STATE OF OPPRESSION

1. CRIMINAL NO.

JOHN DOE,

Accused.

MOTION TO BAR FINGERPRINT EVIDENCE AS UNDULY PREJUDICIAL.

Comes now the accused and Moves this Court to bar the testimony of Ethel Examiner as the testimony will be unduly prejudicial under Federal Rule of Evidence 403. In support of his Motion the accused asserts the following:

* 1. He is currently charged with burglary and theft of a firearm from the gun safe of Susan Smith;
  2. Upon information and belief the evidence to be presented at trial will include that a latent print was taken from the exterior door of the gun safe;
  3. Said latent print was submitted to the State of Oppression’s Bureau of Investigation for examination, with such examination conducted by Ethel Examiner;
  4. Ms. Examiner has previously opined Mr. Doe cannot be excluded as the source of the recovered print;
  5. In prior testimony before this Court on Mr. Doe’s challenge to the admission of any latent print analysis, Ms. Examiner testified to the following:
     1. Every fingerprint is unique;
     2. There are no fixed number of points of comparison necessary before an examiner declares that a latent print can be individualized to a known fingerprint;
     3. There are no databases indicating the frequency with which particular points of value or differentiation appear;
     4. That in her personal experience she is unaware of any times that she “misidentified” a fingerprint (i.e. that she indicated s particular print was individualized to a person and it was later determined that the print was not in fact belonging to that person);
     5. That the 2016 PCAST Report references several studies that have been conducted regarding the error rate in fingerprint examination, with varying false positive error rates ranging from

1 error in 18 cases to 1 error in 604 cases1;

* + 1. That there are some questions relating to whether these error rates can be translated across the range of cases in which latent print examinations are conducted as the studies did not fully account for the use of verification by a second examiner, a component of the ACE-V methodology employed in the case at bar, or the variations of the quality of the samples2;
  1. This Court previously found that latent print examination evidence met the threshold requirements for admission under this jurisdiction’s Frye/Daubert standards, as such evidence has been regularly admitted into evidence in this and other courts across the county for many years;
  2. In so ruling, this Court acknowledged the concerns expressed by both the 2009 NAS Report and the 2016 PCAST Report, but, citing to the Seventh Circuit’s opinion in United States v. Herrerra, 704 F.3d 480,

486 (7th Cir. 2013), stated “[e]vidence does not have to be infallible to be probative;”

* 1. While evidence may not need to be infallible to be probative, its probative value must substantially outweigh its prejudicial effect (FRE 403);
  2. The shortcomings of all fields of feature comparison, specifically, the lack of any empirical data regarding frequency of specific characteristics or any criteria as to the number of characteristics necessary to individualize or conclude a known print cannot be excluded as the source of an unknown print make its probative value minimal;
  3. As applied to the case at bar, without the ability

1 As reported in the PCAST Report 0f 2016

2 As reported in the Friction Ridge Subcommittee of the Organization of

Scientific Area Committee’s (FRS OSAC) Response to the PCAST Report

to provide any data to quantify the commonalty or rarity of any of the features observed on the recovered latent print, the fact that such features were also observed on the known fingerprint of Mr. Doe has minimal probative value;

* 1. Moreover, the lack of any data regarding the commonalty or rarity of any of the features prevents the jury from meaningfully assessing the weight to give the existence of such features;
  2. Although the Court has specified that Ms. Examiner may only testify that Mr. Doe cannot be excluded as a contributor to the latent print, without data to establish what weight to give to this information, especially when coupled with testimony from Ms. Examiner that each fingerprint is unique, the jury will be misled to believe that the fingerprint has been individualized to or “matches” Mr. Doe;
  3. Research has established that jurors commonly believe that fingerprint evidence is highly reliable:
     1. In 2008 233 people completing jury duty in Las Vegas were surveyed as to how they would rate various types of forensic evidence for accuracy on a scale of 0% to 100%. These jurors reported they believed fingerprint evidence to be 91.4% (they rated DNA evidence at 94.4% and hair and fiber at 89.2%. Joel D. Lieberman, Courtney A. Carrell, Terance D. Meithe & Daniel A. Krauss, *Gold Platinum: Do Jurors Recognize the Superiority and Limitations of DNA Evidence Compared to Other Types of Forensic Evidence*,

14 PSYCH. PUBLIC POL. & LAW 27 (2008)

* + 1. In a 2015 study of eligible jurors regarding error rates for various forensic science disciplines, the jurors indicated median false positive error rate for fingerprints at 1 in

5.5 million. Koehler, J.J. “Intuitive error rate estimates for the forensic sciences.” (August 2, 2016) *Available at papers.ssrn.com/ sol3/papers.cfm?abstract\_id=2817443*

* 1. Common perceptions as to the ability to individualize a latent scene print to a specific

individual mean that fingerprint evidence would be unduly prejudicial as the very presentation of such evidence without any indication as to the true reliability of that evidence will lead the jury to conclude that the results are highly reliable, despite the absence of any actual evidence as to the degree of error in such examinations;

* 1. The presentation of this testimony will mislead the jury into concluding that the failure to “exclude” the accused is the equivalent of “matching” the accused as there is no meaningful way for Ms. Examiner to quantify likelihood that others might similarly be “not excluded;”
  2. As noted in the 2016 PCAST Report “[a]n empirical measurement of error rates is not simply a desirable feature; it is *essential* for determining whether a method is foundationally valid. . . . {E]rror rates cannot be inferred from casework, but rather must be determined based on samples where the correct answer is known. . . .{W}ithout appropriate empirical measurement of a method’s accuracy, the fact that two samples in a particular case show similar features has *no probative value*—and . . . it may have considerable prejudicial impact because juries will likely incorrectly attach meaning to the observation;” PCAST Report at p.53
  3. If this Court is not inclined to exclude Ms. Examiner’s testimony, in order to assure the jury can reasonably assess its validity, this Court should follow the recommendations of the PCAST Report and instruct the jury “that (1) only two properly designed studies of the accuracy of latent fingerprint analysis have been conducted and (2) these studies found false positive rates that could be as high as 1 in 306 in one study and 1 in 18 in the other study . . . .[as t]his would appropriately inform jurors that errors occur at detectable frequencies, allowing them to weigh the probative value of the evidence.” PCAST Report at p. 96

WHEREFORE Mr. Doe Moves this Court to exclude the described testimony.

STATE OF CONFUSION

v. CRIMINAL NO.

JOHN DOE,

Accused.

MOTION IN LIMINE TO REGARDING USE OF IMPROPER AND PREJUDICIAL TERMINOLOGY

COMES NOW THE ACCUSED, and Moves this Court for an Order instructing the prosecution and Her witnesses to refrain from referring in voir dire, opening statement, testimony, or closing argument the term “science” or any variation thereof unless and until this Court finds the proper foundation for the use of such terms has been laid.

As grounds for said Motion, the defendant asserts the following:

The Sixth Amendment guarantees an accused a right to a fair trial by an impartial jury. U.S. Const. Amend. VI. The right to an impartial jury is applicable to the states by way of the Fourteenth Amendment. Duncan v. Louisiana, 391

U.S. 145, 149 (1968) *See also, State of Confusion Constitution.*

The use of certain terms can often carry with them additional implications or meaning, whereby mere use of the term can elevate or alter the status of the person or object to which the term is referring, thus producing a measure of subconscious bias. The term “science” is such a term,

carrying with a connotation that the field, technique, or principle to which it refers has been the subject of testing, is objective and unbiased in nature, and has been validated through research and study. (“[S]cientific proof may in some instances assume a posture of mystic infallibility in the eyes of a jury of laymen.” United States v. Addison, 498 F.2d 741, 744 (D.C. Cir. 1974))

When applied to a particular practice, such as the practice of comparing the markings on a shoe’s sole to the image recovered at the scene of a crime, the use of the term “science” would improperly elevate the examination, cloaking it in a degree of reliability which it has not earned. The use of such labels to serve as a proxy for the testing, specificity of measurement, data gathering, methodology, and other rigors associated with true scientific testing misleads the jury as it implies a degree of objectivity and certainty that may not be proven.

Numerous jurisdictions have considered the use of other potentially inflammatory labels and rejected such practices because of the inherent danger of such. See e.g. Delaware (“[t]he term ‘victim’ is used appropriately during trial when there is no doubt that a crime was committed and simply the identity of the perpetrator is in issue. We agree with

the defendant that the word ‘victim’ should not be used in a case where the commission of a crime is in dispute." Jackson v. State, 600 A.2d 21, 21 (Del. 1991)), Texas (“[t]he sole

issue of [the defendant’s] case was whether he committed the various assaults on [the child]. Referring to [the child] as the victim instead of the alleged victim lends credence to her testimony that the assaults occurred and that she was, indeed, a victim;" Veteto v. State, 8 S.W.3d 805, 816-17

(Tex. App. 2000) and also Talkington v. State, 682 S.W.2d 674, 674-75 (Tex. App. 1984)), Connecticut (“in a case where there is a challenge as to whether a crime occurred, the repeated use of the word *victim* . . . is improper,” State v.

Albino, 24 A.3d 602, 615 (Conn. App. 2011), Vermont (“where the commission of a crime is in dispute and the core issue is one of the complainant's credibility, it is error for a trial court to permit a police detective to refer to the complainant as the ‘victim,’” State v. Wigg, 889 A.2d 233,

236 (2005), and California (recognizing the use of the term “victim” in a jury instruction impermissibly constitutes “an expression characterizing the defendant as a criminal.” People v. Williams, 17 Cal. 142, 147 (1860)(See also Utah’s

finding in State v. Devey, 138 P.3d 90, 95-96(2005) that it may have been error to deny a motion in limine prohibiting the State and witnesses from referring to the complaining

witness as a “victim” when the existence of a crime was at issue)

Similar support can be found to eliminate the use of the term “expert.” Several courts have upheld the practice that it is improper to declare a witness is an “expert” in front of the jury as doing so can be seen as a conferring upon the witness an “imprimatur of authority and credibility, thereby inordinately augmenting the witness’s status.” Osorio v. State, 186 So.3d 601 (Fla. 2016); *See also* U.S. v. Johnson, 488 F.3d 690 (6th Cir. 2007)and

American Bar Association Civil Trial Practice Standard 14 (2007). *“*The use of the term "expert" in the Federal Rules of Evidence does not, however, mean that a jury should actually be informed that a qualified witness is testifying as an "expert." Indeed, there is much to be said for a practice that prohibits the use of the term "expert" by both the parties and the court at trial. Such a practice "ensures that trial courts do not inadvertently put their stamp of authority" on a witness's opinion, and protects against the jury's being "overwhelmed by the so-called 'experts.'" Hon. Charles Richey, Proposals to Eliminate the Prejudicial

Effect of the Use of the Word "Expert" Under the Federal Rules of Evidence in Criminal and Civil Jury Trials, 154

F.R.D. 537, 559 (1994) (setting forth limiting instructions

and a standing order employed to prohibit the use of the term "expert" in jury trials).

Recent scientific research on implicit bias (biases which are the product of “the plethora of fears, feelings, perceptions and stereotypes that lie deep within our subconscious, without our conscious permission or acknowledgment3”) highlights the potential for unfair prejudice as a result of the jury’s exposure to such labels. See e.g. United States v. Ray, 803 F.3d 244, 259-60 (6th Cir. 2015)(stating “we recognize the proven impact of implicit biases on individual’s behavior and decision-making” in indicating the unfair prejudice by the repeated use of the word “felon” when “there is no reason a court could not use alternative language.”)

The District Court for the Southern District of New York recognized the specific dangers inherent in the use of the term “science” to fields which lack the rigors associated with true scientific research by ruling in United States v. Glynn, that the comparison of spent shell casings

to firearms, more commonly referred to as “ballistics identification” “could not fairly be called ‘science.’” United States v. Glynn, 578 F.Supp.2d 567,570 (SDNY 2008),

3 J. Mark W. Bennett, *Unraveling the Gordian Knot of Implicit Bias in Jury Selection: The Problems of Judge-Dominated Voir Dire, the Failed Promise of Batson and Proposed Solutions*, 4 Harv. L & Pol’y Rev. 149 (2010)

See also United States v. Starzecpyzel, 880 F.Supp. 1027

(SDNY 1995) (Forensic Document Examination (“FDE’) “does suffer from a substantial problem of prejudice, which is the subject of Fed. R. Evid. 403. The problem arises from the likely perception by jurors that FDE’s are scientists, which would suggest far greater precision and reliability than was established by the Daubert hearing. This perception might arise from several sources, such as the appearance of the words ‘scientific’ and ‘laboratory’ in much of the releveant literature, and the overly precise manner in which FDE’s describe their level of confidence in their opinions as to whether questioned writings are genuine.” Id. at 1029

In its 2015 report, “Presentation of Expert Testimony Policy Recommendations,” the National Commission on Forensic Science4 recommended, among other things, “Experts should not use the term ‘scientific’ when testifying unless the basis for their opinions has been scientifically validated.” Id.

at p. 2 In support of this recommendation the Commission highlighted the risks that by using such terminology jurors may bestow upon the evidence “the aura of the infallibility

of science” when such a status is not warranted. Id. at 17,

4 In 2013, the Department of Justice (DOJ) established the National Commission on Forensic Science, in partnership with the National Institute of Standards and Technology (NIST), to enhance the practice and improve the reliability of forensic science. This unique partnership draws upon each agency's core strengths to promote scientific validity, reduce fragmentation, and improve federal coordination of forensic science.

citing to the NAS report for support (“The law’s greatest dilemma in its heavy reliance on forensic evidence . . . concerns the question of whether-and to what extent-there is *science* in any given forensic science discipline.” NAS Report at 9)

Further the use of the term “science” by the prosecution and/or her witnesses as a means of communicating to the jury that the field at issue is reliable and objection constitutes vouching and is improper. "Vouching occurs when a prosecutor indicates a personal belief in the credibility or honesty of a witness; bolstering is an implication by the government that the testimony of a witness is corroborated by evidence known to the government but not known to the jury." United States v. Sanchez*,* 118 F.3d 192, 198 (4th Cir. 1997). Consistent with these principles, "the prosecution may not portray itself as a guarantor of truthfulness." United States v. Collins*,* 415

F.3d 304, 308 (4th Cir. 2005) (internal quotation marks and citation omitted).

The accused proposes the use the term “feature- comparison” to refer to the examiner’s work. This term was the term utilized by the 2016 PCAST Report “to refer to the wide variety of methods that aim to determine whether an evidentiary sample (e.g. from a crime scene) is or is not

associated with a potential source sample (e.g. from a suspect) based on the presence of similar patterns, impressions, features or characteristics in the sample and the source. Examples include the analysis of DNA, hair, latent fingerprints, firearms and spent ammunition, tool and toolmarks, shoeprints and tire tracks, bitemarks and handwriting.” PCAST Report at p. 23, 46

Finally, Ms. Examiner should not be referred to as a “scientist” or “forensic scientist” as not only does her area of examination lack the necessary foundation so as to be viewed as a “science” but she herself lacks any formalized education in a field of science, having earned

her degree in art.

Respectfully submitted, JOHN DOE

By Counsel

STATE OF DESPAIR

v. CRIMINAL NO.

JOHN DOE,

Accused.

MOTION FOR JURY INSTRUCTIONS

COMES NOW John Doe, the accused, and Moves this Court to instruct the jury regarding the human factors that impact forensic decision making (i.e. cognitive bias). In support of his Motion Mr. Doe asserts the following:

The Sixth Amendment guarantees an accused a right to a fair trial by an impartial jury. U.S. Const. Amend. VI. The right to an impartial jury is applicable to the states by way of the Fourteenth Amendment. Duncan v. Louisiana, 391

U.S. 145, 149 (1968) *See also, State of Despair Constitution.*

One means by which this fundamental right is fulfilled is by properly instructing a jury on the applicable standards prior to the commencement of their deliberations. This responsibility falls upon the Court. [insert applicable state law defining the court’s role and obligations in instructing the jury]

Cognitive bias “refers to ways in which human perceptions and judgments can be shaped by factors other than those relevant to the decision at hand.” President’s Council of Advisors on Science and Technology Report:

*Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods.* (“PCAST Report”)(2016) at 31. This includes considerations of contextual bias (influence from irrelevant background information) and confirmation bias (interpreting information in a way that confirms pre-existing beliefs). Id.

Numerous scientific studies have recognized the role that human factors or cognitive bias plays in the analysis of forensic evidence. PCAST Report (2016), *Strengthening Forensic Science in the United States: A Path Forward*, National Academy of Sciences (2009)(NAS Report), Dror, I.E., Charlton, D, “Why Experts Make Errors” 56 J. of Forensic Identification 600 (2006), Dror, I.E., and Hampikian, G, “Subjectivity and bias in forensic DNA mixture interpretation” Science & Justice, Vol. 51, No. 4, 204-8

(2011)

The concern over the role that these types of biases play in forensic evidence examination led the National Institute of Standards and Technology (NIST) in 2014 to include a “Human Factors” Committee in its newly formed Organization of Scientific Area Committees (OSAC). OSAC is a collaboration of over 600 forensic science practitioners and experts brought together to strengthen the use of forensic science in court by the development of standards,

guidelines, research and measurements. This organization replaces the previous Scientific Work Groups (SWGs) that created guidelines for various forensic disciplines.

The Human Factors Committee is tasked with providing guidance on “the influence of system design on human performance and ways to minimize cognitive and confirmation bias and mitigate errors in complex tasks.” [https://www.nist.gov/forensics/osac-roles-and-](http://www.nist.gov/forensics/osac-roles-and-) responsibilities#HF

Because it operates at a subconscious level, confirmation bias cannot be exposed through the traditional methods of our adversarial system. While cross-examination, the introduction of contradictory evidence and the introduction of character evidence are all means by which an accused can show a particular witness’s biases or motives to fabricate, such tools are only able to address those biases which are readily apparent. By their very nature, subconscious biases operate below the level of conscious awareness. As a witness is not aware of his or her subconscious biases, he or she cannot be readily cross- examined about them.

The use of jury instructions to address these difficult areas has been approved with increasing frequency in the field of eyewitness identification. See e.g. State of New

Jersey v. Henderson, 27 A.3d 872 (2011), Williams v.

Illinois, 132 S.Ct. 2221 (2012) and Perry v. New Hampshire,

132 S.Ct. 716 (2012), Footnote 7 (a listing of numerous state and federal jury instructions) Published on *Federal Evidence Review* (http://federalevidence.com)

The field of eyewitness identification provides numerous parallels to the current issues regarding confirmation bias and the courts’ rulings regarding the necessity of administering a specific jury instruction on the perils of eyewitness identification provide the logic and reasoning which support the similar granting of an instruction relating to confirmation bias.

In concluding that it was not only appropriate, but necessary to provide jury instructions on issues relating to eyewitness identification, the courts recognized that “[t]o help jurors weight that evidence, they must be told about relevant factors and their effect on reliability With

the use of more focused jury charges on those issues, there will be less need to call expert witnesses at trial.” State

1. Henderson, 27 A.3d at 878 In coming to this conclusion the court noted that the use of these instructions was needed “because eyewitness identifications bear directly on guilt or innocence. At stake is the very integrity of the criminal justice system and the courts’ ability to conduct

fair trials. Ultimately we believe that the framework . . . will both protect the rights of defendants, by minimizing the risk of misidentification and enable the State to introduce vital evidence.” Id. at 878-79

Current research indicates jurors place great weight in forensic evidence, believing it has the ability to make individualized identifications and has a very low rate of error. A 2008 survey of 233 Las Vegas jurors reported they placed a great deal of confidence in the accuracy of various forensic fields. When asked to rate the fields for accuracy on a scale of 0% to 100%, jurors had a mean accuracy rating of 94.9% for DNA and 91.4% for fingerprints. Joel D. Lieberman, Courtney A. Carrell, Terance D. Meithe & Daniel

* 1. Krauss, *Gold Platinum: Do Jurors Recognize the Superiority and Limitations of DNA Evidence Compared to Other Types of Forensic Evidence*, 14 PSYCH. PUBLIC POL.& LAW

27 (2008). A 2015 study involving 210 potential jurors indicated that jurors believed the rate of false positive results in fingerprint analysis was 1 in 5.5 million. Koehler, J.J. “Intuitive error rate estimates for the forensic sciences.” Aug. 2, 2015, papers.ssrn.com/sol3/papers.cfm?abstract\_id=2817443.

Despite these beliefs, there is currently no data available as to the frequency of false positive results from

fingerprint analysis, no databases which catalogue the commonalty or rarity of particular features used as points of comparison by fingerprint examiners, and no guidelines as to the number of points of comparison required before an individual can be included or excluded as a potential source for a latent print. PCAST Report at 87-103

When this absence of data and error rate information is combined with the subjective nature of fingerprint analysis, it leads to a situation that is ripe for the impact of cognitive bias.

Currently the Las Vegas Metropolitan Police Department has guidelines regarding witness identification. Updated most recently in November, 2014, these policies require officers to use blinded (also known as “double blind”) or independent administrators. This process is designed to reduce the risk that an investigator, subconsciously, unknowingly and unintentionally, may communicate certain information or expectation to the eyewitness who is examining the photographs. In addition to the use of a blind administrator, the LVMPD has a set of specific instructions for the witness viewing the lineup, given both before and after the administration of the lineup. These procedures were adopted in a specific effort to avoid the risks of confirmation, cognitive and contextual bias.

There is no reason to believe a trained police officer is less immune to cognitive biases than any other professional, such as those engaged in the examination of forensic evidence. In fact, as noted above, research has demonstrated that cognitive biases occur in forensic examinations, including the field of friction ridge analysis (fingerprint comparison).

Thus, similar to the issues in eyewitness identification5, jurors preconceived beliefs regarding the accuracy and reliability of fingerprint evidence is not borne out by the current research and data. This disconnect puts jurors at a high risk to be misled as to the potential probative value of fingerprint evidence, and, without direction from the court by way of a jury instruction, they may not consider the identified human factors that contribute to cognitive bias. Even if some jurors may appreciate and understand the impact human factors may have on fingerprint examiners, the opportunity to assure all the jurors understand these vital concepts is fundamental to assuring a fair trial and imposes no harm upon the

government.

5 See State v. Henderson for a comprehensive description of the studies conducted regarding juror misperceptions relating to eyewitness identification including beliefs regarding stress, weapons focus, and the lack of correlation between a witness’ confidence and his/her accuracy. Based on those studies, the Special Master found "that laypersons are largely unfamiliar" with scientific findings and "often hold beliefs to the contrary."

WHEREFORE the accused Moves this Court to instruct the jury regarding cognitive bias and the human factors associated with such as proposed below.

**Proposed Jury Instruction: (Modeled from California’s Model Instruction on Eyewitness Identification 315)**

You have heard testimony the examination of fingerprint evidence. As with any other evidence, you must decide the weight, if any, to give this evidence. In making this evaluation consider the role that human perceptions and judgments may have played in the examination of this evidence and the conclusions drawn by the examiner.

This includes consideration of potential contextual bias (being influenced by irrelevant background information) and confirmation bias (interpreting information in a way that confirms pre-existing beliefs)

In evaluating the evidence consider the following questions:

Was the examiner exposed to any case information prior to or during the course of his examination of the evidence? If so, was that information relevant or irrelevant to the examination?

Were there other factors which might have impacted the examiner’s work such as fatigue, visual acuity, motives or biases?

What was the examiner’s training and experience? How did the examiner conduct his/her examination?

Did the examiner provide and document detail regarding his/her examination? If so, was that documentation made before or after the comparison with Mr. Doe’s fingerprint?

Did the person who conducted the “verification” examination have any knowledge of the outcome of the initial examination?

The People have the burden of proving beyond a reasonable doubt that it was the defendant who committed the crime. If

the People have not met this burden, you must find that the defendant not guilty.

OR

**Proposed Jury Instruction relating to cognitive bias:** “The examination of the latent fingerprint recovered from Susie Smith’s home to the known fingerprints of John Doe involved the use of a subjective method of comparison.

Subjective methods require careful scrutiny because their heavy reliance on human judgment means that they are especially vulnerable to human error and cognitive bias. Cognitive bias includes the phenomena that, in certain settings, humans (1) may tend naturally to focus on similarities between samples and discount differences and

(2) may also be influenced by extraneous information and external pressures about a case.” (language from PCAST Report at p. 49