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IN THE SUPERIOR COURT OF THE STATE OF WASHINGTON
IN AND FOR THE COUNTY OF KITSAP

STATE OF WASHINGTON,

Plaintiff,

vs.

GERALDO DeJESUS,

Defendant.

)
) Case No.: 15-1-00972-7
)
) MEMORANDUM OF LAW IN
) OPPOSITION TO STATE'S MOTION TO
) PRECLUDE DEFENSE EXPERT
) WITNESSES
)
)
)

COMES NOW the Defendant, Geraldo DeJesus, by and through his attorney, Thomas E. Weaver, and presents the following arguments in opposition to the States' Motion to Preclude Defendant's Expert Witnesses.

The State has endorsed a witness, Cathy Geil, a former employee of the Washington State Patrol Crime Lab, who will testify that 11 shell casings recovered from the crime scene were produced by the same firearm as MSN-008, a shell casing recovered from Mr.. DeJesus' residence. The firearm was never recovered. Mr. DeJesus has previously filed a motion to preclude Ms. Geil from testifying, arguing that her opinion is not generally accepted in the relevant scientific field pursuant to *Frye*. The Court denied the motion. In doing so, the Court

MEMORANDUM IN OPPOSITION TO STATE'S
MOTION TO PRECLUDE DEFENSE EXPERT- 1



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The Law Office of Thomas E. Weaver
P.O. Box 1056
Bremerton, WA 98337
(360) 792-9345

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1 essentially stated that the proposed evidence was sufficiently accepted in the scientific
2 community that the jury should be allowed to hear the evidence. The jury would decide what
3 weight to give the evidence.

4 Mr. DeJesus has endorsed two expert witnesses for his trial: William Tobin and Dr.
5 Clifford Spiegelman. Mr. Tobin and Dr. Spiegelman will present evidence to the jury that the
6 reliability of ballistics/toolmarking identification has not been established and should not be
7 relied upon by the jury without scientifically appropriate explanation and caveats regarding
8 validity, certainty, and rates of practice error. The State has filed a motion to preclude both of
9 them from testifying. In support of their argument, the State has attached various court
10 transcripts and court orders from unrelated cases regarding Mr. Tobin and Dr. Spiegelman. The
11 motion should be denied.

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13 When the State offers scientific evidence, the defendant's ability to rebut the
14 prosecution's case with his own expert testimony may be the critical factor in a successful
15 defense. *Reese v. Stroh*, 74 Wn.App. 550, 558, 874 P.2d 200 (1994), *affirmed*, 128 Wn.2d 300,
16 907 P.2d 282 (1995). In a similar circumstance, the Supreme Court has ruled that "laboratory
17 error is an issue of weight not admissibility under *Frye*." *State v. Copeland*, 130 Wn.2d 244,
18 270, 922 P.2d 1304 (1996). In *Copeland*, the State proffered DNA identification evidence,
19 which was initially challenged prior to trial as not meeting the *Frye* standard. The trial court
20 rejected this challenge. The case then proceeded to trial and both sides presented conflicting
21 views of the evidence through expert witnesses to the jury. On appeal, the defense raised
22 multiple challenges to the admissibility of the DNA evidence, but each of the challenges was
23 rejected as going to the "weight" and not the "admissibility."
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1 As in *Copeland*, Mr. DeJesus first challenged the admissibility of toolmark
2 identification by bringing a *Frye* motion. This motion was denied and may well be the subject
3 of issues on appeal. In the meantime, the defense is entitled under the Sixth Amendment
4 Confrontation and Compulsory Process Clauses to challenge the weight to be given this
5 evidence. The defense intends to do this both through cross-examination of the State's expert
6 and by calling two defense experts, Mr. Tobin and Dr. Spiegelman, who have published widely
7 downloaded scientific papers on the subject. Mr. DeJesus is not offering either proposed
8 witness to address the *fact* of a claimed individualization/source attribution, but rather to
9 address the scientific underpinnings of the forensic practice and methodology..

10 The State attacks the qualifications of Mr. Tobin and Dr. Spiegelman to testify as
11 experts pursuant to ER 702. According to Professor Tegland, ER 702 is to be interpreted very
12 broadly. In addition to academic qualifications, an expert may be qualified by virtue of
13 practical experience, knowledge, skill, or training. Prof. Tegland also notes that experience in a
14 related field may be sufficient, citing *Hall v. Sacred Heart Medical Center*, 100 Wn.App. 53,
15 995 P.2d 621 (2000).

16 Mr. Tobin is a metallurgist by education and experience. He holds both a Bachelor of
17 Science in metallurgy as well as a Masters of Arts degree with continued studies in metallurgy.
18 He worked for the bulk of his professional life as a Supervisory Special Agent of the Federal
19 Bureau of Investigation (FBI). While at the FBI, he primarily worked in the Metallurgy Unit,
20 including acting as the *de facto* Chief Forensic Metallurgist from 1986 to 1998. In his Affidavit
21 dated February 18, 2016 and filed in this Court the following day, Mr. Tobin indicates he has
22 testified as an expert witness 262 times in American courts, both in bench proceedings and in
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1 jury trials. He estimates at least 25 of those testimonies were specifically in the area of
2 toolmark identification with over half of those in jury trials.

3 Mr. Tobin details the relationship between metallurgy and ballistics/tool mark analysis.
4 See Memorandum of Law in Support of Frye Motion, Appendix A, page 6 through 10. Mr.
5 Tobin represents, "The heart of virtually every metal forming/shaping operation for all firearm
6 components is the tool(s)/die(s) responsible for changing the shape of the metal work piece
7 under pressure (forced contact). This is true regardless of the actual product produced, such as
8 firearms, bullets, ammunition cartridge cases, screwdrivers, aerospace components, wire,
9 tubing, etc., or of the function that the product is intended to serve in the consumer market." Id
10 at 7-8. The science of tribology (the science of friction, lubrication and wear) governs creation
11 of the very characteristics used by examiners in their forensic toolmark identification practice,
12 which Mr. Tobin describes as a "sub-discipline" of metallurgy. It is the tribological
13 characteristics of metal interaction that make forensic toolmarking examination even possible.
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15 Mr. Tobin's expertise in metallurgy makes him uniquely qualified to testify about the
16 methodology used by current forensic tool marking examiners. As he explains:

17 Part of my responsibilities as a plant metallurgist included evaluating tribological
18 regimes operative during production, and toolmarks imparted by tools and dies
19 during fabrication and production, in efforts to insure efficacy of operations and
20 production continuity, while reducing product variability and breakdown of
21 production tooling. *I am very familiar with the current practice and methodology*
22 *of forensic firearm/toolmark examinations* inasmuch as I also frequently conducted
23 toolmark comparisons, used the same methodology and comparison microscopy
24 instrumentation in my capacity as a forensic metallurgist at the FBI Laboratory, and
25 would periodically be consulted to assist firearms identification examiners by
explaining phenomena and material behavior they encountered during their
examinations.

23 Id at 9-10 (emphasis added). In sum, Mr. Tobin has expertise in firearm/toolmark identification
24 both by virtue of his education (Bachelors and Masters in metallurgy), practical experience
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1 (frequently conducted toolmark comparisons), knowledge (extensive study of tribology), skill
2 (advised other toolmark examiners), and training (familiar with current practices and
3 methodologies). The State's argument that he is unqualified as an expert is meritless.

4 Dr. Spiegelman is a forensic statistician. He holds a Ph.D. in statistics and applied
5 mathematics from Northwestern University. He is currently a Distinguished Professor at Texas
6 A&M University. Dr. Spiegelman is familiar with the methodology employed by forensic
7 toolmarking examiners as a result of his membership on the National Research Council (NRC)
8 Committee of the National Academy of Sciences that evaluated and issued a report on Forensic
9 Comparative Bullet Lead Analysis. Dr. Spiegelman and Mr. Tobin co-authored a peer reviewed
10 scientific article on toolmarking. Dr. Spiegelman proposed testimony is in the area of the
11 statistical reliability of the current toolmarking identification methodology.

12 The State is very critical of Dr. Spiegelman's expertise as applied to forensic
13 toolmarking, arguing that toolmark identification is "NOT an analytical science on the same
14 footing as DNA analysis and does not lend itself to statistical analysis because there are no fixed
15 knowns *a priori*." State's Memorandum, 5. According to the State, the science of toolmarking is
16 "subjective in nature." Id, 2. That, according to Dr. Spiegelman, is precisely the problem.
17 Without fixed knowns, it is impossible to develop error rates or evaluate reliability, based on
18 currently available information and data.

19 In his original *Frye* motion, Mr. DeJesus argued that the subjective nature of forensic
20 toolmarking is why it is not a science. "The scientific method, which is the only method of
21 hypothesis testing that is generally accepted by scientists, imparts reliability on a scientific
22 process by allowing for results that are repeatable and reproducible." Affidavit of Dr.
23 Spiegelman, January 26, 2016, 2. A "science" that relies on subjective beliefs rather than
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1 objective criteria is not a science at all. Subjectivity has its place in the arts, not the sciences.
2 Whether Mozart was history's greatest composer or Michelangelo the greatest sculptor are
3 beliefs that can be debated persuasively by musicians and artists, but can never be proven.
4 Conversely, a person's sincere belief that the earth is flat is a belief that can be disproven by
5 repeatable and reproducible tests. These concepts, which will be helpful for the jury, are ones
6 for which Dr. Spiegelman is uniquely qualified to address.

7 It is worth noting as well that the State's motion misrepresents the findings of the NRC
8 and Dr. Spiegelman's work on the NRC. A copy of the State's motion was sent to Dr.
9 Spiegelman and he responded, in relevant part:

10 The prosecutor is misrepresenting the NRC report. The report said the underlying
11 chemistry was okay and it was. The report also pointed out the statistical methods
12 were inadequate and the FBI acknowledged that at the time. As far as statistics being
13 relevant, the NRC stated that firearm/toolmarks [identification] did not have a
14 statistical foundation. They did not say it did not need one.

15 Dr. Spiegelman is qualified to testify about the lack of demonstrative statistical reliability of
16 the toolmark identification methodology employed by Ms. Geil.

17 The State's motion should be denied.

18 Dated this 27th day of July, 2016.



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21 Thomas E. Weaver
22 WSBA #22488
23 Attorney for Defendant
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