.0
16-17	0.000522	99,156	52	99,130	6,054,091	61.1
17-18	0.000641	99,105	64	99,073	5,954,960	60.1
18-19	0.000773	99,041	77	99,003	5,855,888	59.1
19-20	0.000909	98,964	90	98,920	5,756,885	58.2
20-21	0.001053	98,875	104	98,822	5,657,965	57.2
21-22	0.001185	98,770	117	98,712	5,559,143	56.3
22-23	0.001283	98,653	127	98,590	5,460,431	55.3
23-24	0.001333	98,527	131	98,461	5,361,841	54.4
24-25	0.001349	98,395	133	98,329	5,263,380	53.5
25-26	0.001354	98,263	133	98,196	5,165,051	52.6
26-27	0.001365	98,130	134	98,063	5,066,855	51.6
27-28	0.001379	97,996	135	97,928	4,968,792	50.7
28-29	0.001401	97,860	137	97,792	4,870,864	49.8
29-30	0.001432	97,723	140	97,653	4,773,072	48.8
30-31	0.001467	97,583	143	97,512	4,675,419	47.9
31-32	0.001502	97,440	146	97,367	4,577,907	47.0
32-33	0.001536	97,294	149	97,219	4,480,540	46.1
33-34	0.001570	97,145	153	97,068	4,383,321	45.1
34-35	0.001609	96,992	156	96,914	4,286,252	44.2
35-36	0.001665	96,836	161	96,755	4,189,338	43.3
36-37	0.001742	96,675	168	96,591	4,092,583	42.3
37-38	0.001829	96,506	177	96,418	3,995,992	41.4
38-39	0.001921	96,330	185	96,237	3,899,574	40.5
39-40	0.002023	96,145	195	96,047	3,803,337	39.6
40-41	0.002135	95,950	205	95,848	3,707,290	38.6
41-42	0.002273	95,745	218	95,637	3,611,442	37.7
42-43	0.002459	95,528	235	95,410	3,515,805	36.8
43-44	0.002703	95,293	258	95,164	3,420,395	35.9
44-45	0.002997	95,035	285	94,893	3,325,231	35.0
45-46	0.003309	94,750	313	94,594	3,230,338	34.1
46-47	0.003631	94,437	343	94,266	3,135,744	33.2
47-48	0.003984	94,094	375	93,907	3,041,479	32.3
48-49	0.004366	93,719	409	93,515	2,947,572	31.5
49-50	0.004768	93,310	445	93,088	2,854,058	30.6
50-51	0.005179	92,865	481	92,625	2,760,970	29.7
51-52	0.005596	92,384	517	92,126	2,668,345	28.9
52-53	0.006034	91,867	554	91,590	2,576,220	28.0
53-54	0.006508	91,313	594	91,016	2,484,630	27.2
54-55	0.007026	90,719	637	90,400	2,393,614	26.4
55-56	0.007591	90,081	684	89,739	2,303,214	25.6
56-57	0.008191	89,397	732	89,031	2,213,475	24.8
57-58	0.008812	88,665	781	88,274	2,124,444	24.0
58-59	0.009425	87,884	828	87,470	2,036,169	23.2
59-60	0.010028	87,056	873	86,619	1,948,700	22.4
60-61	0.010645	86,183	917	85,724	1,862,081	21.6

See footnotes at end of table.

Table 14. Life table for non-Hispanic white males: United States, 2011—Con.Spreadsheet version available from: http://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/NVSR/64_11/Table14.xlsx.

Age (years)	Probability of dying between ages x and $x + 1$	Number surviving to age x	Number dying between ages x and $x + 1$	Person-years lived between ages x and $x + 1$	Total number of person-years lived above age x	Expectation of life at age x
	q_x	l_x	d_x	L_x	T_x	e_x
61–62	0.011305	85,265	964	84,783	1,776,357	20.8
62–63	0.012031	84,301	1,014	83,794	1,691,574	20.1
63–64	0.012880	83,287	1,073	82,751	1,607,780	19.3
64–65	0.013896	82,214	1,142	81,643	1,525,029	18.5
65–66	0.015110	81,072	1,225	80,459	1,443,386	17.8
66–67	0.016503	79,847	1,318	79,188	1,362,927	17.1
67–68	0.018045	78,529	1,417	77,821	1,283,739	16.3
68–69	0.019623	77,112	1,513	76,355	1,205,919	15.6
69–70	0.021262	75,599	1,607	74,795	1,129,563	14.9
70–71	0.023146	73,991	1,713	73,135	1,054,768	14.3
71–72	0.025278	72,279	1,827	71,365	981,633	13.6
72–73	0.027630	70,452	1,947	69,478	910,268	12.9
73–74	0.030219	68,505	2,070	67,470	840,789	12.3
74–75	0.033126	66,435	2,201	65,335	773,319	11.6
75–76	0.036255	64,234	2,329	63,070	707,985	11.0
76–77	0.039716	61,905	2,459	60,676	644,915	10.4
77–78	0.043757	59,447	2,601	58,146	584,239	9.8
78–79	0.048405	56,845	2,752	55,470	526,093	9.3
79–80	0.053785	54,094	2,909	52,639	470,623	8.7
80–81	0.059839	51,184	3,063	49,653	417,984	8.2
81–82	0.066176	48,122	3,184	46,529	368,331	7.7
82–83	0.073348	44,937	3,296	43,289	321,802	7.2
83–84	0.081302	41,641	3,385	39,948	278,513	6.7
84–85	0.090236	38,256	3,452	36,530	238,565	6.2
85–86	0.100743	34,804	3,506	33,050	202,035	5.8
86–87	0.112235	31,297	3,513	29,541	168,985	5.4
87–88	0.124750	27,785	3,466	26,052	139,444	5.0
88–89	0.138311	24,319	3,364	22,637	113,392	4.7
89–90	0.152931	20,955	3,205	19,353	90,755	4.3
90–91	0.168603	17,750	2,993	16,254	71,402	4.0
91–92	0.185302	14,758	2,735	13,390	55,149	3.7
92–93	0.202980	12,023	2,440	10,803	41,758	3.5
93–94	0.221569	9,583	2,123	8,521	30,955	3.2
94–95	0.240976	7,459	1,798	6,561	22,435	3.0
95–96	0.261085	5,662	1,478	4,923	15,874	2.8
96–97	0.281762	4,184	1,179	3,594	10,951	2.6
97–98	0.302853	3,005	910	2,550	7,357	2.4
98–99	0.324194	2,095	679	1,755	4,807	2.3
99–100	0.345609	1,416	489	1,171	3,052	2.2
100 and over	1.000000	926	926	1,881	1,881	2.0

NOTE: This life table is based on death rates that have been adjusted for race and ethnicity misclassification on death certificates.

SOURCE: CDC/NCHS, National Vital Statistics System.

EXHIBIT 8

Appendix A. 2011 U.S. General Population Male Life Table
Life Expectancies Adjusted for South Carolina DC experience 1996 to 2015, followed to 2016
All races

Age (years)	Basic Mortality q_x	Mortality Risk Factor	Adjusted Mortality q_x	Population at Risk l_x	Deaths d_x	Interval Person-years L_x	Cumulative Person-years T_x	Life Expectancy e_x
0-1	0.006575	1.0	0.0065750	100,000	658	99,427	5,474,009	54.7
1-2	0.000445	1.0	0.0004450	99,342	44	99,320	5,374,582	54.1
2-3	0.000301	1.0	0.0003010	99,298	30	99,283	5,275,262	53.1
3-4	0.000240	1.0	0.0002400	99,268	24	99,256	5,175,979	52.1
4-5	0.000183	1.0	0.0001830	99,244	18	99,235	5,076,723	51.2
5-6	0.000169	1.0	0.0001690	99,226	17	99,218	4,977,488	50.2
6-7	0.000150	1.0	0.0001500	99,209	15	99,202	4,878,271	49.2
7-8	0.000134	1.0	0.0001340	99,194	13	99,188	4,779,069	48.2
8-9	0.000115	1.0	0.0001150	99,181	11	99,176	4,679,882	47.2
9-10	0.000097	1.0	0.0000970	99,170	10	99,165	4,580,706	46.2
10-11	0.000085	1.0	0.0000850	99,160	8	99,156	4,481,541	45.2
11-12	0.000092	1.0	0.0000920	99,152	9	99,148	4,382,385	44.2
12-13	0.000132	1.0	0.0001320	99,143	13	99,137	4,283,238	43.2
13-14	0.000213	1.0	0.0002130	99,130	21	99,120	4,184,101	42.2
14-15	0.000323	1.0	0.0003230	99,109	32	99,093	4,084,982	41.2
15-16	0.000439	1.0	0.0004390	99,077	43	99,056	3,985,889	40.2
16-17	0.000552	1.0	0.0005520	99,034	55	99,007	3,886,833	39.2
17-18	0.000675	1.0	0.0006750	98,979	67	98,946	3,787,827	38.3
18-19	0.000807	3.3	0.0027013	98,912	267	98,779	3,688,881	37.3
19-20	0.000942	3.2	0.0030114	98,645	297	98,497	3,590,103	36.4
20-21	0.001085	3.0	0.0032334	98,348	318	98,189	3,491,606	35.5
21-22	0.001216	3.1	0.0038118	98,030	374	97,843	3,393,417	34.6
22-23	0.001310	3.3	0.0043592	97,656	426	97,443	3,295,574	33.7
23-24	0.001353	4.1	0.0054859	97,230	533	96,964	3,198,131	32.9
24-25	0.001358	4.6	0.0062542	96,697	605	96,395	3,101,168	32.1
25-26	0.001351	4.9	0.0066459	96,092	639	95,773	3,004,773	31.3

Appendix A. 2011 U.S. General Population Male Life Table

Life Expectancies Adjusted for South Carolina DC experience 1996 to 2015, followed to 2016

All races

Age (years)	Basic Mortality q_x	Mortality Risk Factor	Adjusted Mortality q_x	Population at Risk l_x	Deaths d_x	Interval Person-years L_x	Cumulative Person-years T_x	Life Expectancy e_x
26-27	0.001349	5.5	0.0074312	95,453	709	95,099	2,909,001	30.5
27-28	0.001353	5.8	0.0078989	94,744	748	94,370	2,813,902	29.7
28-29	0.001371	6.5	0.0089216	93,996	839	93,577	2,719,532	28.9
29-30	0.001399	6.5	0.0090478	93,157	843	92,736	2,625,956	28.2
30-31	0.001432	6.4	0.0091878	92,314	848	91,890	2,533,220	27.4
31-32	0.001464	6.9	0.0101313	91,466	927	91,003	2,441,330	26.7
32-33	0.001496	7.1	0.0106698	90,539	966	90,056	2,350,328	26.0
33-34	0.001528	7.4	0.0113651	89,573	1,018	89,064	2,260,272	25.2
34-35	0.001563	6.8	0.0106137	88,555	940	88,085	2,171,208	24.5
35-36	0.001613	6.4	0.0103475	87,615	907	87,162	2,083,123	23.8
36-37	0.001682	6.7	0.0112230	86,708	973	86,222	1,995,961	23.0
37-38	0.001764	7.1	0.0125987	85,735	1,080	85,195	1,909,740	22.3
38-39	0.001857	7.7	0.0142256	84,655	1,204	84,053	1,824,545	21.6
39-40	0.001964	7.8	0.0152915	83,451	1,276	82,813	1,740,492	20.9
40-41	0.002083	7.9	0.0164363	82,175	1,351	81,500	1,657,679	20.2
41-42	0.002227	7.7	0.0171008	80,824	1,382	80,133	1,576,179	19.5
42-43	0.002414	7.3	0.0176592	79,442	1,403	78,741	1,496,046	18.8
43-44	0.002653	6.8	0.0180473	78,039	1,408	77,335	1,417,306	18.2
44-45	0.002939	6.5	0.0191735	76,631	1,469	75,897	1,339,971	17.5
45-46	0.003243	6.7	0.0216755	75,162	1,629	74,348	1,264,074	16.8
46-47	0.003563	7.1	0.0252682	73,533	1,858	72,604	1,189,727	16.2
47-48	0.003922	7.1	0.0276631	71,675	1,983	70,684	1,117,123	15.6
48-49	0.004320	7.0	0.0301072	69,692	2,098	68,643	1,046,439	15.0
49-50	0.004749	6.9	0.0329621	67,594	2,228	66,480	977,796	14.5
50-51	0.005193	7.4	0.0383143	65,366	2,504	64,114	911,316	13.9
51-52	0.005647	7.4	0.0416080	62,862	2,616	61,554	847,202	13.5

Appendix A. 2011 U.S. General Population Male Life Table
Life Expectancies Adjusted for South Carolina DC experience 1996 to 2015, followed to 2016
All races

Age (years)	Basic Mortality q_x	Mortality Risk Factor	Adjusted Mortality q_x	Population at Risk l_x	Deaths d_x	Interval Person-years L_x	Cumulative Person-years T_x	Life Expectancy e_x
52-53	0.006122	7.3	0.0447095	60,246	2,694	58,899	785,648	13.0
53-54	0.006630	6.9	0.0458032	57,552	2,636	56,234	726,749	12.6
54-55	0.007181	7.0	0.0504908	54,916	2,773	53,530	670,515	12.2
55-56	0.007779	6.9	0.0535175	52,143	2,791	50,748	616,986	11.8
56-57	0.008415	6.6	0.0551671	49,352	2,723	47,991	566,238	11.5
57-58	0.009074	6.4	0.0577152	46,629	2,691	45,284	518,248	11.1
58-59	0.009727	6.3	0.0614132	43,938	2,698	42,589	472,964	10.8
59-60	0.010371	6.7	0.0697133	41,240	2,875	39,803	430,375	10.4
60-61	0.011034	7.1	0.0785312	38,365	3,013	36,859	390,573	10.2
61-62	0.011738	7.0	0.0823663	35,352	2,912	33,896	353,714	10.0
62-63	0.012489	6.9	0.0863986	32,440	2,803	31,039	319,818	9.9
63-64	0.013335	6.3	0.0838569	29,637	2,485	28,395	288,780	9.7
64-65	0.014319	6.0	0.0856537	27,152	2,326	25,989	260,385	9.6
65-66	0.015482	5.6	0.0871033	24,826	2,162	23,745	234,396	9.4
66-67	0.016824	5.7	0.0967221	22,664	2,192	21,568	210,651	9.3
67-68	0.018330	5.3	0.0977241	20,472	2,001	19,472	189,083	9.2
68-69	0.019900	4.6	0.0916566	18,471	1,693	17,625	169,612	9.2
69-70	0.021539	4.2	0.0895439	16,778	1,502	16,027	151,987	9.1
70-71	0.023396	4.1	0.0956488	15,276	1,461	14,546	135,960	8.9
71-72	0.025476	3.5	0.0901705	13,815	1,246	13,192	121,415	8.8
72-73	0.027794	3.5	0.0962033	12,569	1,209	11,965	108,223	8.6
73-74	0.030350	3.2	0.0979219	11,360	1,112	10,804	96,258	8.5
74-75	0.033204	2.8	0.0915335	10,248	938	9,779	85,454	8.3

Appendix A. 2011 U.S. General Population Male Life Table

Life Expectancies Adjusted for South Carolina DC experience 1996 to 2015, followed to 2016

All races

Age (years)	Basic Mortality q_x	Mortality Risk Factor	Adjusted Mortality q_x	Population at Risk l_x	Deaths d_x	Interval Person-years L_x	Cumulative Person-years T_x	Life Expectancy e_x
75-76	0.036345	2.6	0.0947418	9,310	882	8,869	75,675	8.1
76-77	0.039788	2.7	0.1093784	8,428	922	7,967	66,806	7.9
77-78	0.043720	2.6	0.1118552	7,506	840	7,086	58,839	7.8
78-79	0.048335	2.4	0.1145796	6,666	764	6,284	51,753	7.8
79-80	0.053650	2.2	0.1164621	5,902	687	5,559	45,469	7.7
80-81	0.059565	2.1	0.1253563	5,215	654	4,888	39,911	7.7
81-82	0.065848	1.0	0.0658480	4,561	300	4,411	35,023	7.7
82-83	0.072956	1.0	0.0729560	4,261	311	4,106	30,612	7.2
83-84	0.080741	1.0	0.0807410	3,950	319	3,791	26,506	6.7
84-85	0.089357	1.0	0.0893570	3,631	324	3,469	22,716	6.3
85-86	0.099650	1.0	0.0996500	3,307	330	3,142	19,247	5.8
86-87	0.110901	1.0	0.1109010	2,977	330	2,812	16,105	5.4
87-88	0.123146	1.0	0.1231460	2,647	326	2,484	13,293	5.0
88-89	0.136412	1.0	0.1364120	2,321	317	2,163	10,809	4.7
89-90	0.150710	1.0	0.1507100	2,004	302	1,853	8,646	4.3
90-91	0.166038	1.0	0.1660380	1,702	283	1,561	6,793	4.0
91-92	0.182374	1.0	0.1823740	1,419	259	1,290	5,233	3.7
92-93	0.199676	1.0	0.1996760	1,160	232	1,044	3,943	3.4
93-94	0.217880	1.0	0.2178800	928	202	827	2,899	3.1
94-95	0.236903	1.0	0.2369030	726	172	640	2,072	2.9
95-96	0.256636	1.0	0.2566360	554	142	483	1,432	2.6
96-97	0.276954	1.0	0.2769540	412	114	355	949	2.3
97-98	0.297713	1.0	0.2977130	298	89	254	594	2.0
98-99	0.318755	1.0	0.3187550	209	67	176	341	1.6
99-100	0.339914	1.0	0.3399140	142	48	118	165	1.2
100+	1.00000	1.0	1.0000000	94	94	47	47	0.5

EXHIBIT 9

Appendix B. 2011 U.S. General Population Non-Hispanic Black Male Life Table
Life Expectancies Adjusted for South Carolina DC experience 1996 to 2015, followed to 2016
Black men only

Age (years)	Basic Mortality q_x	Mortality Risk Factor	Adjusted Mortality q_x	Population at Risk l_x	Deaths d_x	Interval Person-years L_x	Cumulative Person-years T_x	Life Expectancy e_x
0-1	0.012502	1.0	0.0125020	100,000	1,250	99,007	5,516,944	55.2
1-2	0.000674	1.0	0.0006740	98,750	67	98,717	5,417,937	54.9
2-3	0.000494	1.0	0.0004940	98,683	49	98,659	5,319,221	53.9
3-4	0.000356	1.0	0.0003560	98,634	35	98,617	5,220,562	52.9
4-5	0.000316	1.0	0.0003160	98,599	31	98,584	5,121,946	51.9
5-6	0.000258	1.0	0.0002580	98,568	25	98,556	5,023,362	51.0
6-7	0.000224	1.0	0.0002240	98,543	22	98,532	4,924,807	50.0
7-8	0.000193	1.0	0.0001930	98,521	19	98,512	4,826,275	49.0
8-9	0.000161	1.0	0.0001610	98,502	16	98,494	4,727,763	48.0
9-10	0.000128	1.0	0.0001280	98,486	13	98,480	4,629,269	47.0
10-11	0.000107	1.0	0.0001070	98,473	11	98,468	4,530,790	46.0
11-12	0.000118	1.0	0.0001180	98,462	12	98,456	4,432,322	45.0
12-13	0.000183	1.0	0.0001830	98,450	18	98,441	4,333,866	44.0
13-14	0.000310	1.0	0.0003100	98,432	31	98,417	4,235,425	43.0
14-15	0.000481	1.0	0.0004810	98,401	47	98,378	4,137,009	42.0
15-16	0.000655	1.0	0.0006550	98,354	64	98,322	4,038,631	41.1
16-17	0.000822	1.0	0.0008220	98,290	81	98,250	3,940,309	40.1
17-18	0.001004	1.0	0.0010040	98,209	99	98,160	3,842,060	39.1
18-19	0.001206	2.5	0.0030332	98,110	298	97,961	3,743,900	38.2
19-20	0.001421	2.4	0.0033507	97,812	328	97,648	3,645,939	37.3
20-21	0.001654	2.0	0.0033826	97,484	330	97,319	3,548,291	36.4
21-22	0.001874	2.2	0.0040591	97,154	394	96,957	3,450,972	35.5
22-23	0.002041	2.1	0.0043329	96,760	419	96,551	3,354,015	34.7
23-24	0.002134	2.4	0.0051386	96,341	495	96,094	3,257,465	33.8
24-25	0.002168	2.6	0.0056559	95,846	542	95,575	3,161,371	33.0
25-26	0.002186	2.7	0.0059428	95,304	566	95,021	3,065,796	32.2

Appendix B. 2011 U.S. General Population Non-Hispanic Black Male Life Table
Life Expectancies Adjusted for South Carolina DC experience 1996 to 2015, followed to 2016
Black men only

Age (years)	Basic Mortality q_x	Mortality Risk Factor	Adjusted Mortality q_x	Population at Risk l_x	Deaths d_x	Interval Person-years L_x	Cumulative Person-years T_x	Life Expectancy e_x
26-27	0.002212	3.0	0.0065743	94,738	623	94,427	2,970,775	31.4
27-28	0.002230	3.3	0.0074117	94,115	698	93,766	2,876,349	30.6
28-29	0.002245	3.6	0.0081778	93,417	764	93,035	2,782,583	29.8
29-30	0.002259	3.7	0.0083570	92,653	774	92,266	2,689,548	29.0
30-31	0.002267	3.5	0.0078932	91,879	725	91,517	2,597,282	28.3
31-32	0.002276	3.9	0.0089569	91,154	816	90,746	2,505,765	27.5
32-33	0.002300	4.2	0.0097525	90,338	881	89,898	2,415,019	26.7
33-34	0.002350	4.5	0.0106481	89,457	953	88,981	2,325,122	26.0
34-35	0.002426	4.3	0.0103458	88,504	916	88,046	2,236,141	25.3
35-36	0.002527	3.9	0.0099009	87,588	867	87,155	2,148,095	24.5
36-37	0.002646	4.0	0.0105482	86,721	915	86,264	2,060,941	23.8
37-38	0.002772	4.4	0.0121608	85,806	1,043	85,285	1,974,677	23.0
38-39	0.002896	4.6	0.0134407	84,763	1,139	84,194	1,889,393	22.3
39-40	0.003027	5.0	0.0151857	83,624	1,270	82,989	1,805,199	21.6
40-41	0.003179	4.8	0.0151330	82,354	1,246	81,731	1,722,210	20.9
41-42	0.003369	4.7	0.0159715	81,108	1,295	80,461	1,640,479	20.2
42-43	0.003607	4.2	0.0150020	79,813	1,197	79,215	1,560,019	19.5
43-44	0.003902	3.8	0.0148330	78,616	1,166	78,033	1,480,804	18.8
44-45	0.004251	3.7	0.0158215	77,450	1,225	76,838	1,402,771	18.1
45-46	0.004616	4.3	0.0198424	76,225	1,512	75,469	1,325,934	17.4
46-47	0.005016	4.9	0.0244018	74,713	1,823	73,802	1,250,465	16.7
47-48	0.005513	4.8	0.0264818	72,890	1,930	71,925	1,176,663	16.1
48-49	0.006129	4.3	0.0266542	70,960	1,891	70,015	1,104,738	15.6
49-50	0.006838	4.2	0.0286250	69,069	1,977	68,081	1,034,724	15.0
50-51	0.007586	4.2	0.0321075	67,092	2,154	66,015	966,643	14.4
51-52	0.008344	4.2	0.0353362	64,938	2,295	63,791	900,628	13.9

Appendix B. 2011 U.S. General Population Non-Hispanic Black Male Life Table
 Life Expectancies Adjusted for South Carolina DC experience 1996 to 2015, followed to 2016
 Black men only

Age (years)	Basic Mortality q_x	Mortality Risk Factor	Adjusted Mortality q_x	Population at Risk I_x	Deaths d_x	Interval Person-years L_x	Cumulative Person-years T_x	Life Expectancy e_x
52-53	0.009145	4.2	0.0380858	62,643	2,386	61,450	836,838	13.4
53-54	0.010011	4.1	0.0412941	60,257	2,488	59,013	775,388	12.9
54-55	0.010959	4.2	0.0464298	57,769	2,682	56,428	716,375	12.4
55-56	0.011995	4.1	0.0494287	55,087	2,723	53,726	659,947	12.0
56-57	0.013107	3.9	0.0506911	52,364	2,654	51,037	606,221	11.6
57-58	0.014274	4.0	0.0567492	49,710	2,821	48,300	555,184	11.2
58-59	0.015455	4.0	0.0617318	46,889	2,895	45,442	506,885	10.8
59-60	0.016630	4.3	0.0722177	43,994	3,177	42,406	461,443	10.5
60-61	0.017888	4.6	0.0822606	40,817	3,358	39,138	419,038	10.3
61-62	0.019207	4.9	0.0932768	37,459	3,494	35,712	379,900	10.1
62-63	0.020451	4.6	0.0933672	33,965	3,171	32,380	344,188	10.1
63-64	0.021595	4.3	0.0933499	30,794	2,875	29,357	311,808	10.1
64-65	0.022717	4.0	0.0897633	27,919	2,506	26,666	282,452	10.1
65-66	0.023933	4.1	0.0972571	25,413	2,472	24,177	255,786	10.1
66-67	0.025369	4.2	0.1076218	22,941	2,469	21,707	231,609	10.1
67-68	0.027104	4.2	0.1140207	20,472	2,334	19,305	209,902	10.3
68-69	0.029089	4.0	0.1170901	18,138	2,124	17,076	190,597	10.5
69-70	0.031191	3.5	0.1077634	16,014	1,726	15,151	173,521	10.8
70-71	0.033429	3.5	0.1153442	14,288	1,648	13,464	158,370	11.1
71-72	0.035780	3.3	0.1169415	12,640	1,478	11,901	144,906	11.5
72-73	0.038397	1.0	0.0383970	11,162	429	10,948	133,005	11.9
73-74	0.041254	1.0	0.0412540	10,733	443	10,512	122,058	11.4
74-75	0.044174	1.0	0.0441740	10,290	455	10,063	111,546	10.8

Appendix B. 2011 U.S. General Population Non-Hispanic Black Male Life Table
Life Expectancies Adjusted for South Carolina DC experience 1996 to 2015, followed to 2016
Black men only

Age (years)	Basic Mortality q_x	Mortality Risk Factor	Adjusted Mortality q_x	Population at Risk I_x	Deaths d_x	Interval Person-years L_x	Cumulative Person-years T_x	Life Expectancy e_x
75-76	0.047704	1.0	0.0477040	9,835	469	9,601	101,484	10.3
76-77	0.051047	1.0	0.0510470	9,366	478	9,127	91,883	9.8
77-78	0.054624	1.0	0.0546240	8,888	485	8,646	82,756	9.3
78-79	0.059628	1.0	0.0596280	8,403	501	8,153	74,111	8.8
79-80	0.064976	1.0	0.0649760	7,902	513	7,646	65,958	8.3
80-81	0.070676	1.0	0.0706760	7,389	522	7,128	58,313	7.9
81-82	0.076651	1.0	0.0766510	6,867	526	6,604	51,185	7.5
82-83	0.085516	1.0	0.0855160	6,341	542	6,070	44,581	7.0
83-84	0.092664	1.0	0.0926640	5,799	537	5,531	38,511	6.6
84-85	0.100307	1.0	0.1003070	5,262	528	4,998	32,980	6.3
85-86	0.108460	1.0	0.1084600	4,734	513	4,478	27,982	5.9
86-87	0.117140	1.0	0.1171400	4,221	494	3,974	23,505	5.6
87-88	0.126357	1.0	0.1263570	3,727	471	3,492	19,531	5.2
88-89	0.136120	1.0	0.1361200	3,256	443	3,035	16,039	4.9
89-90	0.146432	1.0	0.1464320	2,813	412	2,607	13,005	4.6
90-91	0.157294	1.0	0.1572940	2,401	378	2,212	10,398	4.3
91-92	0.168701	1.0	0.1687010	2,023	341	1,853	8,186	4.0
92-93	0.180641	1.0	0.1806410	1,682	304	1,530	6,333	3.8
93-94	0.193099	1.0	0.1930990	1,378	266	1,245	4,803	3.5
94-95	0.206052	1.0	0.2060520	1,112	229	998	3,558	3.2
95-96	0.219470	1.0	0.2194700	883	194	786	2,561	2.9
96-97	0.233321	1.0	0.2333210	689	161	609	1,775	2.6
97-98	0.247561	1.0	0.2475610	528	131	463	1,166	2.2
98-99	0.262144	1.0	0.2621440	397	104	345	704	1.8
99-100	0.277019	1.0	0.2770190	293	81	253	359	1.2
100+	1.00000	1.0	1.0000000	212	212	106	106	0.5

EXHIBIT 10

Appendix C. 2011 U.S. General Population Non-Hispanic White Male Life Table
Life Expectancies Adjusted for South Carolina DC experience 1996 to 2015, followed to 2016
White men only

Age (years)	Basic Mortality q_x	Mortality Risk Factor	Adjusted Mortality q_x	Population at Risk I_x	Deaths d_x	Interval Person-years L_x	Cumulative Person-years T_x	Life Expectancy e_x
0-1	0.005524	1.0	0.0055240	100,000	552	99,517	5,349,849	53.5
1-2	0.000413	1.0	0.0004130	99,448	41	99,428	5,250,332	52.8
2-3	0.000273	1.0	0.0002730	99,407	27	99,394	5,150,905	51.8
3-4	0.000229	1.0	0.0002290	99,380	23	99,369	5,051,511	50.8
4-5	0.000156	1.0	0.0001560	99,357	15	99,350	4,952,143	49.8
5-6	0.000160	1.0	0.0001600	99,342	16	99,334	4,852,793	48.8
6-7	0.000146	1.0	0.0001460	99,326	15	99,319	4,753,459	47.9
7-8	0.000132	1.0	0.0001320	99,311	13	99,305	4,654,141	46.9
8-9	0.000114	1.0	0.0001140	99,298	11	99,293	4,554,836	45.9
9-10	0.000095	1.0	0.0000950	99,287	9	99,283	4,455,544	44.9
10-11	0.000082	1.0	0.0000820	99,278	8	99,274	4,356,261	43.9
11-12	0.000088	1.0	0.0000880	99,270	9	99,266	4,256,987	42.9
12-13	0.000125	1.0	0.0001250	99,261	12	99,255	4,157,722	41.9
13-14	0.000201	1.0	0.0002010	99,249	20	99,239	4,058,467	40.9
14-15	0.000305	1.0	0.0003050	99,229	30	99,214	3,959,228	39.9
15-16	0.000414	1.0	0.0004140	99,199	41	99,179	3,860,014	38.9
16-17	0.000522	1.0	0.0005220	99,158	52	99,132	3,760,835	37.9
17-18	0.000641	1.0	0.0006410	99,106	64	99,074	3,661,703	36.9
18-19	0.000773	1.0	0.0007730	99,042	77	99,004	3,562,629	36.0
19-20	0.000909	1.0	0.0009090	98,965	90	98,920	3,463,626	35.0
20-21	0.001053	3.0	0.0031812	98,875	315	98,718	3,364,706	34.0
21-22	0.001185	3.0	0.0035003	98,560	345	98,388	3,265,988	33.1
22-23	0.001283	3.7	0.0048065	98,215	472	97,979	3,167,601	32.3
23-24	0.001333	5.2	0.0069188	97,743	676	97,405	3,069,622	31.4
24-25	0.001349	6.3	0.0084401	97,067	819	96,658	2,972,217	30.6
25-26	0.001354	6.7	0.0090557	96,248	872	95,812	2,875,559	29.9

Appendix C. 2011 U.S. General Population Non-Hispanic White Male Life Table
 Life Expectancies Adjusted for South Carolina DC experience 1996 to 2015, followed to 2016
 White men only

Age (years)	Basic Mortality q_x	Mortality Risk Factor	Adjusted Mortality q_x	Population at Risk l_x	Deaths d_x	Interval Person-years L_x	Cumulative Person-years T_x	Life Expectancy e_x
26-27	0.001365	7.6	0.0103911	95,376	991	94,881	2,779,747	29.1
27-28	0.001379	7.2	0.0099736	94,385	941	93,915	2,684,867	28.4
28-29	0.001401	8.5	0.0118636	93,444	1,109	92,890	2,590,952	27.7
29-30	0.001432	8.2	0.0117347	92,335	1,084	91,793	2,498,063	27.1
30-31	0.001467	9.1	0.0133350	91,251	1,217	90,643	2,406,270	26.4
31-32	0.001502	9.2	0.0138762	90,034	1,249	89,410	2,315,627	25.7
32-33	0.001536	9.0	0.0137534	88,785	1,221	88,175	2,226,218	25.1
33-34	0.001570	8.9	0.0139552	87,564	1,222	86,953	2,138,043	24.4
34-35	0.001609	7.5	0.0121357	86,342	1,048	85,818	2,051,090	23.8
35-36	0.001665	7.2	0.0119280	85,294	1,017	84,786	1,965,272	23.0
36-37	0.001742	7.5	0.0131122	84,277	1,105	83,725	1,880,487	22.3
37-38	0.001829	7.7	0.0141275	83,172	1,175	82,585	1,796,762	21.6
38-39	0.001921	8.5	0.0163393	81,997	1,340	81,327	1,714,178	20.9
39-40	0.002023	8.0	0.0161387	80,657	1,302	80,006	1,632,851	20.2
40-41	0.002135	9.0	0.0191327	79,355	1,518	78,596	1,552,845	19.6
41-42	0.002273	8.5	0.0193702	77,837	1,508	77,083	1,474,249	18.9
42-43	0.002459	9.1	0.0222673	76,329	1,700	75,479	1,397,166	18.3
43-44	0.002703	8.6	0.0233308	74,629	1,741	73,759	1,321,687	17.7
44-45	0.002997	8.3	0.0247547	72,888	1,804	71,986	1,247,928	17.1
45-46	0.003309	7.6	0.0251269	71,084	1,786	70,191	1,175,942	16.5
46-47	0.003631	7.5	0.0272227	69,298	1,886	68,355	1,105,751	16.0
47-48	0.003984	7.6	0.0300949	67,412	2,029	66,398	1,037,396	15.4
48-49	0.004366	8.1	0.0354544	65,383	2,318	64,224	970,999	14.9
49-50	0.004768	8.2	0.0392386	63,065	2,475	61,828	906,775	14.4
50-51	0.005179	9.1	0.0469414	60,590	2,844	59,168	844,947	13.9
51-52	0.005596	9.0	0.0502853	57,746	2,904	56,294	785,779	13.6

Appendix C. 2011 U.S. General Population Non-Hispanic White Male Life Table
Life Expectancies Adjusted for South Carolina DC experience 1996 to 2015, followed to 2016
White men only

Age (years)	Basic Mortality q_x	Mortality Risk Factor	Adjusted Mortality q_x	Population at Risk l_x	Deaths d_x	Interval Person-years L_x	Cumulative Person-years T_x	Life Expectancy e_x
52-53	0.006034	9.0	0.0543075	54,842	2,978	53,353	729,485	13.3
53-54	0.006508	8.1	0.0527141	51,864	2,734	50,497	676,132	13.0
54-55	0.007026	8.1	0.0570244	49,130	2,802	47,729	625,635	12.7
55-56	0.007591	7.9	0.0600728	46,328	2,783	44,937	577,906	12.5
56-57	0.008191	7.6	0.0623023	43,545	2,713	42,189	532,970	12.2
57-58	0.008812	6.8	0.0603584	40,832	2,465	39,600	490,781	12.0
58-59	0.009425	6.6	0.0625852	38,367	2,401	37,167	451,182	11.8
59-60	0.010028	6.8	0.0683332	35,966	2,458	34,737	414,015	11.5
60-61	0.010645	7.2	0.0761226	33,508	2,551	32,233	379,278	11.3
61-62	0.011305	6.4	0.0722265	30,957	2,236	29,839	347,046	11.2
62-63	0.012031	6.6	0.0795687	28,721	2,285	27,579	317,207	11.0
63-64	0.012880	5.8	0.0746940	26,436	1,975	25,449	289,628	11.0
64-65	0.013896	5.9	0.0823396	24,461	2,014	23,454	264,180	10.8
65-66	0.015110	5.7	0.0858800	22,447	1,928	21,483	240,726	10.7
66-67	0.016503	4.8	0.0799398	20,519	1,640	19,699	219,243	10.7
67-68	0.018045	4.1	0.0747021	18,879	1,410	18,174	199,544	10.6
68-69	0.019623	4.1	0.0797052	17,469	1,392	16,773	181,370	10.4
69-70	0.021262	3.9	0.0838395	16,077	1,348	15,403	164,597	10.2
70-71	0.023146	3.7	0.0865662	14,729	1,275	14,092	149,194	10.1
71-72	0.025278	3.4	0.0853467	13,454	1,148	12,880	135,102	10.0
72-73	0.027630	3.5	0.0970708	12,306	1,195	11,709	122,222	9.9
73-74	0.030219	3.2	0.0952045	11,111	1,058	10,582	110,514	9.9
74-75	0.033126	2.8	0.0923638	10,053	929	9,589	99,932	9.9

Appendix C. 2011 U.S. General Population Non-Hispanic White Male Life Table
 Life Expectancies Adjusted for South Carolina DC experience 1996 to 2015, followed to 2016
 White men only

Age (years)	Basic Mortality q_x	Mortality Risk Factor	Adjusted Mortality q_x	Population at Risk l_x	Deaths d_x	Interval Person-years L_x	Cumulative Person-years T_x	Life Expectancy e_x
75-76	0.036255	2.5	0.0889904	9,124	812	8,718	90,343	9.9
76-77	0.039716	2.4	0.0954766	8,312	794	7,915	81,625	9.8
77-78	0.043757	1.0	0.0437570	7,518	329	7,354	73,710	9.8
78-79	0.048405	1.0	0.0484050	7,189	348	7,015	66,357	9.2
79-80	0.053785	1.0	0.0537850	6,841	368	6,657	59,342	8.7
80-81	0.059839	1.0	0.0598390	6,473	387	6,280	52,685	8.1
81-82	0.066176	1.0	0.0661760	6,086	403	5,885	46,405	7.6
82-83	0.073348	1.0	0.0733480	5,683	417	5,475	40,521	7.1
83-84	0.081302	1.0	0.0813020	5,266	428	5,052	35,046	6.7
84-85	0.090236	1.0	0.0902360	4,838	437	4,620	29,994	6.2
85-86	0.100743	1.0	0.1007430	4,401	443	4,180	25,375	5.8
86-87	0.112235	1.0	0.1122350	3,958	444	3,736	21,195	5.4
87-88	0.124750	1.0	0.1247500	3,514	438	3,295	17,459	5.0
88-89	0.138311	1.0	0.1383110	3,076	425	2,864	14,164	4.6
89-90	0.152931	1.0	0.1529310	2,651	405	2,449	11,301	4.3
90-91	0.168603	1.0	0.1686030	2,246	379	2,057	8,852	3.9
91-92	0.185302	1.0	0.1853020	1,867	346	1,694	6,796	3.6
92-93	0.202980	1.0	0.2029800	1,521	309	1,367	5,102	3.4
93-94	0.221569	1.0	0.2215690	1,212	269	1,078	3,735	3.1
94-95	0.240976	1.0	0.2409760	943	227	830	2,658	2.8
95-96	0.261085	1.0	0.2610850	716	187	623	1,828	2.6
96-97	0.281762	1.0	0.2817620	529	149	455	1,206	2.3
97-98	0.302853	1.0	0.3028530	380	115	323	751	2.0
98-99	0.324194	1.0	0.3241940	265	86	222	429	1.6
99-100	0.345609	1.0	0.3456090	179	62	148	207	1.2
100+	1.00000	1.0	1.0000000	117	117	59	59	0.5

DLO/0313851
WITNESSES

Charleston City Police Department

AGENCY CASE NUMBER
2016-01522

ARREST WARRANT NUMBER
2016-GS-10-02116

DATE OF ARREST

02/06/2016

ACTION OF GRAND JURY

TRUE BILL

APR 11 2016

Foreperson of Grand Jury

Date:

VERDICT

Guilty

Foreperson of Petit Jury

8/9/17
Date:

DOCKET NO. 2016-GS-10-02116

The State of South Carolina
County of Charleston

COURT OF GENERAL SESSIONS
APRIL TERM 2016

THE STATE

VS.

DEVANTE ANTONIO GRANT
B/M DOB: [REDACTED]

Indictment for
ARMED ROBBERY

SC Code: § 16-11-0330(A)
CDR Code: 0139

STATE OF SOUTH CAROLINA
COUNTY OF CHARLESTON

INDICTMENT

At a Court of General Sessions, convened April 2016, the Grand Jurors of Charleston County present upon their oath:

ARMED ROBBERY

That on or about January 26, 2016, in Charleston County, South Carolina, the Defendant, Devante Antonio Grant, by use of force, threats or intimidation and while armed with a deadly weapon, or while alleging, either by action or words, he was armed while using a representation of a deadly weapon or any object which a person present during the commission of the robbery reasonably believed to be a deadly weapon, did take and carry away goods and/or monies from the person or immediate presence of Kristina Kirby Hooks with the intent to permanently deprive the victim of possession thereof, in violation of §16-11-330(A) of the South Carolina Code of Laws (1976) as amended.

Against the peace and dignity of the State, and contrary to the statute in such case made and provided.

Alex J. Ziegler for
DAVID L. OSBORNE
ASSISTANT SOLICITOR

DLO/0313851
WITNESSES

Charleston City Police Department

AGENCY CASE NUMBER
2016-01522

ARREST WARRANT NUMBER
2016A1020100727

DATE OF ARREST

02/06/2016

ACTION OF GRAND JURY

TRUE BILL

APR 1 2016

For person of Grand Jury

Date:

VERDICT

GUILTY

For person of Petit Jury

Date:

DOCKET NO. 2016-GS-10-02106

The State of South Carolina
County of Charleston

COURT OF GENERAL SESSIONS
APRIL TERM 2016

THE STATE

VS.

DEVANTE ANTONIO GRANT
B/M DOB: [REDACTED]

Indictment for

POSSESSION OF A WEAPON DURING
THE COMMISSION OF A VIOLENT
CRIME

SC Code: § 16-23-0490
CDR Code: 0549

STATE OF SOUTH CAROLINA
COUNTY OF CHARLESTON

INDICTMENT

At a Court of General Sessions, convened April 2016, the Grand Jurors of Charleston County present upon their oath:

POSSESSION OF A WEAPON DURING THE COMMISSION OF A VIOLENT CRIME

That in Charleston County, South Carolina, on or about January 26, 2016, the Defendant, Devante Antonio Grant, did possess a firearm or did visibly display what appeared to be a firearm or did visibly display a knife during the commission of or attempted commission of a violent crime, to wit: Armed Robbery; in violation of Section 16-23-490, Code of Laws of South Carolina, (1976, as amended).

Against the peace and dignity of the State, and contrary to the statute in such case made and provided.



DAVID L. OSBORNE
ASSISTANT SOLICITOR

STATE OF SOUTH CAROLINA

COUNTY OF CHARLESTON

STATE VS.

DEVANTE ANTONIO GRANT

AKA:

Race: Black/African AmericanSex: MDOB: [REDACTED]SS#: [REDACTED]Address: [REDACTED]City, State, Zip: North Charleston, SC 29418DL# [REDACTED]SID# [REDACTED]*CDL Yes ☐ No ☐ CMV Yes ☐ No ☐ Hazmat Yes ☐ No ☐

In disposition of the said indictment comes now the Defendant who was

☒ CONVICTED OF or☐ PLEADSTO: Possession Of A Weapon During The Commission Of A Violent CrimeIn violation of § 16-23-0490 of the S.C. Code of Laws, bearing CDR Code # 0549☒ NON-VIOLENT☐ VIOLENT☐ SERIOUS☐ MOST SERIOUS☐ Mandatory GPS(CSC w/minor 1st or Lewd Act)☐ §17-25-45

The charge is:

☒ As indicted,☐ Lesser Included Offense,☐ Defendant Waives Presentment to Grand Jury,

(def.'s initials)

The plea is:

☒ Without Negotiations or Recommendation,☐ Negotiated Sentence,☐ Recommendation by the State.

ATTEST:

T. Richard Waring, Assistant Solicitor
SC Bar # 100465

Defendant

Attorney for Defendant

75164
SC Bar #

WHEREFORE, the Defendant is committed to the ☒ State Department of Corrections ☐ County Detention Center, for a determinate term of 5 days/months/years or ☐ under the Youthful Offender Act not to exceed _____ years and/or to pay a fine of \$ _____; provided that upon the service of _____ days/months/years and or payment of \$ _____; plus costs and assessments as applicable*; the balance is suspended with probation for _____ months/years and subject to South Carolina Department of Probation, Parole and Pardon Service standard conditions of probation, which are incorporated by reference.

☒ CONCURRENT or ☐ CONSECUTIVE to sentence on: _____☒ The Defendant is to be given credit for time served pursuant to S.C. Code §24-13-40 to be calculated and applied by the State Department of Corrections. 551 days☐ The Defendant is to be placed on Central Registry of Child Abuse and Neglect pursuant to S.C. Code §17-25-135.

Pursuant to 18 U.S.C. Section 922, it is unlawful for a person convicted of a violation of Section 16-25-20 or 16-25-65 (Domestic Violence) to ship, transport, possess, or receive a firearm or ammunition.

SPECIAL CONDITIONS:

☐ RESTITUTION:☐ Deferred☐ Def. Waives Hearing☐ Ordered

PTUP

Total: \$ _____ plus 20% fee: \$ _____

_____ days/hours Public Service Employment

Payment Terms: _____

Obtain GED ☐☐ Set by SCDPPPS _____

Attend Voc. Rehab. Or Job Corp. _____

May serve W/E beginning _____

Substance Abuse Counseling ☐Random Drug/Alcohol Testing ☐

Fine may be pd. in equal consecutive weekly/monthly

pmts. of \$ _____ Beginning _____

\$ _____ Paid to Public Defender Fund

Other: _____

Recipient: _____

*Fine: _____ \$ _____

§14-1-206 (Assessments 107.5%) \$ _____

§14-1-211 (A)(1)(Conv. Surcharge) \$100 \$ 100-

§14-1-211 (A)(2)(DUI Surcharge) \$100 \$ _____

§56-5-2995 (DUI Assessment) \$12 \$ _____

§56-1-286 (DUI Breath Test) \$25 \$ _____

Proviso 61.6 (Public Def/Prob) \$500 \$ _____

§14-1-212 (Law Enforce. Funding) \$25 \$ 25-

§14-1-213 (Drug Court Surcharge) \$150 \$ _____

§50-21-114 (BUI Breath Test Fee) \$50 \$ _____

§56-5-2942(J) (Vehicle Assessment) \$40/ca \$ _____

3% to County (if paid in installments) \$ 3.75TOTAL \$ 128.75☐ Appointed PD or appointed other counsel,

§47.12 requires \$500 be paid to Clerk during probation.

Clerk of Court/Deputy Clerk: [Signature]Court Reporter: Phillip's NortonPresiding Judge: [Signature]Judge Code: 2060Sentence Date: 8/9/17

STATE OF SOUTH CAROLINA

COUNTY OF CHARLESTON

STATE VS.

DEVANTE ANTONIO GRANT

AKA:

Race: Black/African American Sex: MDOB: [REDACTED] SS#: [REDACTED]Address: [REDACTED]City, State, Zip: North Charleston, SC 29418DL# [REDACTED] SID# [REDACTED]*CDL Yes ☐ No ☐ CMV Yes ☐ No ☐ Hazmat Yes ☐ No ☐

In disposition of the said indictment comes now the Defendant who was

TO: Armed RobberyIn violation of § 16-11-0330(A) of the S.C. Code of Laws, bearing CDR Code # 0139
☐ NON-VIOLENT ☒ VIOLENT ☐ SERIOUS ☒ MOST SERIOUS ☐ Mandatory GPS ☐ §17-25-45
(CSC w/minor 1st or Lewd Act)
The charge is: ☒ As Indicted, ☐ Lesser Included Offense,☐ Defendant Waives Presentment to Grand Jury. (def.'s initials)The plea is: ☒ Without Negotiations or Recommendation,☐ Negotiated Sentence, ☐ Recommendation by the State.

ATTEST:

[Signature] 100465
T. Richard Waring, Assistant Solicitor SC Bar #

Defendant

Attorney for Defendant

75164 SC Bar #

WHEREFORE, the Defendant is committed to the ☒ State Department of Corrections ☐ County Detention Center, for a determinate term of 30 days/months/years or ☐ under the Youthful Offender Act not to exceed _____ years and/or to pay a fine of \$ _____; provided that upon the service of _____ days/months/years and or payment of \$ _____; plus costs and assessments as applicable*; the balance is suspended with probation for _____ months/years and subject to South Carolina Department of Probation, Parole and Pardon Service standard conditions of probation, which are incorporated by reference.

☐ CONCURRENT or ☐ CONSECUTIVE to sentence on: _____☒ The Defendant is to be given credit for time served pursuant to S.C. Code §24-13-40 to be calculated and applied by the State Department of Corrections.☐ The Defendant is to be placed on Central Registry of Child Abuse and Neglect pursuant to S.C. Code §17-25-135.

Pursuant to 18 U.S.C. Section 922, it is unlawful for a person convicted of a violation of Section 16-25-20 or 16-25-65 (Domestic Violence) to ship, transport, possess, or receive a firearm or ammunition.

SPECIAL CONDITIONS:

☐ RESTITUTION: ☐ Deferred ☐ Def. Waives Hearing☐ Ordered PTUP _____

Total: \$ _____ plus 20% fee: \$ _____

_____ days/hours Public Service Employment

Payment Terms: _____

Obtain GED ☐☐ Set by SCDPPPS _____

Attend Voc. Rehab. Or Job Corp. _____

Recipient: _____

May serve W/E beginning _____

*Fine: _____ \$ _____

Substance Abuse Counseling ☐

§14-1-206 (Assessments 107.5%) \$ _____

Random Drug/Alcohol Testing ☐§14-1-211 (A)(1)(Conv. Surcharge) \$100 \$ 100-

Fine may be pd. in equal consecutive weekly/monthly

§14-1-211 (A)(2)(DUI Surcharge) \$100 \$ _____

pmts. of \$ _____ Beginning _____

§56-5-2995 (DUI Assessment) \$12 \$ _____

\$ _____ Paid to Public Defender Fund

§56-1-286 (DUI Breath Test) \$25 \$ _____

Other: _____

Proviso 61.6 (Public Def/Prob) \$500 \$ _____

§14-1-212 (Law Enforce. Funding) \$25 \$ 25-

§14-1-213 (Drug Court Surcharge) \$150 \$ _____

§50-21-114 (BUI Breath Test Fee) \$50 \$ _____

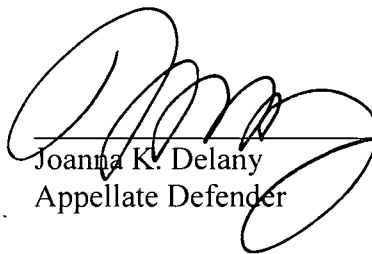
§56-5-2942(J) (Vehicle Assessment) \$40/cu \$ _____

3% to County (if paid in installments) \$ \$ 3.75TOTAL \$ 128.75
☐ Appointed PD or appointed other counsel, §47.12 requires \$500 be paid to Clerk during probation.
Clerk of Court/Deputy Clerk: [Signature]Presiding Judge: [Signature]Court Reporter: Phillip's NortonJudge Code: 2060Sentence Date: 8/9/10

CERTIFICATE OF COUNSEL FOR APPELLANT

Counsel for appellant certifies that this Record on Appeal contains all material proposed to be included by any of the parties and not any other material and that this Record on Appeal complies to the best of my ability with the April 15, 2014 order from the South Carolina Supreme Court entitled "Revised Order Concerning Personal Identifying Information and Other Sensitive Information in Appellate Court Filings."

Respectfully Submitted,



Joanna K. Delany
Appellate Defender

South Carolina Commission on Indigent Defense
Division of Appellate Defense
PO Box 11589
Columbia, S.C. 29211-1589

ATTORNEY FOR APPELLANT

This 2nd day of November, 2018.

RECEIVED
NOV 02 2018
SC Court of Appeals