

PHILADELPHIA COUNTY COMMON PLEAS COURT
CRIMINAL DIVISION

COMMONWEALTH OF PENNSYLVANIA)	
Respondent,)	
v.)	51-CR-0008035-2007
)	PCRA: First-Degree Murder
BIN WANG)	Woods-Skipper, J.
Defendant-Petitioner)	

Affidavit of Brent Turvey, Ph.D.

1. I hold an MS in Forensic Science, and a PhD Criminology. Since 1996, I have performed casework as a forensic scientist, reconstructionist, and/or criminal profiler for law enforcement agencies, civil defense attorneys, civil plaintiff attorneys, and criminal defense attorneys all over the world. My caseload is diverse, and is comprised at any given moment of sexual assaults, false allegations, serial rapes and homicides, sexual homicides, domestic homicides, staged crime scenes, and multiple homicides of a particularly violent or aberrant nature. My casework often involves firearms use, related gunshot wound pattern analysis, and regularly requires me to perform shooting incident reconstruction.
2. My CV is attached to this affidavit as Exhibit 1 and it outlines my law enforcement, civil, and criminal case experience, as well as publications related to my areas of expertise.
3. Over the course of my career, I have also held various academic positions all over the world, including the United States, Mexico, and Australia. My academic affiliations are listed on pages 5 and 6 of Exhibit 1.
4. Over the course of my career, I have presented numerous lectures and seminars and have published several textbooks and peer-reviewed articles relating to crime reconstruction, criminal profiling, and criminal investigations. I have written a textbook on the subject of Crime Reconstruction, currently in its second edition,

which includes chapters related to shooting incident reconstruction. I have also written extensively on the subject of victimology, including a textbook currently in its second edition. My publications are listed on pages 8 thru 12 of Exhibit 1. My lectures and presentations are listed on pages 12 thru 22 of Exhibit 1.

5. Over the course of my career, I have served as a trial consultant or been qualified as a forensic expert in court on the subjects of forensic science, crime reconstruction, shooting incident reconstruction, interpretation of presumptive blood test results, crime scene analysis, crime scene investigation, case linkage analysis (motive and signature analysis), criminal profiling, staged crime scenes, false allegations, and victimology.

6. I have been qualified as an expert and given expert forensic testimony in over forty cases. These cases include criminal and civil cases in both state and federal court. The cases where I have been qualified as an expert and gave expert testimony are listed on page 2 of Exhibit 1.

7. In August 2015, Craig Cooley, Bin Wang's attorney, contacted me regarding Mr. Wang's case. I agreed to examine Mr. Wang's case to review the physical evidence, crime scene investigation, and autopsy findings to determine whether the evidence is more indicative of a homicide or suicide.

Materials Reviewed

8. When Mr. Cooley retained me, he sent me the following reports, photographs, transcripts, and pleadings to review:

- a. Police and crime scene reports;
- b. Crime scene sketches and color photographs;
- c. Medical examiner's case reports;
- d. Autopsy report and toxicology report;
- e. Autopsy photographs;
- f. Various police investigative reports, interviews, and logs;
- g. Various EMS reports;
- h. Expert report of forensic pathologist Paul Hoyer, M.D.;
- i. Preliminary hearing transcripts;
- j. Trial transcripts; and
- k. Appellate brief from direct appeal

Physical Evidence Recovered from the Scene

9. Based on the scene photographs and evidence collection reports, a Taurus 9mm semi-automatic handgun fired the fatal shot that killed Sharon Lin on May 11, 2007.
10. There were two pillows at the head of the bed. One *right* of center. One *left* of center.¹ Investigators recovered the fired cartridge casing (“FCC”) at the head of the bed. It was positioned very near the pillow *right* of center.²
11. Investigators also recovered the discharged bullet between the mattress and the bed frame on the *left* side of the bed near the headboard.³ The bullet went through Ms. Lin’s skull and hit the east wall opposite where Ms. Lin’s body came to rest after the fatal shot.⁴ The bullet then ricocheted off the wall and fell between the mattress and bed frame.
12. Investigators also recovered the Taurus 9mm semi-automatic handgun in one of the drawers from the knocked over dresser that is to the *left* of the bed in the corner of the bedroom.
13. A laptop was positioned at the foot of the bed near the middle. Investigators collected and analyzed the laptop.

Testimony and Statements Reviewed

14. I reviewed **Timothy Fleming’s** May 11, 2007 statement.
 - a. Mr. Fleming was standing outside in front of Mr. Wang’s residence on May 11, 2007 when he heard a gunshot.
 - b. Immediately thereafter, Mr. Fleming saw Mr. Wang yelling out the second floor window asking people to call an ambulance and the police.

¹ When I discuss direction regarding the bed’s position, my directions are based on me or someone standing at the foot of the bed and facing the bed. Thus, to my *right* is the closet. The strike mark was located above the closet. To my *left* is the narrow, 1.5 feet, area between the wall and the bed. This is the area where Ms. Lin’s body came to rest after the fatal shot was inflicted.

² NT, Trial, 11/3/2009, pp. 47-49.

³ NT, Trial, 11/3/2009, p. 55.

⁴ NT, Trial, 11/3/2009, p. 53.

c. When Mr. Fleming ran to Mr. Wang's front door, Mr. Wang came downstairs and opened the front door. Mr. Wang looked "real frantic" and "kept saying, 'she killed herself.'" Mr. Fleming went upstairs and checked the bedroom.

d. When Mr. Fleming entered the bedroom he described what he saw: "I went further into the room and started checking and I saw her feet on the head of the bed and saw the rest of her body laying on her right side face up, I saw blood on the front of her face but the majority of the blood was coming from the back of her head."

e. Mr. Fleming then walked around the foot of the bed and slowly "crawled" across the middle of the bed to check Ms. Lin's vitals. Ms. Lin was still breathing when Mr. Fleming checked on her.

15. I reviewed **Officer Anthony Magsam's** trial testimony.

a. Officer Magsam was the first officer at the scene.

b. When Officer Magsam arrived, Ms. Lin's head and back were against the left wall and "tilted right at the corner of the floor."⁵ Ms. Lin's legs "went up" at a 45-degree angle and were positioned near the head of the bed, not far from the dresser positioned in the left corner of the bedroom.⁶

c. Officer Magsam said the distance between the left wall and the bed was 1 1/2 feet.⁷

16. I reviewed **Officer Joanne Kitz's** trial testimony.

a. Officer Kitz was the second officer at the scene.

b. Officer Kitz also saw Ms. Lin's feet up on the bed near the head of the bed at a 45-degree angle.⁸

⁵ NT, Trial, 11/4/2009, p. 30-31, 45.

⁶ NT, Trial, 11/4/2009, p. 30-31, 45.

⁷ NT, Trial, 11/4/2009, pp. 45-46, 47.

⁸ NT, Trial, 11/4/2009, p. 64.

c. Once medics arrived, Officer Kitz helped medics move Ms. Lin's body to the bed. They placed Ms. Lin's head at the foot of the bed and her feet at the head of the bed.⁹

17. I reviewed **Officer Robert Stott's** trial testimony regarding Ms. Lin's positioning at the time of the shooting. Officer Stott gave the following testimony at Mr. Wang's trial:

a. Officer Stott was a firearms examiner with the Philadelphia Police Department. Officer Stott had been with the firearms identification unit for 11 years.¹⁰

b. Officer Stott said the firearm that produced the fatal wound was a Taurus 9mm semi-automatic handgun.¹¹

c. In terms of Ms. Lin's positioning at the time of the fatal shot, Officer Stott opined that Ms. Lin was seated *near the left edge* of the bed near the bed's *midline*, facing the closet to the *right* of the bed, when the fatal shot was fired.¹² Officer Stott said this position was "more plausible" than Ms. Lin being seated against or near the headboard left of center.¹³

d. Officer Stott based his opinion on the strike mark's location, the location where Ms. Lin's body came to rest, the blood spatter on the wall to the *left* of the bed, and the lack of blood spatter to the head board

Prosecutor: Now, if I were to pose this hypothetical to you, is it possible, based on that strike mark where it is at up here, that the victim was seated around this area of the bed when she was shot? Is that possible? (Indicating).

Ofc. Stott: Yes.

⁹ NT, Trial, 11/4/2009, p. 65.

¹⁰ NT, Trial, 11/4/2009, p. 138.

¹¹ NT, Trial, 11/4/2009, p. 141.

¹² NT, Trial, 11/4/2009, pp. 158, 163.

¹³ NT, Trial, 11/4/2009, p. 158.

Prosecutor: That she was shot in the back of the head and it exited and the strike mark is in this direction here, is that possible?

Ofc. Stott: Yes, it is possible.

Prosecutor: If I told you another fact being that when she is found, her head is found on this wall here at a 45-degree angle and her feet are up on the bed in this direction, is that possible? (Indicating).

Ofc. Stott: That certainly seems more plausible.¹⁴

e. Officer Stott made the following observations and statements regarding the blood spatter on the wall to the *left* of the bed:

Prosecutor: Officer Stott, based on this splatter that you see on this wall which is approximately a foot-and-a-half away from the bed where the victim's body was moved to, are we clear on that? (Indicating).

Ofc. Stott: Yes.

Prosecutor: Do you have an opinion based on what you see in this photograph as to where the victim was at the time that this shooting occurred?

...

Ofc. Stott: Based upon the photos I have seen, it would be my opinion that is where the victim fell due to the large pooling in this area and lack of it in other places.

Prosecutor: You don't see any of this type of evidence by the headboard or the wall by the headboard?

¹⁴ NT, Trial, 11/4/2009, p. 158.

Ofc. Stott: None.¹⁵

f. On cross-examination, Officer Scott reiterated his opinion regarding the positioning of Ms. Lin when the fatal shot was fired:

It appears to me [Ms. Lin] was at the edge of the bed with [her] back toward the [left] wall where she was found laying against and would have fell backward. That is what it appeared to me.¹⁶

g. Based on the strike mark's location above the closet to the right of the bed, the entrance wound's location, and the lack of blood spatter to the headboard and the bedroom's left corner walls near the headboard, Officer Stott opined that Ms. Lin could *not* have been seated with her back near or against the headboard facing forward when the fatal shot was inflicted.¹⁷

h. When the prosecutor asked Officer Stott about the strike mark's location, Officer Stott first mentioned the position of Ms. Lin's body as a reason why Ms. Lin could not have been seated near or against the headboard:

Well, there are certain indications, number one, the place of the body for the person to be sitting against the headboard, facing toward us. Number one, the body wouldn't get up and move like that.¹⁸

i. The prosecutor then asked Officer Stott about the entrance wound:

Prosecutor: Is it plausible that she could have been leaning back against the that headboard and shot herself in the head on the left side and cause that strike mark in the position where that strike mark is?

Ofc. Stott: In my opinion, no.

¹⁵ NT, Trial, 11/4/2009, pp. 162-163.

¹⁶ NT, Trial, 11/4/2009, p. 172.

¹⁷ NT, Trial, 11/4/2009, pp. 153-155.

¹⁸ NT, Trial, 11/4/2009, pp. 153-154.

Prosecutor: Why not?

Ofc. Stott: Well, it is hard to tell from the picture but if I was seated against the headboard... for me to shoot myself in the back of the head and have it come out in the far left side... in a rearward, forward motion, the bullet is striking the side. So it would indicate to me if she was looking at you (i.e., the prosecutor), the bullet would have to make a hard left turn after it left the head and to strike the closet like that.¹⁹

j. If Ms. Lin was seated with her back near or against the headboard and facing forward, Officer Stott opined that based on the entrance wound's location, he would expect to find the strike mark much further to the right of the closet: "Suppose there was another wall... at the foot of the bed, I would expect to find the strike mark in that area."²⁰

k. Officer Stott also opined that the lack of blood spatter on the headboard, the corner left walls, and the mattress also made it unlikely Ms. Lin was near or against the headboard when the fatal shot was inflicted:

Prosecutor: Suppose her body was turned slightly even if she is up against the headboard, does that alter your opinion at all?

Ofc. Stott: Well, not being there and observing the scene personally and just doing it from pictures makes it a little difficult but the one that I see that causes a problem with that theory is there is no blood spatter –

Prosecutor: Where?

¹⁹ NT, Trial, 11/4/2009, p. 155.

²⁰ NT, Trial, 11/4/2009, p. 157.

Ofc. Stott: -- and there is a very large gaping wound in the head and I would expect to see blood both on the wall, the headboard and on the mattress, itself.

Prosecutor: Where would you expect to see that, Officer Stott?

Ofc. Stott: If she was sitting against the headboard, I would expect to find blood spatter in this vicinity here. (Indicating)²¹

1. Officer Stott reiterated this point on cross-examination:

Counsel: Did you consider, rather than having the body fairly well forward down the bed from the headboard, that perhaps that person is partially away from the headboard but has shot while the head is turned at some angle? Does that question make sense?

Ofc. Stott: It is possible for a person to turn their head certainly instead of looking directly in this direction, looking like this. Could it happen? Yes, but my problem with that is the lack of any blood spatter on that side of the room, whether it is on the headboard area, the wall behind the headboard. (Indicating).

...

... When the bullet exits the head, that would be followed by an explosive spray of blood and tissue. I didn't find anything like that in those photographs and I would assume that none of the crime scene investigators did or there would be evidence of it. All the blood that I see is where the victim allegedly fell and her head came to rest on the floor.

²¹ NT, Trial, 11/4/2009, p. 157.

...

The lack of blood in any other area other than that makes the hypothetical that you proposed to me of her shooting herself in that area near the headboard or partway down the bed, I find unusual that there is absolutely nothing there.²²

m. On cross-examination, Officer Stott admitted he was not qualified to analyze and he did not analyze the bloodstains and blood spatter on the left wall. Officer Stott said the criminalistics section of the Philadelphia Police Department Crime Laboratory analyzes bloodstains and blood spatter for directionality and reconstructive purposes.²³

18. I reviewed **Dr. Gregory McDonald's** autopsy report, autopsy photographs, and trial testimony.

- a. Mr. McDonald performed Ms. Lin's autopsy on May 12, 2007.
- b. Ms. Lin was 5'2" and weighed 73 lbs.
- c. Based on the autopsy photographs, Ms. Lin had long, thick black hair.
- d. Dr. McDonald identified the entrance wound on the left backside of the head centered 3¼" below the top of the head and 2 ½" to the left of the midline. The entrance wound measured 3" x 3 ½" and was a stellate shaped gunshot wound.
- e. Dr. McDonald reported that the bullet traveled leftwards, forwards, and upwards and exited out the left temple 1½" below the top of the head. The exit wound measured 1" x 1 ½".
- f. In his autopsy report, Dr. McDonald reported he did not see or identify gunpowder, stippling, or soot near the entrance wound. Dr. McDonald also reported he did not see or identify a muzzle stamp surrounding the entrance wound.

²² NT, Trial, 11/4/2009, pp. 170-171, 172-173, 174.

²³ NT, Trial, 11/4/2009, p. 173.

g. In his autopsy report, Dr. McDonald wrote, “Microscopic examination fails to disclose any gunpowder or soot within the depths of the wound.” The report does not mention whether Dr. McDonald microscopically examined Ms. Lin’s hair and clothing for gunpowder and soot.

h. Dr. McDonald classified the manner of death a homicide.

i. At trial, on direct-examination, when the prosecutor asked Dr. McDonald if “there was any evidence of soot” or gunpowder on Ms. Lin’s clothing, Dr. McDonald said, No.”²⁴

j. On direct-examination, Dr. McDonald said he examined Ms. Lin’s head and hair for gunpowder stippling and soot:

Yes, I examined the head, the hair, the skin surrounding the entrance wound and the entrance wound, itself, in that I took sections of the entrance wound and looked at it under a microscope to look for gunpowder, look for soot which is also produced when a firearm is discharged and none of those substances were present.²⁵

k. Dr. McDonald said he shaved Ms. Lin’s hair around the entrance wound.²⁶

l. On cross-examination, Dr. McDonald admitted he did not microscopically examine any parts of Ms. Lin’s hair, including the shavings Dr. McDonald’s examination, in other words, consisted solely of visually examining the hair without the assistance of a microscope:

Counsel: Did you analyze those [hair] shavings.

McDonald: As I am shaving it, I am looking for gunpowder and, again, if it was close range or contact, I would be able to see those

²⁴ NT, Trial, 11/5/2009, p. 12.

²⁵ NT, Trial, 11/5/2009, p. 15.

²⁶ NT, Trial, 11/5/2009, p. 16.

fragments of gunpowder in the hair or on the skin or in the skin and I did not.²⁷

m. The absence of stippling and soot in the hair and entrance wound led Dr. McDonald to opine that the Taurus 9mm semi-automatic handgun was more 3 feet away from Ms. Lin when the fatal shot was fired:

Prosecutor: Now, you are telling us there was no soot and for there to be soot, there would have to be close-range firing of approximately 3 feet; is that right?

McDonald: Correct.

Prosecutor: So are you telling this jury that this gun was fired from more than 3 feet or the muzzle of the gun was at least 3 feet from the victim's head?

McDonald: Yes.

Prosecutor: Three feet, that's 36 inches?

McDonald: Yes.

...

Prosecutor: So your testimony is it is more than 3 feet away?

McDonald: Yes.²⁸

n. Based on his 3 foot determination, Dr. McDonald said:

Well, the position of the entrance wound... it is... in an unlikely position for a self-inflicted wound... [and] I cannot think of a very plausible position in either hand where the

²⁷ NT, Trial, 11/5/2009, p. 36.

²⁸ NT, Trial, 11/5/2009, pp. 16-17, 19.

gun could have been held and fired without leaving gunpowder and/or soot.²⁹

o. Dr. McDonald also based his 3 feet determination on the lack of blood spatter on Ms. Lin's hands:

I would expect to see what we call, if there was a close range or a contact wound, that is the muzzle of the weapon was in contact or very close to the entrance wound, I would expect to see what we call blood spatter, very fine droplets of blood, that find their way on the hand that is holding the weapon. We call that gunpowder spatter... and that was not present.³⁰

p. After the prosecutor showed Dr. McDonald exhibit C-55, a photograph of Ms. Lin's palms, Dr. McDonald again commented on the lack of blood spatter on her hands:

There was no blood spatter, these little droplets of blood, on the on the palms of her hands. What you are seeing here is blood but it is more like the hand being wiped against a surface where there is blood in it. If you ever dropped a bottle of grape juice or something of that nature and it popped and you see the little droplets of grape juice, you can see how difficult it is to get those removed, that is what we were looking for and that was not present here.³¹

q. Dr. McDonald said if Ms. Lin was against or near the headboard when she was shot, he would expect to see blood spatter on the headboard and the left corner walls near the dresser:

Prosecutor: If there was no blood spatter in that general area, what would that tell you?

²⁹ NT, Trial, 11/5/2009, p. 18.

³⁰ NT, Trial, 11/5/2009, p. 19.

³¹ NT, Trial, 11/5/2009, p. 26.

McDonald: Again, the same thing, either it was cleaned significantly or that the body was not in the position when the gun was discharged.³²

r. On cross-examination, when trial counsel highlighted several tiny specks of blood on the lower part of Ms. Lin's right hand, Dr. McDonald agreed that the tiny specks were blood, but refused to characterize them as blood spatter:

Well, that would be blood of a certain degree that I would not characterize as spatter because, again, there are just so few of them and it is very close to that rather broad area of blood that I mentioned would be consistent with the hand being dragged through some larger puddle of blood.³³

s. Dr. McDonald said the Medical Examiner's Office did not swab Ms. Lin's hands for gunshot residue.³⁴

t. Dr. McDonald said he performed nearly 5,000 autopsies. Of these 5,000 autopsies, he said 10% to 20% or 500 to 1,000 were accidental shootings or suicide. Of these 500 to 1,000 accidental shootings or suicides, he said 5% or 25 to 50 involved women who committed suicide with a firearm.³⁵

u. Dr. McDonald said the manner of death of homicide.³⁶

19. I reviewed **Officer Terrance Lewis's** trial testimony. On cross-examination, Officer Lewis discussed which side of the Taurus 9mm semi-automatic handgun the FCC would eject from. Officer Lewis said it would eject from the right side:

Counsel: You would agree with me... that the first thing that happens after the round is fired is that the cartridge casing ejects; is that right?

Ofc. Lewis: That's correct.

³² NT, Trial, 11/5/2009, p. 21.

³³ NT, Trial, 11/5/2009, p. 34.

³⁴ NT, Trial, 11/5/2009, p. 35.

³⁵ NT, Trial, 11/5/2009, p. 28.

³⁶ NT, Trial, 11/5/2009, p. 29.

Counsel: Do you want to show the jury where it ejects from?

Ofc. Lewis: Yes, that would be from the right side. This is the open area, the ejection port where the casing would come out. (Indicating).

Counsel: If you are firing the weapon, it is on the right side or the left side of the –

Ofc. Lewis: It would be on the right side.

Counsel: It would eject from the right side; right?

Ofc. Lewis: That's correct.

Counsel: Do have any reports based on tests to tell you normally how far and what direction to the right the fired cartridge casing?

Ofc. Lewis: No. That would be for a firearms examiner.

Counsel: You don't have that?

Ofc. Lewis: No. All I can tell you is the casing comes out from the right. I can't tell you how far it would go and in which direction, I wouldn't know. That would be for a ballistics expert to tell you that.³⁷

³⁷ NT, Trial, 11/3/2009, pp. 66-67.

Commonwealth's Theories as to Where Ms. Lin Was Positioned and My Opinion Regarding These Theories

20. At trial, the Commonwealth presented *three* theories of where Ms. Lin was positioned on the bed when Mr. Wang shot her. I discuss these three positions and explain why the physical evidence does not support any of the three positions.

21. The *first* theory presented by the Commonwealth came from Officer Stott. Officer Stott opined that Ms. Lin had to have been seated on the left edge of the bed with her back toward the left wall and her facing the closet to the right of the bed. Moreover, based on the strike mark above the closet and the blood pooling to the left of the bed, Officer Stott opined that Mr. Wang had to be behind Ms. Lin standing in the narrow, 1½ foot wide, space between the bed and left wall. Officer Stott's opinions are not supported by the physical evidence, the bedroom's dimensions, and Dr. McDonald's testimony.

a. *First*, Officer Stott's opinion directly contradicts Dr. McDonald's testimony, assuming of course, Dr. McDonald's testimony is correct. Dr. McDonald said the shot that killed Ms. Lin was fired at a distance more than 3 feet away from Ms. Lin. However, the distance between the left wall and the edge of the bed is only 1½ feet or 18 inches. In other words, Officer Stott's opinion and Dr. McDonald's opinion cannot co-exist with one another.

b. The only way Officer Stott's opinion and Dr. McDonald's opinion could possibly co-exist together is if Ms. Lin was seated in the *middle of the bed*, not on the edge, and Mr. Wang is not directly against the bed. However, if Ms. Lin was seated in the middle of the bed, she would not have fallen off the bed. When first responders found Ms. Lin, her feet were still on the left edge of the bed near the dresser, while her back was very near the left wall. If Ms. Lin was seated in the middle of the bed, she would have come to rest on the bed, not the floor.

c. *Second*, Officer Lewis testified that the FCC of the 9mm Taurus semi-automatic handgun ejects to the right. Officer Stott said Mr. Wang stood directly behind Ms. Lin and shot straight ahead at her. Based on Officer Stott's positional and directional theory, therefore, the FCC would be ejected to the right and would have landed either on the foot of the bed or on the floor near the left foot of the bed.

d. The FCC, however, was not recovered at the foot of the bed or on the floor near the foot of the bed. The FCC was recovered at the head of the bed near the midline. Thus, instead of coming to rest to the right of the 9mm Taurus semi-automatic handgun, the FCC came to rest to the *left*.

e. If Officer Stott's positional and directional theory is correct, the only plausible way the FCC came to rest where it did was if it somehow got entangled with Ms. Lin's thick, long hair and was redirected to the left. The likelihood of this occurring, however, is slim. To begin with, the only plausible way the FCC could become entangled with Ms. Lin's hair is if Mr. Wang placed the 9mm Taurus semi-automatic handgun against Ms. Lin's head or very near her head. The likelihood of this occurring, however, is slim because, if Mr. Wang shot her at such a close range, Mr. Wang's clothing and hands would likely have some blood evidence or back spatter on them, even if it is minimal due to Ms. Lin's long, thick hair. Back spatter is blood directed back towards the source of energy or force that caused the spatter. Mr. Wang's clothing and trigger hand had no blood at all on them. Moreover, the back spatter that would have hit Mr. Wang's clothing and person would have likely created a void pattern on the left wall. Based on my review of the photographs of the left wall, I can see no discernible void pattern.

f. *Third*, the location of the strike mark above the closet undermines Officer Stott's positional and directional theory. Scene investigators did not measure the closet's dimensions. However, standard ceilings are generally 8 feet high. Conservatively estimated, then, the strike mark above the closet is between 6½ to 7 feet high. Ms. Lin was only 5'2". The average bed height for a standard mattress, box spring, and bed frame is 25" or just over 2 feet. If Ms. Lin was seated on the left edge of the bed and sitting with a straight posture, her head height would be somewhere between 56" and 61" or just under or over 5 feet high.³⁸

g. According to the Pennsylvania Department of Correction's online records, Mr. Wang is 5'7" or 67" tall. Consequently, if Mr. Wang is standing behind Ms. Lin and Ms. Lin is seated on the edge of the bed, Mr. Wang would be nearly a half-foot taller than Ms. Lin. At this height discrepancy, if Mr. Wang shot Ms. Lin, the trajectory of his shot would most likely be either downward or straight ahead. Both trajectories could not have produced the strike mark *above* the closet.

³⁸ I calculated this number by dividing Ms. Lin's body height (62") in half (31") and adding this number to 25" (the bed height). $31" + 25" = 56"$.

h. In other words, if Mr. Wang shot Ms. Wang from behind while standing in the narrow, 1½ feet, area between the bed and left wall, the evidence strongly suggests he would have had to shoot at an upward trajectory in order to create the strike mark above the closet.

22. The *second* theory presented by the Commonwealth is provided by the prosecutor during her closing arguments. According to the prosecutor, Ms. Lin was seated at the left foot of the bed when Mr. Wang grabbed her by the hair and shot her in the head:

She was sitting on the bed at the end. She was on that laptop. What do you think she was doing? What do you think she was looking up? That is the Sony laptop where all the e-mails came from. That is what they were arguing about. You know that's what that main argument was about.

....

So they argue and... She is on that laptop. He knows she is on the laptop. He doesn't know what she is doing on the laptop, so they fight some more.

Her hair is pulled out. You see her hair on that beer box. Her hair is pulled out of her head. What do you think happened? Do you think he grabs her by the head of the hair and shoots her in the back of the head? You saw the strike mark. You can put it all together... [.]³⁹

23. The prosecutor's theory is not supported by the physical evidence, the bedroom's dimensions, Dr. McDonald's testimony, or Officer Stott's testimony.

a. *First*, the prosecutor's theory contradicts her own expert's testimony. Officer Stott placed Ms. Lin on the left edge of the bed near the middle.

b. *Second*, the prosecutor's theory also contradicts her other expert's testimony. Dr. McDonald said the shot that killed Ms. Lin was fired at a distance more than 3 feet away from Ms. Lin. The prosecutor, however, has Mr. Wang firing the fatal shot while he is in very close proximity of Ms. Lin because,

³⁹ NT, Trial, 11/5/2009, pp. 209, 212-213.

according to the prosecutor, Mr. Wang is pulling her hair with his left hand and discharging the firearm with his right hand. The likelihood Mr. Wang held the firearm 3 feet from Ms. Lin's body as he pulled her hair is slim to none.

c. *Third*, first responders saw no evidence of a struggle on the bed generally or at the foot of the bed specifically.

d. *Fourth*, based on the prosecutor's positional and directional theory, the trajectory of the FCC would have resulted in it landing either on the floor near the foot of the bed or on the foot of the bed. The FCC, however, was not recovered on the floor near the foot of the bed or on the foot of the bed. The FCC was recovered at the head of the bed near the midline.

e. Again, if the prosecutor's positional and directional theory is correct, the only plausible way the FCC came to rest where it did was if it somehow got entangled with Ms. Lin's thick, long hair and was redirected to the left. The likelihood of this occurring, however, is slim. To begin with, the only plausible way the FCC could become entangled with Ms. Lin's hair is if Mr. Wang placed the 9mm Taurus semi-automatic handgun against Ms. Lin's head or very near her head. As mentioned, though, if Mr. Wang shot her at such a close range, Mr. Wang's clothing and hands would likely have some blood evidence or back spatter on them, even if it is minimal due to Ms. Lin's long, thick hair. Mr. Wang's clothing and trigger hand had no blood on them.

f. *Fifth*, if Mr. Wang shot Ms. Lin at the left foot of the bed, it would have been highly improbable and likely impossible for Ms. Lin to knock over the dresser next to the head of the bed.

g. *Sixth*, if Mr. Wang shot Ms. Lin at the left foot of the bed, it is highly improbable and likely impossible for Ms. Lin's feet to be in the position they were when first responders arrived. When first responders arrived, Ms. Lin's feet were still on the edge of the bed near the dresser more toward the *head* of the bed.

h. *Seventh*, the location of the firearm in the dresser drawer does not support this theory. Based on this theory, after shooting Ms. Lin at the foot of the bed, Mr. Wang either threw the firearm to the left corner toward the dresser or he walked over Ms. Lin's body and placed the firearm in the dresser drawer himself. While it is possible Mr. Wang may have done either of these two things, it is very unlikely for the following reasons:

i. At trial, during closing arguments, the prosecutor argued that after shooting Ms. Lin, Mr. Wang threw the firearm to the left corner of the bedroom in an attempt to hide the gun:

You know what happened here. He tried to hide the gun. He moved the gun. He shot her. He didn't know what to do. He threw it in the drawer in hopes that nobody would find it and then he concocts this whole suicide story.⁴⁰

ii. Mr. Wang's behavior once first responders arrived does not support the prosecutor's theory because Mr. Wang showed first responders where the firearm came to rest. From a behavioral perspective, if Mr. Wang, in fact, threw the gun toward the dresser in the hopes of hiding it, he would not then immediately identify the firearm's location once first responders arrived.

iii. Moreover, if Mr. Wang concocted the suicide narrative to mask the homicide, why would he place the firearm in the drawer? Why wouldn't he simply place the firearm very near Ms. Wang's body, like her head or right hand? Based on my experience, when a suspect attempts to stage a shooting to look like a suicide, he or she generally places the firearm near the victim's body, particularly the victim's hands. The suspect does not hide the firearm because doing so entirely defeats the suspect's suicide narrative.

iv. The prosecutor also argued that because Mr. Wang knew the firearm's location, this proved Mr. Wang hid the firearm in the drawer.⁴¹ Mr. Wang's knowledge of the firearm's location, however, can be innocently explained by the fact that he saw Ms. Lin's body fall to the floor. Indeed, in his May 12, 2007 statement, Mr. Wang said: "Then I saw her body fall to the floor, her eyes was open."

v. Lastly, the prosecutor argued that if Ms. Lin shot herself, it would have been impossible for the firearm to come to rest in the drawer under two CDs:

⁴⁰ NT, Trial, 11/5/2009, p. 215.

⁴¹ NT, Trial, 11/5/2009, p. 214.

[Officer Magsam] can tell you because he was the first officer on the scene, and he told you what the Defendant said. The gun is over there. The gun is over there. How the heck would he know the gun is in the drawer? What is it, a magic gun? You heard Dr. McDonald tell you that when [Ms. Lin] gets shot, she is incapacitated. She can't move. Did she throw the gun up in the air and it ends up in the drawer, in the bottom, in the bottom drawer with CD's on top of it?

This is just impossible. It is just that whole story is ludicrous and you shouldn't buy into it. It is ludicrous that it would happen that way.⁴²

24. I respectfully disagree with the prosecutor and Dr. McDonald because both failed to consider the concept of *evidence dynamics*. Evidence dynamics refers to any influence that changes, relocates, obscures, or obliterates physical evidence, regardless of intent. Here, it is entirely plausible that after Ms. Lin shot herself the firearm and she both fell toward and against the dresser. That the momentum of Ms. Lin's fall caused the dresser to tumble forward opening the two drawers. And that the firearm ultimately came to rest in the drawer and under the CDs.

25. Based on evidence dynamics principles, therefore, there is nothing "ludicrous" or "impossible" about this scenario. Indeed, this scenario is far more plausible than Dr. McDonald's and the prosecutor's because both have Ms. Lin seated at the foot of the bed. As mentioned, if Ms. Lin was seated at the foot of the bed to the left, it is my opinion Ms. Lin would not have come in contact with the dresser when she fell off the bed. Thus, somebody or something had to knock the dresser over. Based on my experience and evidence dynamics principles, the more plausible scenario is that Ms. Lin's body was the object that caused the dresser to tumble forward because Ms. Lin was positioned at the head of the bed near the dresser when the fatal shot was fired.

26. The *third* theory presented by the Commonwealth was not explicitly argued by the Commonwealth. Rather, it is based on Dr. McDonald's testimony, the bedroom's dimensions, the bed's position, and the strike mark's position.

⁴² NT, Trial, 11/5/2009, pp. 214-215.

a. Dr. McDonald was adamant that the shot that killed Ms. Lin was fired at a distance more than 3 feet away from Ms. Lin. As mentioned, based on the bedroom's dimensions and the bed's placement, this eliminates Mr. Wang standing in the narrow space between the bed and the left wall because the distance between the left wall and the bed is only 1½ feet.

b. Based on the strike mark's position above the closet to the *right* of the bed as well as Ms. Lin's final resting position, this means Mr. Wang had to have fired the fatal shot at the foot of the bed on the left. Most importantly, based on Dr. McDonald's testimony, Mr. Wang had to be standing at least 3 feet away from Ms. Lin as she sat at the foot of the bed.

27. This *third* theory is not supported by the physical evidence.

a. *First*, if Mr. Wang shot Ms. Lin at a distance of more than 3 feet, it would be virtually impossible for the FCC to come to rest at the head of the bed. The FCC, as mentioned, would have ejected to the right, and based on Dr. McDonald's positional and directional theory, would have come to rest on the floor in front of the foot of the bed. Unlike the prosecutor's theory, moreover, there is virtually no chance the FCC got entangled in Ms. Lin's long, thick hair because, as Dr. McDonald hammered home at trial, Mr. Wang had to be more than 3 feet from Ms. Lin when he fired the fatal shot.

b. *Second*, the only plausible way Mr. Wang could have created the strike mark above the closet is if he positioned the firearm at an upward trajectory when he fired it. Based on Mr. Wang's height, which is 5'7", and the fact he must be standing more than 3 feet from Ms. Lin when he fired the fatal shoot, it is very unlikely in my opinion that Mr. Wang would have had the firearm positioned at an upward trajectory when he fired it.

c. It is possible Mr. Wang had the firearm at his hip pointed upward when he fired the fatal shot, but this is very unlikely for one simple reason. If Mr. Wang had the firearm near his hip, while standing more than 3 feet from the bed on the *left* side of the bedroom, the likelihood of the FCC landing at the head of the bed where it was ultimately located is as close to zero as one can get. In other words, there is no plausible explanation under the laws of physics that would have allowed the FCC to land at the head of the bed *right* of center.

d. *Third*, based on Dr. McDonald's positioning and the location of the strike mark, Ms. Lin had to be seated at the foot of the bed near the left edge. This positioning, which is similar to the prosecutor's theory during closing arguments, cannot be correct for two reasons. To begin with, if Mr. Wang shot Ms. Lin at the left foot of the bed, it would have been highly improbable and likely impossible for Ms. Lin to knock over the dresser next to the head of the bed. Similarly, if Mr. Wang shot Ms. Lin at the left foot of the bed, it is highly improbable and likely impossible for Ms. Lin's feet to be in the position they in were when first responders arrived.

e. *Fourth*, like the prosecutor's theory, Dr. McDonald's theory requires Mr. Wang to have somehow placed the firearm in the drawer *after* shooting Ms. Lin. As mentioned *supra*, while it is possible Mr. Wang threw the firearm in a panic after shooting Ms. Lin, the more plausible explanation based on the physical evidence and evidence dynamics principles is that Ms. Lin's body caused the dresser to tumble forward opening the drawers and allowing the firearm to come to rest in the drawer.

Victimology

28. In all death investigations, and especially where there are statements or evidence suggesting the decedent may have committed suicide, a thorough investigation must be conducted on the decedent's background as well as his or her emotional, psychological, and physical wellness in the days and months leading to his or her death.⁴³

29. Based on my review of the record, there are multiple indicators that Ms. Lin was emotionally and psychologically unstable in the months and days leading to her death on May 11, 2007. While these indicators do not definitively prove Ms. Lin committed suicide, they are nonetheless relevant in situations such as are event in the instant case. Specifically, given that the physical evidence cannot definitively establish, with absolute certainty, whether Ms. Lin's death was the result of a suicide or a homicide, it is imperative to examine Ms. Lin's background as well as his or her emotional, psychological, and physical wellness in the days and months leading to his or her death.

⁴³ VERNON J. GEBERTH, PRACTICAL HOMICIDE INVESTIGATION 378-379 (3d ed. 1996); BRENT TURVEY, CRIMINAL PROFILING: AN INTRODUCTION TO BEHAVIORAL EVIDENCE ANALYSIS 137-155 (2d ed. 2002).

30. I reviewed **Officer Esteban Roche's** trial testimony.

a. Officer Roche worked as a computer forensic examiner for the Philadelphia Police Department. Officer Roche examined the two laptops recovered from the scene and recovered emails which are relevant to my victimology assessment.⁴⁴

b. Based on the recovered emails, it appears Ms. Lin had learned that Mr. Wang was communicating with another woman named **Elaine**. Based on the content of the emails, more importantly, it is evident Ms. Lin was extremely hurt and angered by Mr. Wang's betrayal. It is also evident Ms. Lin was emotionally unstable and near her breaking point. For instance, Ms. Lin sent the following email to Elaine on **March 23, 2007**, less than two months before her death:

There you sick fucking bitch. You call him phone on 6:00 a.m. I know it was you. We was sleeping, fucking bitch, fucking bitch. I never see this kind bitch. My husband told me he doesn't like you, just play game. Now it over. Find someone. Fuck you.⁴⁵

c. Three days later, on **March 26, 2007**, Ms. Lin sent another caustic, vitriolic, and erratic email to Elaine:

You told him about I send male. Fuck you. He asked me did you do that. I fuck you [or fuck with him] and I give up. He is unhappy now. I don't want to talk to him. He didn't sleep two light. He has very big money problem. I want to stay with him, figure out this problem but now I change my mind. If you truly love him, help him. I am out. You in. Okay. You turn. He needs someone help. We have been together for eight years. If some day he weren't my husband, he still like my brother. He would treat me like his sister. You can't understand right anyway. I just don't want him going down. He told me you are not chatting each other anymore, so let me don't bother you. I

⁴⁴ NT, Trial, 11/4/2009, pp. 111-113.

⁴⁵ NT, Trial, 11/4/2009, p. 122.

don't trust him because he lie to me before. I think it is time for me to be on my way, think to you.⁴⁶

d. Six days later, on **April 1, 2007**, Ms. Lin sent another email. Though less caustic and vitriolic, it nonetheless sheds significant light on how Ms. Lin viewed the world around her and how depressed and lonely she felt:

Dear Elaine, I think we cannot go back together. Something just happened. I feel you are a nice girl. You are young. Sometimes if you meet some guy who will tell you how bad is his wife, don't trust they because always not true. I cleaned the house. I also cook for him. Even I still work, I am waitress. I work 11 or 12 hours a day. Life is very difficult for me. He never help me around the house. Every day he went home, he just chatting – I guess people. Sometimes I went home 11:00 pm, he still doesn't ate dinner. He waiting for me cook for him but one thing I didn't tell you, I think he love you. He doesn't love me anymore. He very nice to me, just because he feel sorry for me, all this things for my son is bad but maybe good for me. Be happy.⁴⁷

31. The Commonwealth used the emails to establish a motive as to why Mr. Wang shot and killed Ms. Lin. While there are aspects of these emails that may suggest a possible motive, this requires the assumption that the case is indeed a homicide. The emails, in my opinion, offer strong evidence as to Ms. Lin's emotional and psychological temperament before her death - but they do not prove the circumstances of her death. In other words, it is equally plausible that the emails support a suicide theory as opposed to a homicide theory.

32. I also reviewed **Officer Ashley Johnson's** trial testimony.

a. Officer Johnson discussed a **December 16, 2006** domestic disturbance call she responded to at Mr. Wang's and Ms. Lin's residence. Officer Johnson received the radio call at 11:30 p.m.⁴⁸ Ms. Lin was not the complainant. Mr. Wang

⁴⁶ NT, Trial, 11/4/2009, pp. 124-125.

⁴⁷ NT, Trial, 11/4/2009, pp. 126-127.

⁴⁸ NT, Trial, 11/4/2009, p. 75.

was the complainant and the one who called 911.⁴⁹ When Officer Johnson interviewed Mr. Wang, Mr. Wang said Ms. Lin was acting “crazy.”⁵⁰ Officer Johnson interviewed Ms. Lin and described Ms. Lin as “very irate” and “crying” because she had recently learned that Mr. Wang was emailing and communicating with another woman.⁵¹ When Officer Johnson asked Ms. Lin if she had anywhere she could go to “cool down,” Ms. Lin told Officer Johnson she had nowhere to go “because she [was] alone here in the country.”⁵²

b. Officer Johnson and her partner left Mr. Wang’s and Ms. Lin’s residence. A “couple minutes” later, however, Officer Johnson and her partner received another radio call asking them to return to the residence for another “disturbance.” Mr. Wang was the complainant who called 911 again.⁵³ Officer Johnson returned to the residence and spoke with Ms. Lin again. Officer Johnson described Ms. Lin’s emotions as being up and down:

She was pretty much more – it was like up and down, up and down. When we talked to her and tried to calm her down, to calm down a little bit but I guess whatever was going on, it would flare her back up.⁵⁴

c. Officer Johnson saw no physical injuries to Ms. Lin.⁵⁵

33. Ms. Lin’s erratic and emotionally unstable behavior is consistent with the erratic and emotionally unstable content in the emails she sent Elaine. Likewise, Ms. Lin’s statement of having nowhere to go or anyone else to turn to is consistent with her April 1, 2007 email. All paint a picture of an erratic, depressed, and emotionally unstable woman who viewed her situation as one of hopelessness, loneliness and isolation. Ms. Lin apparently felt she had no one she could turn to during moments of frustration, sadness, or anger. The more isolated and withdrawn one is with the world around them, the likelihood of spiraling into a deeper depression increases, which in turn increases the likelihood this person may contemplate suicide and then in fact commit suicide.

⁴⁹ NT, Trial, 11/4/2009, p. 86.

⁵⁰ NT, Trial, 11/4/2009, p. 76.

⁵¹ NT, Trial, 11/4/2009, p. 78.

⁵² NT, Trial, 11/4/2009, p. 79.

⁵³ NT, Trial, 11/4/2009, pp. 79-80.

⁵⁴ NT, Trial, 11/4/2009, p. 82.

⁵⁵ NT, Trial, 11/4/2009, p. 82.

34. Again, the Commonwealth used Officer Johnson's testimony to bolster its motive argument: Mr. Wang killed Ms. Lin because she learned about his communications with Elaine. Like the emails, however, Officer Johnson's testimony is a two-headed sword. It may support the Commonwealth's theory about motive, but it also supports a suicide theory. Officer Johnson's testimony regarding Ms. Lin's erratic behavior and feelings of isolation, in my opinion, is more relevant to the issue of Ms. Lin's emotional and psychological temperament before her death, but not her motive. From a behavioral perspective, in other words, Officer Johnson's testimony supports the suicide theory more so than the homicide theory.

35. Moreover, based on **Denise Weber's** trial testimony, which I also reviewed, Ms. Lin exhibited depressive symptoms for sometime before her death in May 2007. Ms. Weber lived next to Mr. Wang and Ms. Lin the three years preceding Ms. Lin's death.⁵⁶ Ms. Weber said she saw Ms. Lin crying on the front porch a few times a year. Ms. Weber usually saw Ms. Lin sometime between 11:30 p.m. and midnight.⁵⁷ Again, the constant crying is indicative of someone who is lonely, unhappy, and depressed, and thus someone predisposed to suicidal ideations.

36. What is perhaps most significant about Ms. Weber's trial testimony is that Ms. Lin's crying episodes *pre-dated* her knowledge of Mr. Wang's communications with Elaine. If Ms. Lin felt lonely, unhappy, and depressed before learning about Mr. Wang's betrayal, her level of loneliness, unhappiness, and depression would have necessarily increased after she learned of Mr. Wang's betrayal. Ms. Lin's statements and behavior on December 16, 2006 as well as her emails to Elaine bear this out quite clearly.

37. On "several" of these occasions when Ms. Weber saw Ms. Lin crying, Ms. Weber testified she saw swelling and bruising on Ms. Lin's face, as if she had just suffered a physical assault at the hands of Mr. Wang.⁵⁸ Despite observing what Ms. Weber described as fairly obvious signs of physical abuse, Ms. Weber said she only called 911 once, but she could not recall the date, the month, or the year when she allegedly made this 911 call.⁵⁹ Also, Ms. Weber did not know if officers ever arrived and treated Ms. Lin after she allegedly called 911. According to Ms. Weber, after calling 911 to report her suspicions of physical abuse, Ms. Weber had to leave because she had to walk her dogs.⁶⁰

⁵⁶ NT, Trial, 11/4/2009, p. 11.

⁵⁷ NT, Trial, 11/4/2009, p. 16.

⁵⁸ NT, Trial, 11/4/2009, p. 16-17.

⁵⁹ NT, Trial, 11/4/2009, pp. 17-18.

⁶⁰ NT, Trial, 11/4/2009, p. 118.

38. While it is possible Ms. Weber observed what she claims to have observed and called 911 once, the evidence suggests otherwise. Ms. Weber was a nurse who was “very concerned about people[.]”⁶¹ The facts, however, as Ms. Weber provided them, do not support her claim. If Ms. Weber truly felt Ms. Lin had suffered multiple physical assaults at the hands of Mr. Wang, she would and should have contacted authorities on multiple occasions, but she did not. Moreover, the one time Ms. Weber allegedly called 911 was when Ms. Lin supposedly “looked the worst” and “seemed the most upset.”⁶² Despite the gravity of the situation and the severity of Ms. Lin’s alleged wounds, Ms. Weber did not stay with Ms. Lin to console, support, or protect her until officers arrived because, as she put it, she *had* to walk her dogs. Thus, instead of staying with someone who she believed had just suffered a violent physical assault, and was in physical danger, Ms. Weber chose to walk her dogs. Consequently, based on Ms. Weber’s narrative, I give limited weight and credibility to her testimony regarding the alleged injuries she claimed to see on Ms. Lin’s face.

39. I make these observations regarding Ms. Weber for one simple point. The Commonwealth relied on Ms. Weber’s testimony to argue that Ms. Wang was controlling and that he controlled her by beating her. For instance, during closing arguments, the prosecutor argued:

His true character is one of a control freak. He tried to control Sharon Lin. He tried to control her probably from the minute they were married and when she was getting out of control or getting out of his control, he didn’t like it.

You heard that neighbor, Denise Weber. You heard what she said. Why would she make that up on how many numerous times she saw Sharon Lin on the front steps crying in her pajamas? She tried to render help. She is a nurse by trade. She tried to say can I help you. Do you need help? She even went so far to call the police once because she did see bruises on her.⁶³

⁶¹ NT, Trial, 11/4/2009, p. 21.

⁶² NT, Trial, 11/4/2009, p. 20.

⁶³ NT, Trial, 11/5/2009, p. 204.

40. I respectively disagree with the prosecutor's behavioral assessment of Mr. Wang. To begin with, Ms. Weber's testimony, as mentioned, lacks credibility. Moreover, based on my review of the investigative reports, Mr. Wang's statement, and the trial testimony, I see little, if any, evidence suggesting Mr. Wang was controlling. The evidence, in my opinion, supports the opposite conclusion, namely that Mr. Wang paid little attention to Ms. Lin. Indeed, based on Ms. Lin's April 1, 2007 email to Elaine, Mr. Wang was rarely home and when he was home he rarely paid attention to her. Yes, it appears Mr. Wang wanted Ms. Lin to cook for him, but this hardly supports the conclusion Mr. Wang was controlling, let alone the assertion that if Ms. Lin did not conform to his wishes he would then beat her into submission.

41. Furthermore, many of the homicides I have worked on have had domestic violence components. In these cases, the abuser is aware of the injuries that they inflict on their victim, and they take steps to prevent them from revealing related indications of the physical abuse in public. Here, though, based on Ms. Weber's testimony, Ms. Lin routinely sat out in front of her residence crying in public. The fact Ms. Lin routinely did this leads me to conclude that Mr. Wang was not controlling her by beating her as the prosecutor suggested.

The Evidence is More Indicative of a Suicide than a Homicide

42. Based on my education, training, and experience, it is my professional opinion that the physical evidence in this case is more suggestive of a suicide than a homicide. I have arrived at this conclusion for the following reasons:

43. *First*, I came to this conclusion by process of elimination. As explained *supra*, the physical evidence does not support any of the three homicide theories presented and argued by the Commonwealth unless numerous assumptions are made about Ms. Lin's and Mr. Wang's actions. If the homicide narrative cannot be explained without the use of multiple assumptions, Ms. Lin's death is most likely a suicide. *Occam's razor*, therefore, is applicable here. Occam's razor is a principle from philosophy which says that the more assumptions you have to make, the more unlikely an explanation is.

44. *Second*, it is my opinion the entrance wound is most consistent with a contact wound for the following reasons.

a. To begin with, according to the preeminent forensic pathologist treaty, MEDICOLEGAL INVESTIGATION OF DEATH by Werner Spitz, the image below represents a classic contact wound:



64

b. The star-shaped pattern is indicative of a contact wound. Ms. Lin's wound is similar because it too has a stellate or cruciform appearance that is totally unlike the round or oval perforating wounds seen in other non-boney regions of the body. A photograph of Ms. Lin's entrance wound is below:



⁶⁴ WERNER U. SPITZ, MEDICOLEGAL INVESTIGATION OF DEATH 317 (3d ed. 1993)

c. Next, while there was not a significant amount of blood/back spatter on Ms. Lin's hands, her right hand nonetheless presented with a very small amount of blood/back spatter which is indicative of a contact wound. Dr. McDonald dismissed the few blood spatter stains. I respectfully disagree because Dr. McDonald failed to take into account Ms. Lin's long, thick hair, which could have and likely did minimize the amount of blood/back spatter projected onto Ms. Lin's right hand. Likewise, Dr. McDonald failed to take into account the small size and power of the 9mm semi-automatic handgun used to kill Ms. Lin.

d. Furthermore, while Dr. McDonald claimed not to have identified any soot or gunpowder stippling around or in the entrance wound or in Ms. Lin's hair, the Taurus 9mm semi-automatic's small powder charge could easily explain why such evidence was absent. For instance, one of the preeminent gunshot wound treatises said this about firearms with small powder charges:

Hard contact wounds of the hand from .22 Short or .32 Smith & Wesson Short cartridges are *often difficult to interpret because of the small powder charge loaded into such cartridges*. These wounds may appear to be distant because of our inability to detect the small amount of soot produced and to recover unburned powder grains in the wound track.⁶⁵

e. Likewise, Dr. McDonald said the absence of burned or seared hair on Ms. Lin's head also suggested the entrance wound was not a contact wound. I respectfully disagree. Again, as one of the preeminent gunshot wound treatises explained:

Many textbooks in their descriptions of contact and near-contact wounds in hairy regions put great stress on the presence of burned hair. *In actual practice, charred or seared hair is rarely seen*, most probably because the gas emerging from the barrel blows away any charred hair. Even in seared zones of skin, however, unburned hairs are numerous. Occasionally, seared hair is seen when a

⁶⁵ VINCENT J.M. DIMAIO, GUNSHOT WOUNDS 101 (1993) (emphasis added).

revolver is discharged close to the head while long hair overlays the cylinder gap.⁶⁶

45. While I believe the evidence suggests the entrance wound is a contact wound, I cannot definitively say with 100% certainty that it is a contact wound. The lack of certain is directly related to Dr. McDonald's mistakes when analyzing the hair surrounding the entrance wound as well as the entrance wound itself.

a. At trial, Dr. McDonald said he visually examined the hair surrounding the entrance wound *without* the assistance of a microscope. Dr. McDonald, moreover, did not microscopically examine the hair shavings. Dr. McDonald also said he examined surrounding sections of the entrance wound as well as the entrance wound itself with a microscope. Dr. McDonald conducted no further assessments of the entrance wound or hair.

b. Under the circumstances, especially when suicide is potentially in play, Dr. McDonald should have conducted additional tests. As one of the preeminent gunshot wound treatises explained:

Unfortunately, *recognition of material as soot is to a certain degree subjective*. Drying, hemolyzed blood, and decomposition can simulate or mask soot. In cases in which one is not sure whether a wound is contact and in which no gunpowder particles can be identified by the dissecting microscope, *the use of energy dispersive x-ray (EDX) or flameless atomic absorption (FAAS) should be employed*. Using these devices, one can analyze for the vaporized materials from the bullet, cartridge case, and primer.⁶⁷

46. The mere fact the entrance wound very likely represents a contact wound does not automatically prove Ms. Lin fired the fatal shot. It is possible Mr. Wang fired the fatal shot, but this is unlikely for the following reasons.

a. Based on the concentration of blood and evidence dynamics on the left wall and the left corner of the bedroom, it is my opinion the fatal shot was fired somewhere at the head of the bed near the dresser. Thus, if Mr. Wang fired the fatal shot he had to be in the narrow, 1½ foot, space between the left wall and bed.

⁶⁶ VINCENT J.M. DIMAIO, GUNSHOT WOUNDS 110 (1993) (emphasis added).

⁶⁷ VINCENT J.M. DIMAIO, GUNSHOT WOUNDS 101 (1993) (emphasis added).

If Mr. Wang fired the fatal shot from this location, it is likely there would be some sort of blood spatter or blood evidence on him or his clothing. No blood was seen or detected on Mr. Wang's person or clothing. Yes, the blood spatter would likely be minimal based on Ms. Lin's long, thick hair and the size of the firearm, but I would still expect at least some blood evidence on his hand, shirt, pants, or shoes.

b. Next, as mentioned *supra*, if Mr. Wang is standing over Ms. Lin as he shot her, it is unlikely he would have placed the firearm at an upward trajectory. While it is possible Mr. Wang did just this, it is my opinion, based Mr. Wang's height, Ms. Lin's height, the bed's height, and the height of the strike mark, that the more plausible explanation is that Ms. Lin was seated at the head of bed when she fired the fatal shot at an upward trajectory.

47. *Third*, the physical evidence supports Mr. Wang's statement and trial testimony that Ms. Lin was seated at the head of the bed near the headboard.

a. I reviewed **Mr. Wang's statement and trial testimony**. In his statement and trial testimony, Mr. Wang said Ms. Lin was seated at the head of the bed with her back against the headboard when she threatened to kill herself.⁶⁸ After Ms. Lin threatened to kill herself, Mr. Wang made the dismissive "pffft" sound and turned away from her. Immediately thereafter, while Mr. Wang was *looking away* toward the bedroom window, Ms. Lin shot herself.⁶⁹

b. At trial, the prosecution went about discrediting Mr. Wang's suicide narrative by positioning Ms. Lin *against* the headboard when she allegedly shot herself. The prosecutor then asked Officer Stott and Dr. McDonald about the lack of blood spatter on the headboard and the left corner walls. In other words, according to the prosecution, the lack of blood spatter in these areas proved that Mr. Wang's suicide narrative was untrue.

c. I respectfully disagree. Mr. Wang's positioning at the time of the shooting is critical. Mr. Wang was looking *away* when Ms. Lin shot herself, so Mr. Wang could not know if Ms. Lin leaned forward—*away from the headboard*—when she shot herself. Thus, there is no evidence in the record definitively placing Ms. Lin *against* the headboard when she shot herself. Moreover, based on the physical evidence, it is entirely plausible Ms. Lin leaned forward when she shot herself:

⁶⁸ NT, Trial, 11/5/2009, pp. 126, 128.

⁶⁹ NT, Trial, 11/5/2009, pp. 129-130, 141-142.

i. To being with, the fact the dresser was knocked over suggests Ms. Lin was seated at the head of the bed near the dresser, not at the foot of the bed as Dr. McDonald and the prosecutor suggested.

ii. Next, the location of the FCC at the head of the bed makes it more plausible that the fatal shot was inflicted at the head of the bed near the dresser, not at the foot of the bed as Dr. McDonald and the prosecutor suggested.

iii. Furthermore, the blood spatter to the left wall also makes it plausible Ms. Lin was seated at the head of the bed when she shot herself.

iv. Likewise, the strike mark's location above the closet makes it more plausible that Ms. Lin inflicted the fatal shot. To create this strike mark the fatal bullet had to be traveling at an upward trajectory. The bullet tract through Ms. Lin's head was upward. As mentioned, if Ms. Lin was seated at the foot of the bed and Mr. Wang was standing more than 3 feet from her, it is highly unlikely he used an upward trajectory when he shot her. The more plausible scenario is that Ms. Lin turned her head slightly, placed the firearm to the base of her head with an upward trajectory, and pulled the trigger.

v. Lastly, Dr. McDonald and Officer Stott both appeared fixated on the lack of blood spatter in general and how the lack of blood/back spatter undermined Mr. Wang's suicide narrative. I respectfully disagree for two reasons:

1. Dr. McDonald and Officer Stott failed to consider how Ms. Lin's long, thick hair would have impacted the quantity of blood/back spatter created. It is entirely plausible Ms. Lin's hair minimized the amount of blood/back spatter created from the entrance wound.

2. Dr. McDonald and Officer Stott also failed to consider the small size and powder charge of a Taurus 9mm semi-automatic handgun. Both characteristics would have impacted the amount of blood/back spatter produced. The Taurus 9mm semi-automatic handgun is a small firearm that does not have the powder charge of large firearms and cartridges.

48. *Fourth*, and lastly, Ms. Lin's emotional and psychological state of mind in the months leading up to her death supports the suicide narrative more so than the homicide narrative. Ms. Lin exhibited classic symptoms of depression: she frequently cried and she felt lonely and isolated from the world. Ms. Lin's depressive symptoms, moreover, manifested *before* she learned of Mr. Wang's communications

with Elaine. Once Ms. Lin learned of Mr. Wang's betrayal, her emotions and behavior became more unstable because she presumably grew more depressed and lonely.

Availability Between 2007 and 2009

49. While my opinions are based on my training, education, and experience, they are also based on information, literature, and scientific evidence that was available prior to Mr. Wang's trial in November 2009. I was available to testify at Mr. Wang's trial. Had trial counsel retained me, I would have provided the opinions contained in this affidavit.

Respectfully submitted this the 20th day of May, 2016.

/s/Brent Turvey
(electronic signature)
Brent Turvey, Ph.D.