# In the Missouri Court of Appeals
# Eastern District

**DIVISION THREE**

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| STATE OF MISSOURI, | ) | No. ED93494 |
| | ) | |
| Respondent, | ) | Appeal from the Circuit Court |
| | ) | of the City of St. Louis |
| vs. | ) | |
| | ) | Honorable John F. Garvey, Jr. |
| JUDY PICKENS, | ) | |
| | ) | |
| Appellant. | ) | Filed: January 25, 2011 |

Courts are no strangers to tragedy. But, in this case, we must recount crimes that are almost beyond our imagining. After hearing evidence from forty-eight witnesses over four days, a jury convicted the defendant, Judy Pickens, of killing her young son and poisoning her young daughter by giving them the drug Clonidine.[1] Yet the defendant complains on appeal only about the testimony of a single witness. At trial, the State called Dr. Michael Armour, a forensic psychologist, who testified about "factitious disorder by proxy," a mental disorder also known as "Munchausen syndrome by proxy." A person with this disorder either induces or fakes symptoms in another person, typically someone the individual has control over, when no external motivation to do so is apparent except to take on the role of the sick patient. The defendant raises three objections to the testimony. First, she contends Dr. Armour's response to two

[1] Clonidine is a prescription antihypertensive drug for lowering blood pressure.

hypothetical questions violated Section 552.030(5) RSMo 2000,[2] which limits the use of information from pretrial mental-health examinations. Second, she asserts the doctor's responses invaded the province of the jury. And third, she maintains the doctor's general testimony about the disorder should have been excluded because the diagnosis has not achieved general acceptance by the psychiatric community and thus does not meet the *Frye*[3] standard for the admission of expert testimony. We affirm.

## ***Factual and Procedural Background***

On the morning of September 28th, 2004, the defendant brought her three-year-old son to his daycare center for the day.[4,5] The son was usually very jovial, high-spirited, and rambunctious, but on that day was very lethargic, withdrawn, and "out of touch." The center's coordinator told the defendant that her son did not look well. The defendant replied that both her son and her five-year-old daughter had been ill. She stated that she thought the children had gotten sick from eating food bought from a street vendor over the weekend. The defendant insisted that her son stay at the center and instructed the coordinator to call her if her son got worse or didn't feel any better as the day progressed, and she would come pick him up. After the defendant left, the son refused to eat his breakfast, which was unusual. He went to class for only ten to fifteen minutes before being sent to the office because he was sick. The coordinator of the early-childhood department let the defendant's son sleep in her office. The young boy would wake up every few minutes, still very lethargic, and would cry and complain that his stomach

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[2] All statutory references are to RSMo 2000.
[3] *Frye v. United States*, 293 F. 1013 (D.C. Circ. 1923).
[4] The defendant does not challenge the sufficiency of the evidence to sustain her convictions. We view the evidence in the light most favorable to the verdict and we state the relevant facts in accord with that standard. *See State v. Partain*, 310 S.W.3d 765, 766 (Mo. App. E.D. 2010).
[5] We commend the State on the quality of its statement of facts set forth in its respondent's brief. We extensively borrow from that statement of facts without further notation.

and head hurt. The center called the defendant at 9:00, 9:30, and 10:20 that morning about her son's condition. No other children in the daycare center were sick at this time.

Meanwhile, at Ashland Elementary School, the defendant's daughter, normally friendly, talkative, and sweet, was now incoherent and drowsy. Her kindergarten teacher had trouble waking her up after rest time. School officials tried to reach the defendant, and eventually contacted her at her workplace. While waiting to be picked up, the young girl slept on the classroom floor. No other children in the class were sick, and neither a virus nor flu was going around the school.

After several calls to the defendant's workplace, which was also a daycare center, the defendant told the receptionist that the receptionist either needed to look after the class the defendant was watching or pick up her children. The receptionist decided to pick up the defendant's children. She picked up the defendant's daughter first, noting that the girl looked "very ill." She had to physically help the young girl to the car because the girl could not walk on her own. The receptionist then picked up the defendant's son, who also looked "very ill." The receptionist brought the two children back to the daycare center and took them to their mother in her classroom.

Sometime later that day, the defendant took her two children to the office of their pediatrician, Dr. Margaret Schmandt. By this time, the children were ill with vomiting, diarrhea, and fever. Dr. Schmandt's partner diagnosed the children with viral gastroenteritis. The doctor sent the children home with directions to rest and drink fluids. He instructed the defendant to call if the children's symptoms did not improve.

Three days later, on October 1st, the defendant brought the children back into Dr. Schmandt's office. Dr. Schmandt was alarmed at how ill and dehydrated the children appeared.

The defendant told Dr. Schmandt that a number of other children at the daycare her children attended were out sick with the same kind of symptoms. Dr. Schmandt sent the children to the CARES Unit, a part of the emergency room at Children's Hospital in St. Louis, for tests and IV fluids.

At the CARES Unit, the defendant reported that the children had a temperature, had been lethargic, and had been complaining of abdominal pain and headache. She again stated that other children at daycare were sick with flu-like symptoms. The doctors treated the children for vomiting and gave them IV fluids for dehydration. They also gave the children popsicles and juice, which the children were able to tolerate. Because the children improved with the treatment and lab results were not abnormal, the doctors discharged the children and sent them home. They instructed the defendant to give the children small amounts of fluid frequently, to get stool samples for testing, and to come back if the children got worse.

The defendant called Dr. Schmandt three days later, on October 4th, and reported that the children were not better. Dr. Schmandt instructed the defendant to bring the children back to the CARES Unit. At the hospital, the children looked much worse than on their prior visit. Upon arrival, the defendant's son was dry-heaving and was not talking, and when the pediatric resident first saw the children, the defendant's daughter was also dry-heaving. The defendant's son had lost five pounds over three days. The defendant stated that she could not "get a handle" on the vomiting and the diarrhea and that the children had been "very, very sick." She stated that she had been up with the children and had not slept, that she was unable to keep the children hydrated, and that the children could not keep anything down by mouth, but instead just kept vomiting. At this point, the children had been sick for about six days with vomiting, diarrhea,

and fevers up to 104 degrees. The children were admitted and moved into a hospital room together.

The children stayed in the hospital room together from October 4th through October 9th. During that time, the children experienced "copious amounts" of vomiting and diarrhea. They could not keep anything down by mouth. The doctors ordered numerous tests to discover the cause of the children's illness, but the tests came back normal or very close to normal. The doctors could discover no medical reason for the children's symptoms.

The defendant stayed in the hospital room with the children nearly the entire time they were in the hospital. Indeed, one doctor who saw the children three to four times a day did not recall ever seeing the defendant leave the children's room. The defendant was very "attentive" and "active" in the children's care, even changing the children's diapers, changing the bed linens, and offering to clean the bathroom, all of which were jobs normally performed by the nursing staff. The defendant's level of involvement was such that the doctors and nurses considered it "almost refreshing" and "exciting" to see a parent so involved with the care of her children. The defendant told the doctors that "multiple" classmates at both of the children's schools were sick with similar symptoms. But she never mentioned the story she had told the daycare-center coordinator about the children eating food from a street vendor.

After the children were admitted to the hospital, doctors consulted two infectious-disease specialists to help determine the origin of the children's illness. The specialists spoke with the defendant, who, for the first time since being at the hospital, mentioned food from a street vendor. However, the defendant's explanation varied from her earlier story. She now related that on the day the children were sent home from school ill, a coworker had bought her a chicken sandwich from a street vendor and brought it back to work for her, leaving it on her desk. The

defendant explained that the children ate that sandwich. Because the defendant had asserted that the children had eaten something from their mother's workplace that may have made them sick, the defendant's supervisor later spoke to the defendant. Contrary to the earlier explanation she had given at the hospital, the defendant told her supervisor that a coworker had bought her a sandwich and brought it to the office, but that the children did not eat it, so she took it home and put it in the refrigerator.

In their search for the cause of the children's illness, doctors contacted the public-health department because they were worried about a potential outbreak, especially because the defendant had said that other children, as well as one of her coworkers, were sick with a similar illness. Officials discovered nothing wrong at either the son's daycare center or at the center where defendant worked. Indeed, they found no one at either location had been sick with the stomach flu.

On the night of October 5th, a nurse was cleaning the bathroom of the children's room while the children were sleeping and the lights in the room were off. The defendant told the nurse that "something brown" was in the children's IV tubing. The nurse looked over and saw something that appeared brown in the son's IV tubing and possibly also in the daughter's tubing. The nurse said that she did notice something, but thought it must be a shadow, because the tubing was new and nothing should be wrong with it. The brown areas were at the bottom of the tubing near the injection port. The nurse finished in the bathroom, came into the room, and turned on the lights to inspect the IV tubing. At this point, the nurse saw nothing in the tubing.

From October 4th to October 9th, the daughter's condition remained stable and she started to slowly improve. By the end of the week, she was acting like she was better and became hungry. The son's condition, however, waxed and waned. He would get a little better, then a

little worse. The staff had difficulties keeping a working IV in the young boy. Every time they got a good IV running, it would either come out or become blocked, which prevented the boy from being hydrated. On October 6th, doctors inserted a tube through the boy's nose to his stomach to attempt to hydrate him, but the young boy would still vomit, which was unusual for a child of his age. The next day, October 7th, doctors surgically inserted a Broviak catheter into a large vein in the boy's leg to allow constant IV access. After the doctors placed this catheter and started IV fluids, the boy started to stabilize and improve until the next day.

In the late afternoon of October 8th, the defendant's son started to complain about abdominal pain. He then fell asleep and could not be aroused except by a "sternal rub,"[6] and even then he would only open his eyes, recognize the people in the room, and then quickly fall back asleep. This change in the defendant's son was unexpected given his symptoms, the treatment, and the tests that had been performed. The doctors could find no medical reason for the boy's decreased arousability. The doctors ran a number of blood tests and obtained a CT scan to search for an explanation for the change in the boy's mental state. But the tests and the scan came back normal. During this period of decreased arousability, the IV machine started to alarm, indicating that the Broviak catheter was occluded, meaning that no IV fluids could infuse through the line. The boy's nurse pointed out to another nurse that some kind of white milky substance was in the tubing. The other nurse had never before seen anything like it in IV tubing. The nurse disconnected the tubing and threw it in the trash. The nurse then tried to flush the Broviak but, due to the occlusion, the catheter broke. It is unusual for a Broviak catheter to clot so soon after insertion. The doctors gave the defendant's son two different doses of anti-clotting medicine to dissolve the clot. The doctors also fixed the Broviak and placed another IV line to

[6] A "sternal rub" is performed by taking one's knuckles and rubbing them on another's sternum to the point of pain to arouse that person.

hydrate the young boy. His vital signs returned to normal and he became alert again about an hour after the decrease in arousability.

The defendant's son was stable until the early morning hours of October 9th. Various people had visited the children during the evening, but the defendant was alone in the room with her children at this point in time. The defendant had been in the room the entire evening, including during the event involving the substance in her son's IV tubing. At about 1:00 in the morning, the boy's heart rate and oxygen monitors sounded their alarms. His oxygen levels were down and he was breathing too fast. The doctor listened to the boy's lungs and heard mild wheezing. Although the boy had a history of asthma, the doctor did not know what could have triggered an attack given that the boy was in the hospital and all of his other symptoms were unrelated to asthma. The doctor obtained a chest x-ray, which was normal. The doctor gave the defendant's son a respiratory treatment and oxygen, and the boy started to improve, although his respiration did not return to normal. Even though he was breathing fast and was on oxygen, the defendant's son stabilized. His oxygen level, heart rate, and blood pressure returned to normal. The young boy remained stable for the next several hours.

At 4:30 a.m., staff called the doctor back into the young boy's room because the boy was struggling to breathe. The young boy was using all of his neck, face, and chest muscles to try to force air into his lungs. He had a look of fear on his face. The doctor again listened to the boy's lungs, which sounded "perfectly clear." The doctor could not explain why the young boy was struggling so hard to breathe. Within two minutes of the doctor's arrival, the defendant's son fell unconscious and stopped breathing. The doctor instituted life-saving measures. However, despite extensive measures to resuscitate him, the young boy died.

In response to the news of her son's death, the defendant was "visibly shaken" and wailed loudly. Due to her extreme emotional distress, the defendant was eventually taken to the emergency room. While there, the doctor asked her about medications she was taking. The defendant mentioned only two—a calcium-channel blocker and an ACE inhibitor. She made no mention of the drug Clonidine, even though she had been taking that drug for at least the previous four years.

That same day, October 9th, after the defendant's son died, Dr. Schmandt went to check on the defendant's daughter. The doctor was concerned that the same thing would happen to the young girl, whose symptoms mirrored her brother's. Upon arriving in the daughter's room, the doctor met the young girl's cousin, who gave her the tubing with the white substance in it that the nurse had removed from the defendant's son's IV line and thrown away. The cousin said that, after the nurse had left the room, the defendant had taken the tubing out of the trash and put it in her bag. Dr. Schmandt turned the tubing over to the charge nurse to have it tested.

The next day, October 10th, the defendant again presented to the emergency room, this time with dizziness, weakness, and an altered mental state. The defendant was sluggish, slow to respond, and difficult to arouse. A nurse asked the defendant's husband about any drugs the defendant was taking. He mentioned that the defendant had missed her medications due to the stress, and that she had taken two Clonidine tablets at 8:30 that morning. Upon the mention of Clonidine, the defendant immediately became alert and argumentative, saying that she was not on Clonidine anymore. She demanded that any notation that she was taking Clonidine be removed from her chart. Medical and pharmacy records, however, showed that the defendant had obtained well over 800 doses of Clonidine in the prior six months. Indeed, she had refilled

her most recent prescription for Clonidine just two days earlier, on October 8th, even though she had received a thirty-day supply only two weeks prior, on September 22nd.

Later that afternoon, the defendant's daughter suddenly took a turn for the worse and became very ill. The young girl had been improving, but now displayed a decreased level of mental alertness and became difficult to arouse. She could only be aroused with a sternal rub. As with her brother, the girl's new symptoms were unexpected. The doctors immediately transferred the defendant's daughter to the pediatric intensive care unit (ICU), and inserted an endotrachial tube in the girl to assure that she was breathing adequately. The doctors continued IV rehydration and ran many tests. They also consulted additional experts to try to determine the cause of the girl's sudden decline. Among those experts was a medical toxicologist, who interviewed the defendant on October 10th. During the course of this interview, the toxicologist asked the defendant about any medications she was taking to which the children may have been exposed. Again, the defendant did not mention that she took Clonidine. During this conversation, the defendant appeared calm and collected. She was able to give detailed, organized answers. She had a flat affect and showed no outward expression of grief. This was obviously odd for a parent who had lost a child in the hospital. When the toxicologist checked on the defendant's daughter the next day, the defendant was challenging and demeaning to him, suggesting that he was not smart enough to figure out what was causing her daughter's illness.

The doctors also called in a hospital social worker to lend support to the family. The social worker spoke with the defendant during the afternoon of October 10th, after the defendant's daughter had been transferred to the pediatric ICU. The defendant told the social worker that she was "very observant" and that she had noticed nothing out of the ordinary on the morning the children came home ill from school, that they had seemed healthy when she dropped

them off earlier that morning. During the conversation, the defendant used specific medical terminology, referring to the "IVAC" (the IV machine) and the "Broviak" catheter and saying that her son's eyes were "open and fixed." She described the doctor's resuscitation efforts in detail. During the course of the conversation, the defendant stated numerous times that she would not sue the hospital, even though the social worker never mentioned a lawsuit. The defendant stated that she had never seen a more dedicated team of physicians, and that doctors had come to her offering condolences on more than one occasion, which surprised her. When asked about her medications, the defendant again failed to mention Clonidine. She did, however, mention thirteen other medications or vitamins that she or her husband took. The defendant stated that she had been informed that there would be an autopsy on her son and understood that possibly no cause of death would be found. She asked how often that happened. Throughout the conversation, the defendant had a very flat, emotionless demeanor, even when talking about her children and her son's death.

The defendant's daughter was in the pediatric ICU for three days. Her room had a window and glass doors, and a nurse seated directly outside the room at all times. The defendant could be in the room with her daughter, but not all of the time. After three days under those conditions, the defendant's daughter improved dramatically, even though the doctors were unable to ascertain the cause of the girl's symptoms. On October 13th, the doctors transferred the young girl from the ICU back to a regular hospital-room. That same day, an attorney sent the hospital a letter advising that he was representing the defendant and her husband in a medical-malpractice action alleging the wrongful death of the defendant's son.

When the defendant's daughter returned to her regular hospital-room, Natalie Summers, a patient-care assistant, was assigned to the room to sit with the young girl. Ms. Summers was

instructed to monitor who came in and out of the room. Later that evening, the defendant told Ms. Summers that she was worried about her daughter needing to drink. Ms. Summers replied that the girl was getting enough nutrients from the IV, but the defendant insisted, saying that the ICU doctors told her that her daughter needed to drink by mouth so she would not forget how to drink. The defendant tried to give her daughter a drink from a blue cafeteria cup, but the girl said, "It taste gross." The defendant then offered her daughter apple juice, but the girl was reluctant to take it from the defendant. Another visitor in the room offered the defendant's daughter something to drink, and the girl took a drink from her. Shortly thereafter, the defendant took the blue cup into the bathroom, which did not have a sink, and then came back out with it. She said she "hated to do this," and then woke up her daughter to give her another drink. The defendant then set the cup down on a food tray sitting on the bedside table. That night, the defendant's daughter became very tired and lethargic, although she was still arousable.

Later that same evening, the defendant asked Ms. Summers to help her get a glass angel that had been hung on her daughter's IV pole so she could put it away. As the defendant reached up, Ms. Summers saw a small syringe fall to the floor. The defendant covered the syringe with her foot, and then asked Ms. Summers to get the box for the angel, which was on the windowsill. Ms. Summers turned her back to the defendant in order to get the box. After she got the box and turned back around, Ms. Summers did not see the syringe.

Sometime later, the defendant left the room to get her hair done for her son's funeral. As soon as she left, Ms. Summers got a nurse, and both examined the blue cup. Inside was a small amount of clear liquid with a cloudy white sediment in the bottom of the cup. The nurse called the on-call resident and the hospital administrative supervisor to look at the cup. They put the cup in a biohazard bag and stored it in a locked room until it was later picked up by security.

When the defendant returned to the room, she said she needed to take some medicine and needed a drink. Ms. Summers said that she could drink from the blue cup, but the defendant said she preferred warm soda. The defendant then asked where the cup was, and Ms. Summers stated that they had cleared the tray it was on from the bedside. The defendant stated she had to find the tray because her keys were on it. Ms. Summers had seen no keys. Early the next morning, the defendant searched for the tray, looking in the food service tray-return area as well as going through the trash outside the room.

On the evening of October 14th, another assistant, Tara Owens, was sitting in the room with the defendant's daughter. The defendant and visitors were also in the room. Ms. Owens had been instructed to watch the defendant's behavior and the condition of the defendant's daughter. Around 10:00 p.m., the defendant closed the curtain to shield her daughter from the other guests and then changed the young girl's diaper. After she did so, she went to her daughter's bedside and said, "Your wires are all messed up and tangled up." The wires did not appear tangled to Ms. Owens. The defendant knelt down by the bed as if fixing the wires. Ms. Owens did not see the wires move as if being fixed. The defendant's hands were positioned so that Ms. Owens could not see the defendant's hands, which were near the IV tubing and ports. The defendant then stated, "Well, I can't fix them, so they're just going to stay messed up." She then walked over to the recently-emptied trash can and threw an object in it.

The defendant then returned to her daughter's bedside and asked Ms. Owens if she thought the girl was breathing funny. Ms. Owens stated that she did not think the girl's breathing was any different. The defendant, however, insisted that something was not right and that Ms. Owens needed to get somebody to check on her daughter. Ms. Owens went to the door and got a nurse. The nurse noted that the girl was breathing really fast, but that she did not

appear to be in distress. The defendant kept insisting that something was not right. She asked for her daughter's oxygen to be turned up, but the nurse said the oxygen was fine. The defendant remained insistent, and the nurse got another nurse to come in and assess the defendant's daughter. By this time, the young girl was coughing and having trouble catching her breath. She also spiked a fever and had a change in her mental alertness. Ms. Owens whispered to the two nurses that the defendant was acting suspiciously and had thrown something in the trash. With Ms. Owens blocking the defendant's view, one of the nurses removed the trash bag from the room while the other nurse got a doctor. Inside the trash bag was a syringe with a white residue on the tip. The syringe was bagged and turned over to security. This syringe was later lost before the substance could be tested.

By October 16th, the forensic-toxicology laboratory at the St. Louis University School of Medicine had tested the white substance in the blue cup from which the defendant had made her daughter drink. Those tests revealed the presence of Clonidine. The Clonidine would have made the liquid taste bitter, or "gross." The laboratory also performed tests on blood samples that had been drawn from the defendant's daughter on October 10th and October 15th. October 10th was the date when the defendant's daughter was admitted to the pediatric ICU after displaying a dramatic decrease in her level of mental alertness. October 15th was the day after the young girl had experienced great difficulty breathing and had another decrease in her mental alertness – the same evening when defendant was observed "fixing" her daughter's IV lines and then throwing an object into the trash can, from which staff later retrieved a syringe with white residue on the tip. The level of Clonidine in daughter's blood should have been zero because the doctors had not prescribed Clonidine for her. However, both samples tested positive for Clonidine. The presence of Clonidine in the young girl's system accounted for her symptoms.

Based on the amount of Clonidine in the girl's blood and the short half-life of the drug, the defendant's daughter would have had to have received at least two separate doses of Clonidine. Those could not have come from hospital staff because only one .01 mg tablet of Clonidine had been dispensed in the entire hospital during the time that the children had been in the hospital.

Based on the Clonidine test results, the defendant was barred from seeing her daughter, and a security guard was stationed outside of the girl's room at all times. The daughter's condition improved. She was very stable by the end of October 16th. By the next day, she was awake, alert, and playful, and was able to get out of bed for the first time in many days. The defendant's daughter continued to improve without any incident. She was discharged from the hospital three days later.

An autopsy on the defendant's son showed that he had pieces of a foreign substance throughout the blood vessels of his lungs consistent with the filler material in pills. This finding was similar to that found in the lungs of drug abusers who inject themselves with crushed-up pills. Tests on the IV tubing with the white residue showed that the residue contained aluminum and silicate, typical binding agents for Clonidine pills manufactured by Mylan Pharmaceuticals, the company that manufactured the defendant's Clonidine pills. The material in the tubing had the same microscopic structure as the substance in the boy's lungs. Toxicology tests on his blood and liver showed the presence of Clonidine in an amount 70 times greater than the amount considered toxic to a young child. Clonidine would have caused the symptoms that sent the young boy to the hospital as well as the changes in his mental state. The young boy's death was caused by both the Clonidine and the filler material. The Clonidine lowered the boy's blood pressure, which slowed his heart rate, decreasing the blood flow through his body. The pill filler clogged the boy's pulmonary blood vessels, preventing his blood from properly oxygenating.

The decreased oxygenation and decreased blood flow resulted in no oxygen being delivered to the boy's entire body, causing tissue and organ death, heart failure, and ultimately death.

By grand-jury indictment, the State charged the defendant with first-degree murder, first-degree assault, two counts of child abuse, and two counts of armed criminal action. Following her indictment, the defendant filed a motion for appointment of a psychiatrist and requested that the trial court order a mental-health examination of her pursuant to Sections 552.020 and 552.030. These statutes govern respectively mental-health examinations made for the purpose of determining competency to stand trial and mental-health examinations regarding a plea of not guilty by reason of mental disease or defect (NGRI).[7] The defendant, in her motion, expressed her "intent to investigate" the defenses of diminished capacity and NGRI, based on the possibility that she "may be" or "could have been" suffering from a mental disease or defect.[8] The trial court granted the defendant's motion, and the defendant was thereafter examined. The case proceeded to trial in June of 2009.

At trial, in addition to forty-seven other witnesses, the State called Dr. Michael Armour, the forensic psychologist who conducted the pretrial mental-health evaluation of the defendant. The defendant objected to the testimony of Dr. Armour on a number of grounds, both in pretrial

[7] Section 552.020 provides in part that "[n]o person who as a result of mental disease or defect lacks capacity to understand the proceedings against him or to assist in his own defense shall be tried, convicted or sentenced for the commission of an offense so long as the incapacity endures." The section provides for a mental-health evaluation for the purposes of determining whether a defendant is competent to proceed and stand trial. Section 552.030 provides in part that "[a] person is not responsible for criminal conduct if, at the time of such conduct, as a result of mental disease or defect such person was incapable of knowing and appreciating the nature, quality, or wrongfulness of such person's conduct." The section provides for evaluation to determine "whether, at the time of the alleged criminal conduct, the accused, as a result of mental disease or defect, did not know or appreciate the nature, quality or wrongfulness of such accused's conduct or as a result of mental disease or defect was incapable of conforming such accused's conduct to the requirements of law."

[8] The parties disagree over whether this language suffices to constitute a plea of NGRI or notice of the defendant's intent to rely on the defense, so as to trigger the court's duty to order a mental-health examination under Sections 552.020 and 552.030. For reasons detailed in footnote 14, we need not resolve the disagreement.

motions in limine and at trial.[9] The trial court overruled the defendant's objections and allowed the testimony to explain why the defendant committed the acts with which she was charged. The doctor then took the stand, testified in general about factitious disorder by proxy, and then answered two hypothetical questions posed by the prosecutor.

Dr. Armour began his testimony by explaining the disorder. A person with this disorder either induces or fakes symptoms in another person, the proxy, usually someone the person has control over. No external motivation for the induction of symptoms or the fabrication of symptoms appears except for the perpetrator to take on the role of the patient. The disorder is a recognized diagnosis under the general diagnosis "factitious order, not otherwise specified" in

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**9** While the defendant objected on numerous grounds, including violation of Section 552.030, invading the province of the jury, and *Frye*, the defendant did not object to this evidence as irrelevant or as lacking foundation. The State did not introduce evidence that the defendant actually had been diagnosed with factitious disorder. Absent such evidence, testimony about the disorder is arguably inadmissible. *See State v. Lumbrera*, 845 P.2d 609, 620 (Kan. 1992)(striking all testimony relative to the disorder due to lack of foundation; there was no expert testimony attempting to prove the defendant suffered from the disorder). But Dr. Armour had in fact diagnosed her with such disorder in his pretrial mental-health examination, which was filed with the court. The State and the defense were both aware that Dr. Armour had examined the defendant and had diagnosed her with the disorder. It may be that the State was leery of violating Section 552.030.5, which prohibits the use of certain statements and information from a pretrial examination as evidence that the defendant committed the act charged. It may also be that the defendant was fearful of calling attention to the absence of a diagnosis at this point. Whether a matter of considered strategy or not, the defendant did not object to the irrelevance of Dr. Armour's testimony or the lack of foundation for that testimony.

Courts have struggled with evidentiary issues arising in factitious-disorder-by-proxy cases. *See Austin v. State*, 222 S.W.3d 801, 807 (Tex. App. 2007)(and citations therein). Missouri courts have rarely addressed the disorder and the related evidentiary issues. However, courts across the country have consistently allowed the prosecution to use evidence of the disorder to explain a defendant's motive. *Id*. In Missouri, evidence regarding motive is logically relevant and admissible. *State v. Shurn*, 866 S.W.2d 447, 457 (Mo. banc 1993). The State and the accused alike generally have wide latitude to develop evidence of motive. *Id*. Motive can be relevant in a criminal prosecution even if it is not an element of the crime charged. *State v. DeWeese*, 751 S.W.2d 389, 393 (Mo. App. E.D. 1988); *accord State v. Crabtree*, 625 S.W.2d 670, 675-76 (Mo. App. E.D. 1981); *see also State v. Henderson*, 301 S.W.2d 813, 816-17 (Mo. 1957)(noting that "the presence or absence of motive is an evidentiary circumstance to be given such weight by the jury as they consider it entitled to under all the circumstances," and that the issue of motive is more important where the evidence is circumstantial).

If the defendant did suffer from factitious disorder by proxy, Dr. Armour's general testimony about the disorder could aid the jury in an area beyond their ken. Dr. Armour's testimony about the disorder was a matter outside the common everyday experience and knowledge of the jurors. His testimony might assist the jury in understanding the disorder and provided context for why a seemingly devoted mother would commit crimes against her own children. *See Austin*, 222 S.W.3d at 807-08; *Reid v. State*, 964 S.W.2d 723, 730 (Tex.App.-Amarillo 1998); *People v. Phillips*, 122 Cal.App.3d 69, 84, 175 Cal.Rptr. 703, 712 (1981). While the State was not required to prove motive, a jury would naturally question what motive could underlie such aberrant behavior. Normally the motives for criminal behavior are as obvious as lust, greed, and anger. But here, the State theorized that the defendant had an unusual perverse motive that caused her to poison her own children.

the main body of the DSM-IV-TR.[10] He also acknowledged that the disorder is listed in the appendix of the DSM-IV-TR, under "criteria sets and axes provided for further study" – a section listing ideas for further research and study. Dr. Armour explained that further study was desired to determine whether the disorder should be its own diagnosis or should remain under the broader diagnosis of factitious disorder.

Dr. Armour acknowledged that the diagnosis was "controversial," but explained that the controversy was about "soft signs" of the disorder that may be too broad and do not sufficiently differentiate people who have the disorder from "normal" people. "Soft signs" that could indicate the presence of the disorder include the perpetrator being the individual who has primary responsibility for the victim. Other "soft signs" are that that the perpetrator is usually seen superficially as normal or as a good caretaker, can be an accomplished liar or manipulator, may have a background in the health-care profession or a knowledge of medical procedures and symptoms, might seek attention from a wide variety of people, may doctor-shop, and might be the only person who is consistently present when the victim has symptoms. Dr. Armour testified that even critics agreed the diagnosis was valid when, in addition to "soft signs," there were "robust indicators" such as lab tests confirming the presence of symptom-causing substances in the victim's body.

The prosecutor concluded her examination of Dr. Armour by asking him two lengthy hypothetical questions.[11] For the first question, the prosecutor asked the doctor to assume as true

[10] The DSM IV-TR refers to the *Diagnostic and Statistical Manual of Mental Disorders* published by the American Psychiatric Association. The manual is used to define and diagnose mental disorders. It lists mental diseases as well as the diagnostic criteria for each of those conditions. The manual is considered the standard reference text for psychiatric diagnoses.

[11] We have attached an appendix of the testimony for the reader wishing to examine the record in greater detail.

a number of circumstances that mirrored the evidence that had been adduced at trial. The prosecutor then asked the doctor:

> Based on those assumptions … do you have an opinion based upon reasonable scientific certainty whether the outlined circumstances are consistent with factitious disorder by proxy[?]

Dr. Armour responded:

> It's my opinion that the circumstances you outlined are consistent with factitious disorder by proxy.

The prosecutor then asked the doctor if a person can have a diagnosis of factitious disorder by proxy and still be "very deliberate and reality oriented." The defense objected, and the doctor never answered the question. The prosecutor then framed his second hypothetical question, and again asked Dr. Armour to assume as true a number of circumstances that mirrored certain other facts from the case. The prosecutor then asked:

> Now, if those circumstances are true … do you have an opinion based upon these facts whether the mother is acting in a manner which would indicate she is rational and in touch with reality[?]

Dr. Armour responded:

> Based on the circumstances you described, it's my opinion those are rational and deliberate behavior in the absence of any other symptoms of a major mental illness.

The doctor went on to explain that the disorder was not a mental disease that would excuse responsibility for those actions.

The defendant did not adduce any evidence in support of a defense of NGRI and the court did not instruct on the defense.

The jury found the defendant guilty of second-degree felony murder, Section 565.021, which was submitted as a lesser offense to the charged crime of first-degree murder. The jury also found the defendant guilty of first-degree assault, Section 565.050; two counts of child

abuse (one a class A felony, the other a class C felony), Section 568.060; and two counts of armed criminal action, Section 571.015. The trial court sentenced the defendant to consecutive terms of life imprisonment for the murder, life imprisonment for the related count of armed criminal action, thirty years' imprisonment for assault, thirty years' imprisonment for one count of child abuse, seven years' imprisonment for the other count of child abuse, and ninety years' imprisonment for the other count of armed criminal action, for a total of two life sentences plus 157 years.

The defendant appeals, advancing a three-pronged attack challenging the admission of Dr. Armour's testimony. Her first two challenges focus on the doctor's responses to the two hypothetical questions, in which the doctor opined that the actions of the hypothesized actor – presumably the defendant – were consistent with a diagnosis of factitious disorder by proxy and were rational and deliberate actions. The defendant first contends this testimony violated Section 552.030.5. She secondly contends this testimony invaded the province of the jury. Lastly, the defendant argues that the doctor's testimony about factitious disorder by proxy should have been excluded because the diagnosis has not achieved general acceptance by the psychiatric community and thus does not meet the *Frye* standard for the admission of expert testimony. We shall address each of the defendant's contentions in turn.

## ***Standard of Review***

As the defendant acknowledges, the trial court is vested with broad discretion to admit or exclude expert testimony. *State v. Davis*, 814 S.W.2d 593, 603 (Mo. banc 1991). We will not overturn the trial court's decision unless we find that the trial court clearly abused its discretion. *State v. Worrall*, 220 S.W.3d 346, 349 (Mo. App. E.D. 2007); *see also State v. Storey*, 40 S.W.3d 898, 910 (Mo. banc 2001). The trial court abuses its discretion when its ruling is "clearly against

the logic of the circumstances then before the court, and is so unreasonable and arbitrary that it shocks the sense of justice and indicates a lack of careful, deliberate consideration." *State v. Irby*, 254 S.W.3d 181 (Mo. App. E.D. 2008). Furthermore, on direct appeal, we review "for prejudice, not mere error, and will reverse only if the error was so prejudicial that it deprived the defendant of a fair trial." *Storey*, 40 S.W.3d at 903; *State v. Speaks*, 298 S.W.3d 70, 81 (Mo. App. E.D. 2009). "Trial court error is not prejudicial unless there is a reasonable probability that the trial court's error affected the outcome of the trial." *State v. Johnson*, 207 S.W.3d 24, 34 (Mo. banc 2006).

## ***Discussion***

### ***Section 552.030***

The defendant's first asserts that Dr. Armour's testimony violates Section 552.030.5. Chapter 552 of the Missouri statutes addresses the admissibility of evidence of mental illness in criminal proceedings. *State v. Walkup*, 220 S.W.3d 748, 754 (Mo. banc 2007). Section 552.015.2 authorizes the use of evidence of mental disease or defect in nine circumstances, one of which is "to determine whether the defendant is criminally responsible as provided in Section 552.030." *Id*.; Section 552.015.2(2). Section 552.030, in turn, requires the defendant to plead not guilty by reason of mental disease or defect or to notify the State in writing of the intent to use this defense.[12] *Walkup*, 220 S.W.3d at 754. Evidence of mental disease or defect excluding responsibility is not admissible at the defendant's trial unless the defendant has entered such a plea or has given such notice. Section 552.030.2. Upon such a plea or written notice, the accused is to undergo a mental-health examination. Sections 552.030.2 and 552.030.3. Section 552.030.5 mandates that no "statement made by the accused" or "information received" by any

[12] If successful on this affirmative defense, the defendant is not found criminally responsible for his conduct, but instead is remanded to the custody of the department of mental health and committed to a state facility until a court orders that the defendant be released. Section 552.040.2; *Walkup*, 220 S.W.3d at 754.

physician or other person in the course of the examination may be admitted in evidence against the accused "on the issue of whether the accused committed the act charged against the accused[.]" Section 552.030.5.[13] Such statements or information are admissible against the accused "only on the issue of the accused's mental condition." *Id.* The statute further mandates that when such statements and information are admitted for this purpose, the court is to instruct the jury that it must not consider such statement or information as evidence of whether the accused committed the act with which he or she is charged. *Id.*

The defendant argues the trial court erred when, without giving the statutorily-mandated instructions, the court permitted Dr. Armour to testify about not only her mental diagnosis of factitious disorder by proxy, but also that certain actions, presumably the defendant's, were rational and deliberate. The defendant contends the jury likely concluded from this that she had the requisite intent to commit the charged offenses. Thus, she argues the testimony was used as proof of her guilt in violation of the statute.[14]

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[13] In its entirety, Section 552.030.5 provides:

> No statement made by the accused in the course of any such examination and no information received by any physician or other person in the course thereof, whether such examination was made with or without the consent of the accused or upon the accused's motion or upon that of others, shall be admitted in evidence against the accused on the issue of whether the accused committed the act charged against the accused in any criminal proceeding then or thereafter pending in any court, state or federal. The statement or information shall be admissible in evidence for or against the accused only on the issue of the accused's mental condition, whether or not it would otherwise be deemed to be a privileged communication. If the statement or information is admitted for or against the accused on the issue of the accused's mental condition, the court shall, both orally at the time of its admission and later by instruction, inform the jury that it must not consider such statement or information as any evidence of whether the accused committed the act charged against the accused.

[14] In a related point, the defendant alleges the trial court plainly erred in ordering an examination of her competency to stand trial and of her mental state at the time of the crime under Sections 552.020 and 552.030. She contends there was no cause to believe that she was incompetent, and further asserts that the language of her motion was insufficient to constitute a plea of NGRI or notice of her intent to rely on the defense, to trigger the court's duty to order a mental-health examination. This point merits little discussion. A defendant may not take advantage of self-invited error nor complain about matters she herself brings into the case. *State v. Baumruk*, 280 S.W.3d 600, 612 (Mo. banc 2009); *State v. Hoy*, 219 S.W.3d 796, 810-11 (Mo. App. S.D. 2007); *State v. Copeland*, 95 S.W.3d 196, 201-02 (Mo. App. S.D. 2003). "Ordinarily, a party cannot complain on appeal about a procedure adopted in the trial court at his or her own request, nor may an appellant complain of alleged error, which by such person's conduct at trial, he or she joined in or acquiesced or invited." *Carter v. St. John's Reg'l Med. Ctr.*, 88 S.W.3d 1, 19 (Mo. App.

The troubles with the defendant's contentions are numerous. The statute limits the use of statements made by the accused and information received during the mental-health examination; Dr. Armour, however, did not testify to any statements made by the defendant in the course of examination. And he did not relate any information he received during the examination. He did not even testify that he had examined the defendant. The fact that the defendant was evaluated at all was never mentioned at trial. Indeed, when defense counsel treaded close to opening the door to evidence of Dr. Armour's examination of the defendant, the trial court *sua sponte* cautioned defense counsel to avoid doing so because counsel had fought so hard to keep that information excluded. Further, Dr. Armour did not testify that he, or any other mental-health professional, had diagnosed the defendant with factitious disorder by proxy. Instead, Dr. Armour testified about factitious disorder by proxy in general. Then the doctor answered two hypothetical questions, applying his expertise to assumed facts. He opined that the actions set forth in the hypothetical were consistent with a diagnosis of factitious disorder by proxy and were rational and deliberate actions. Presumably, this same testimony could have been provided by any mental-health expert, regardless of whether that expert had evaluated the defendant.

The defendant protests that the hypothesized facts in the prosecutor's questions were the same facts that the doctor learned by examining the defendant. Thus, she argues Section 552.030 should prohibit the State from using that information to establish her guilt. The defendant's argument is without merit. The statute restricts the use of certain statements and information learned during the course of a mental-health examination. It protects against the State's turning the table on a defendant who has been examined by having information from his pretrial

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S.D. 2002). Here, defendant's counsel filed a motion for appointment of a psychiatrist and requested that the trial court order a mental-health examination of the defendant pursuant to Sections 552.020 and 552.030. The defendant affirmatively invited the trial court to order the examination of which the defendant now complains. Under these circumstances, we will not convict the trial court of plain error for granting the defendant's request. We deny this point.

examination used against him to establish the commission of a criminal act. Here we have no reason to believe that the hypothesized facts originated from the mental-health examination of the defendant. More probably, they simply originated from the investigation and prosecution of the defendant. In any case, Dr. Armour is not vouching for the truth of the hypothesized facts. He is not testifying to statements made by the defendant or information that he received in the mental-health examination. He is not disclosing anything he learned in his examination to the fact-finder. He is simply offering an expert opinion based on hypothesized facts. We find no violation of Section 552.030. The doctor's testimony simply did not fall within the statute's purview. We deny this point.

***Province of Jury***

The more substantial challenge to Dr. Armour's testimony is that the doctor's testimony invaded the province of the jury on the ultimate issue of whether the defendant possessed the mental state required for her convictions. The defendant argues that in responding to the prosecutor's hypothetical questions, Dr. Armour impermissibly provided his conclusion about her state of mind and guilt. She contends that, at the least, the doctor's testimony provided the jury with an expert opinion that she had had the requisite intent required for the charged crimes. She asserts that, at the most, the doctor's opinion amounted to expert testimony that she was guilty as charged. Thus, the defendant insists that the trial court erroneously permitted Dr. Armour to invade the province of the jury and to determine the very same questions that the jury was impaneled to decide. She maintains the jurors were fully capable of determining whether she possessed the mental state required for her convictions without the assistance of Dr. Armour.

Let us first review the somewhat inconsistent principles of law on invading the province of the jury. "The province of the jury is to hear all of the evidence including opinion evidence,

to weigh it all, and to decide the issues." *State v. Paglino*, 319 S.W.2d 613, 623 (Mo. 1958) (emphasis in original). "An expert opinion expressed by one properly qualified and based upon sufficient means of knowledge is evidence." *Id*. (internal quotation omitted). Thus, it has been stated that the opinion testimony of an expert witness, being evidence, cannot invade the province of the jury, and this is so even though the opinion is upon the very issue to be decided. *Id*. (internal quotation omitted). The jury must still resolve what weight it will accord the opinion. *See, e.g., State v. Haslett*, 283 S.W.3d 769, 780 (Mo. App. S.D. 2009)(citing *State v. Faulkner*, 103 S.W.3d 346, 361 (Mo. App. S.D. 2009)); *Stone v. City of Columbia*, 885 S.W.2d 744, 748 (Mo. App. W.D. 1994); *Busch & Latta Painting Corp. v. State Highway Comm'n*, 597 S.W.2d 189, 203 (Mo. App. W.D. 1980)(citing *Hotchner v. Liebowits*, 341 S.W.2d 319, 328 (Mo. App. 1961)); *Scanlon v. Kansas City*, 28 S.W.2d 84, 95 (Mo. 1930). For these reasons, our Supreme Court has held that an objection that an expert opinion invades the province of the jury is not a valid one. *Paglino*, 319 S.W.2d at 623 (and cases cited therein); *see also* VII Wigmore on Evidence, 3rd ed. §1920; *State v. Menard*, 331 S.W.2d 521, 522 (Mo. 1960). As the Court noted: "Every expert opinion to a certain extent 'invades' the province of a jury in the sense that it constitutes a conclusion gathered from facts…." *Paglino*, 319 S.W.2d at 623. "An expert witness, in a manner, discharges the functions of a juror because, in matters in which intelligent conclusions cannot be drawn from the facts by inexperienced persons, experts, who, by experience, observation, or knowledge, are peculiarly qualified to draw conclusions from such facts, are, for the purpose of aiding the jury, permitted to give their opinion." *Id*. at 623-24 (internal quotations omitted).

Courts over the years have repeatedly held that an expert in a criminal case may testify as to his or her opinion on an ultimate issue. *See, e.g., Paglino*, 319 S.W.2d at 623-24; *State v.*

*Taylor*, 663 S.W.2d 235, 239 (Mo. banc 1984)(finding expert's testimony went beyond proper limits of opinion expression); *State v. Candela*, 929 S.W.2d 852, 866-67 (Mo. App. E.D. 1996); *State v. Fairow*, 991 S.W.2d 712, 715 (Mo. App. E.D. 1999); *Faulkner*, 103 S.W.3d at 361; *State v. Harris*, 305 S.W.3d 482, 490-91 (Mo. App. E.D. 2010). The courts are quick to note, though, that the testimony must aid the jury. *See, e.g.*, *Fairow*, 991 S.W.2d at 715; *Faulkner*, 103 S.W.3d at 361; *Harris*, 305 S.W.3d at 490. Indeed, the general purpose of expert testimony is to assist the jury in areas that are outside of everyday experience or lay experience. *Harris*, 305 S.W.3d at 490-91. The court should never admit the opinion of an expert witness "unless it is clear that the jurors themselves are not capable, for want of experience or knowledge of the subject, to draw correct conclusions from the facts proved." *Taylor*, 663 S.W.2d at 239 (quoting *Sampson v. Missouri Pac. R.R. Co.*, 560 S.W.2d 573, 586 (Mo. banc 1978), quoting *Housman v. Fiddyment*, 421 S.W.2d 284, 289 (Mo. banc 1967)); *see also Harris*, 305 S.W.3d at 490. Thus, the essential test of admissibility of expert-opinion evidence is whether it will be helpful to the jury. *State v. Hayes*, 88 S.W.3d 47, 61 (Mo. App. W.D. 2002). If the subject on which the expert intends to testify is one of everyday experience, where the jurors are competent to decide the issues, then opinion testimony is properly rejected. *Id*. However, if the subject "is one which lay jurors are not inclined to be familiar with, so the opinion would be helpful to the jury, the testimony is admissible and it is not a valid objection that the expert's opinion goes to the ultimate issue for the jury to decide, or that the expert's opinion invades the province of the jury." *Guzman v. Hanson*, 988 S.W.2d 550, 554 (Mo. App. E.D. 1999); *see also Hayes*, 88 S.W.3d at 61; *Harris*, 305 S.W.3d at 490 (noting expert testimony admissible on subjects about which the jurors lack experience or knowledge).

Despite the broad language of *Paglino*, Missouri courts have held that expert testimony can invade the province of the jury. For instance, the expert is not allowed to comment on the veracity of another witness. *Haslett*, 283 S.W.3d at 779; *see also, e.g.*, *State v. Link*, 25 S.W.3d 136, 143 (Mo. banc 2000); *Taylor*, 663 S.W.2d at 240-41; *State v. Davis*, 32 S.W.3d 603, 608-9 (Mo. App. E.D. 2000). And the expert may not express an opinion as to the guilt or innocence of the defendant. *Haslett*, 283 S.W.3d 779; *Harris*, 305 S.W.3d at 490-91. To do so would usurp the decision-making function of the jury. *See, e.g.*, *State v. Churchill*, 98 S.W.3d 536, 539 (Mo. banc 2003)(noting particularized testimony concerning a specific victim's credibility as to whether the victim has been abused must be rejected because it usurps the decision-making function of the jury). "An expert may not substitute his reasoning and conclusions for the reasoning and conclusions of the jury upon the issue, or issues, before the triers of fact." *Deiner v. Sutermeister*, 178 S.W. 757, 761 (Mo. 1915). For instance, an expert is allowed to give testimony regarding whether the defendant had the *ability* to deliberate, but he is not allowed to give testimony regarding whether the defendant *actually* deliberated. *State v. Clements*, 789 S.W.2d 101, 110-11 (Mo. App. S.D. 1990)(emphases added)(finding trial court erroneously admitted opinion testimony of expert that defendant deliberated in committing the murder, holding that the determination of this ultimate issue was within the capability of the jurors); *see also State v. Powell*, 286 S.W.3d 843, 850 (Mo. App. W.D. 2009); *State v. Jones*, 134 S.W.3d 706, 717 (Mo. App. S.D. 2004). An expert may not intrude upon the jury's right to draw inferences and conclusions from the facts of the case. *Guzman*, 988 S.W.2d at 555 (finding trial court erroneously admitted opinion testimony concerning ultimate issue because testimony intruded upon the jury's right to draw inferences and conclusions from the facts).

Let us now turn to Dr. Armour's testimony. Again, after Dr. Armour generally described the nature of the disorder, the prosecutor asked two hypothetical questions based on assumed facts. First, the prosecutor asked whether the outlined circumstances were consistent with a diagnosis of factitious disorder by proxy. Dr. Armour responded that in his opinion, they were. Understandably, the defendant lodges little protest to this response. The fact that the circumstances are consistent with a diagnosis does not address the mental state necessary to convict the defendant and does not encroach upon the jury's domain. Next, the prosecutor asked if under the assumed circumstances the actor appeared to be rational and in touch with reality. Whether the defendant was acting "rationally" was not an element of any of the charged crimes. And the defendant's sanity was not an issue submitted to the jury. Thus, the doctor's testimony about the apparent rationality of the hypothesized actor did not invade the province of the jury.

However, the doctor went further and opined that under the assumed circumstances the actor was exhibiting rational *and deliberate* behavior.[15] The doctor's response is troubling. The doctor was offering his expert opinion that the hypothesized actor—presumably the defendant—had the mental state necessary to commit a charged offense.[16] That being said, we do not grant the defendant's point on appeal.

Arguably, this does not invade the jury's province because it still left it to the fact-finder to conclude that the hypothesized actor was the defendant. After all, Dr. Armour did not testify

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[15] Dr. Armour's testimony that the actor was exhibiting rational *and deliberate* behavior was non-responsive and exceeded the scope of the prosecutor's question. The defense lodged no objection and did not request that Dr. Armour's response be stricken. But we hesitate to deny relief on this basis because the trial court had just overruled a defense objection to the prosecutor's previous question in which the prosecutor asked Dr. Armour if a person could have a diagnosis of factitious disorder by proxy and still be "very deliberate and reality oriented." The court overruled this objection, but Dr. Armour never answered the question. Given the murky record, it may be that defense counsel considered that the court had definitively ruled on the question.

[16] The State charged the defendant with committing first-degree murder in violation of Section 565.020. Deliberation is an element of that offense. Section 565.020.1 provides that "[a] person commits the crime of murder in the first degree if he knowingly causes the death of another person after *deliberation* upon the matter." (Emphasis added).

that the defendant herself had acted deliberately. Rather he opined that the hypothesized actor had acted deliberately. He did not vouch for the truth of the assumed facts. It was still left to the fact-finder – the jury here – to determine the truth of the assumed circumstances, and then from there, whether the defendant had the requisite mental state to convict her of the charged crimes. The jury remained free to give Dr. Armour's testimony the weight they thought it deserved and to draw the inferences they believed should be drawn from the evidence presented. *See Haslett*, 283 S.W.3d at 780. This is an interesting, if not entirely persuasive, argument. We conclude a hypothetical question and answer could invade the province of a jury even though it remains for the jury to conclude the truth of the hypothesized facts. *See Davis*, 32 S.W.3d at 608 (holding an offer of proof invaded the province of the jury where expert testified to a suspect's thought process under circumstances similar to the defendant's); *see also Deiner*, 178 S.W.at 761. For example, an expert could not testify that a hypothesized witness was lying or that a hypothesized defendant was guilty and shield this testimony from error by the thin veil that the testimony was premised on hypothesized, rather than actual, facts. Such a holding would allow a prosecutor to make an end-run around the rules prohibiting testimony that a witness is lying or truthful, or that a defendant is guilty or not guilty. That an opinion is based on hypothetical facts does not necessarily mean that the province of the jury has not been invaded.

However, an opinion based on hypothetical facts may lessen the danger of invading the jury's domain and is doubtless proper. An expert may base his or her opinion on hypothesized facts. *Hobbs v. Harken*, 969 S.W.2d 318, 323 (Mo. App. W.D. 1998). When an opinion is hypothetical in nature, it "must not be founded on mere assumption or surmise, but on facts within the expert's knowledge or upon hypothetical questions embracing proven facts." *Id*. (internal quotation omitted). When, as here, an expert "is asked to assume certain facts are true

in order to answer a hypothetical question, those facts must be established by the evidence." *Id*. (internal quotation omitted). The hypothetical question "need not include all material facts in evidence but it must fairly hypothesize the material facts reasonably relevant to and justly presenting the questioner's theory of the case so that an answer of assistance to the jury in proper determination of the case may be elicited." *Id*. (internal quotation omitted); *see also Riley v. Union Pac. R.R.*, 904 S.W.2d 437, 445 (Mo. App. W.D. 1995)(finding that hypothetical question did not include sufficient material facts reasonably relevant to his theory of the case upon which an opinion could have been based). The prosecutor's questions, framed to mirror the evidence adduced at trial, were not only permissible, they were required to be framed as they were. In sum, while the use of a hypothetical question is proper and may lessen the danger of invading the province of a jury, it is not necessarily dispositive of the danger.

Expert testimony also presents the danger that jurors may be overawed by the expert witness's evidence or may defer too quickly to the expert's opinion, rather than making their own independent determination on an issue. *Haslett*, 283 S.W.3d at 780; *State v. Williams*, 858 S.W.2d 796, 800 (Mo. App. E.D. 1993). And we cannot conclude that the defendant's deliberation was a proper topic for expert testimony. The jury was capable of drawing a conclusion regarding deliberation from the facts proved without the opinion of an expert, particularly given that the poisoning occurred over an extended period of time.

But we are confident that Dr. Armour's opinion characterizing the assumed behavior as "deliberate" did no harm to the defense. This testimony was a single isolated occurrence. The prosecutor asked no further questions along this line and did not argue it in closing argument. *See Clements*, 789 S.W.2d at 110 (noting, in finding plain error in the expert's testimony of

deliberation, that the prosecutor made several references to the expert's testimony during closing argument). Critically, the jury convicted the defendant of second-degree felony murder, of which deliberation is not even an element.[17] Thus, even if the doctor's testimony was construed as stating that the defendant herself had deliberated, the jury apparently did not credit that opinion. Thus, the defendant suffered no prejudice. If Dr. Armour's testimony invaded the province of the jury, it was a single incursion into somewhat disputed territory without a casualty. We deny this point.

***Frye Test***

The defendant lastly contends that Dr. Armour's testimony about factitious disorder by proxy should have been excluded because the diagnosis has not achieved general acceptance by the psychiatric community and thus does not meet the standard set forth in *Frye* for the admission of expert testimony.

In determining the admissibility of scientific evidence in criminal cases, Missouri courts have long-followed the standard enunciated in *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923). *Davis*, 814 S.W.2d at 600 (and cases cited therein). Results of scientific procedures, and the opinion of an expert based upon those tests, may be admitted as evidence only if the procedure is "'sufficiently established to have gained general acceptance in the particular field in which it belongs.'" *Id*. (quoting *Frye*, 293 F. at 1014).

The defendant's argument is premised solely on her assertion that factitious disorder by proxy is not a formal diagnosis in the DSM-IV-TR, but merely a "research" diagnosis that

[17] The verdict-director for second-degree murder instructed the jury to find the defendant guilty of second-degree murder if they found, beyond a reasonable doubt, that the defendant committed child abuse, that she gave her son the prescription drug Clonidine, and that the young boy was killed as a result of the perpetration of that child abuse. The verdict-director for child abuse instructed the jury to find the defendant guilty of child abuse if they found, beyond a reasonable doubt, that the defendant gave her son the prescription drug Clonidine, that in so doing, the defendant inflicted cruel and inhuman punishment upon the boy, that the boy was under the age of seventeen, that the defendant knew her conduct was inflicting cruel and inhuman punishment upon a child less than seventeen years old, and that the young boy died as a result of injuries sustained from the defendant's conduct.

appears in the appendix, in a section listing ideas for further study and research. She argues that because the disorder is not a formal diagnosis and requires further study, this controversial concept has not achieved general acceptance by the psychiatric community.

The defendant's assertions are contradicted by the record. Dr. Armour testified that the diagnosis of factitious disorder by proxy is an accepted diagnosis. He stated that the disorder is a recognized diagnosis, classified in the regular diagnostic section of the DSM-IV-TR as a subcategory under the general diagnosis of "factitious disorder, not otherwise specified." He also testified that in addition to being listed in the main portion of the DSM-IV-TR, the diagnosis is also listed in the appendix, in the section for further research and study. Dr. Armour explained that the listing of the diagnosis under the "further study" section in the appendix simply indicated that more research is desired before the diagnosis stands on its own instead of being a sub-diagnosis of factitious disorder. The doctor acknowledged that the diagnosis of factitious disorder by proxy was a controversial diagnosis, but explained that the controversy dealt with "soft signs" that could indicate the presence of the disorder, not whether or not the disorder actually existed.

The cases cited by the defendant do not support her assertion that the disorder is not generally accepted. Rather the courts excluded testimony about the disorder either on other grounds or for no stated reason. *See In re Adoption of Keefe*, 733 N.E.2d 1075, 1079-80 (Mass. App. 2000)(excluding evidence because some of the "soft signs" constituted improper profile evidence); *State v. Lumbrera*, 845 P.2d 609, 620 (Kan. 1992)(striking all testimony relative to the disorder due to lack of foundation; there was no expert testimony attempting to prove the defendant suffered from the disorder); *Commonwealth v. Robinson*, 565 N.E.2d 1229, 1237-38 (Mass. App. 1991)(excluding evidence at trial; no reason given in the opinion). As the State

points out, numerous other jurisdictions have accepted the disorder as a generally accepted diagnosis. *See, e.g.*, *In re K.T.*, 836 N.E.2d 769, 781-82 (Ill. App. 2005); *People v. Phillips*, 122 Cal.App.3d 69, 84-87 (Cal. App. 1981); *Reid*, 964 S.W.2d at 729-35.

The trial court here considered the parties' arguments, as well as the memorandum supplied by the State and the cases cited therein. The court weighed the question of the admissibility of Dr. Armour's testimony for several days before rendering its decision. Given the objections actually lodged, we find no abuse of discretion in permitting the doctor's testimony. We deny this point.

***Prejudice***

Even if the trial court erroneously admitted Dr. Armour's testimony, the defendant's appeal still fails. The burden is on the defendant to show both error and the resulting prejudice before reversal is merited. *State v. Isa*, 850 S.W.2d 876, 895 (Mo. banc 1993). The Court will reverse a conviction due to the improper admission of testimony only if the defendant proves prejudice by demonstrating a reasonable probability that the error was outcome-determinative. *State v. Bynum*, 299 S.W.3d 52, 60 (Mo. App. E.D. 2009); *see also State v. Reed*, 282 S.W.3d 835, 838 (Mo. banc 2009). A finding of outcome-determinative prejudice expresses a judicial conclusion that the erroneously admitted evidence so influenced the jury that, when considered with and balanced against all of the evidenced properly admitted, a reasonable probability exists that the jury would have reached a different conclusion but for the erroneously admitted evidence. *Id*. (quoting *State v. Barriner*, 34 S.W.3d 139, 150 (Mo. banc 2000)). The defendant has failed to make such a showing. She advances no argument on the matter, other than mere allegations and conclusory statements that the trial court's rulings prejudiced her. She has not explained how the admission of Dr. Armour's testimony so influenced the jury that it would have

reached a different conclusion had the doctor's testimony been excluded. The defendant's shortcomings aside, we have reviewed the record and find that any prejudice to the defendant based upon the admission of Dr. Armour's testimony cannot be said to have been outcome-determinative. While the proof of the defendant's guilt was entirely circumstantial, the circumstances were compelling. Because the evidence of the defendant's guilt was very strong, any error in the admission of Dr. Armour's testimony was harmless. *See State v. Hayes*, 113 S.W.3d 222, 226-27 (Mo. App. E.D. 2003).

We affirm the trial court's judgment.

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LAWRENCE E. MOONEY, JUDGE

SHERRI B. SULLIVAN, P.J., and
CLIFFORD H. AHRENS, J., concur.

**APPENDIX**

The following is an excerpt from the prosecutor's direct examination of Dr. Armour, and includes the two hypothetical questions asked by the prosecutor:

BY MR. TYSON [prosecutor]

Q. Doctor, let me ask you a hypothetical question. Would you assume as true the following circumstances:
First, that two children, siblings, a four-year-old boy and a six-year-old girl, are brought into the emergency room of Children's Hospital on a Friday night with symptoms of gastroenteritis.

They're rehydrated intravenously, and their conditions are observed to improve rapidly and released the same night.

MR. TUCCI: Objection. That's a violation of the statute.

THE COURT: Overruled.

MR. TUCCI: My objection is that this is --that's improper. It goes beyond your ruling.

THE COURT: No, it doesn't. Overruled.

BY MR. TYSON:

Q. Doctor, then assume that the same children are presented to the same hospital on the following Monday with the same symptoms, and they're admitted and treated for those symptoms with some improvement.

Please then assume as true that the mother of the children describes to different members of the hospital staff different stories as to the potential etiology of the symptoms, claiming fellow classmates were sick, then later on describing the children eating a chicken sandwich from a street vendor, giving different stories as to who bought the sandwich or how it was stored before the children ate it.

Assume that one of the children suffers a sudden, unexpected deterioration in his condition, becomes nonresponsive, and dies. Consider as true that the doctors were unable to explain the deterioration and death based upon symptoms -- the symptoms that the children initially displayed. The doctors are unable to determine any medical reason for the deterioration and death despite exhaustive medical testing.

Assume as true that the medical examiner determines that the deceased child had filler material from pills in his lungs, which caused pulmonary arterial obstruction, and the child suffered Clonidine poisoning and determines the child's death to be a homicide.

Assume as true that the surviving child's medical condition improves considerably upon treatment for the original symptoms, but she then suffers a sudden, unexpected deterioration of her physical condition as well as sudden mental state changes. Mental status changes. And those changes cannot be explained by exhaustive medical testing until the doctors know to look specifically for Clonidine.

Also assume that the deterioration of physical condition and mental status of both children do not fit any pattern of any illness or any known infection, and that their illness did not respond to any known medical treatments.

Consider that the surviving child is found to have toxic levels of Clonidine in her system. Consider that the children were never prescribed to receive Clonidine. Please consider that the mother of the children is observed to be present in the hospital room constantly or nearly so. Assume that the mother displays an unusual level of attentiveness and involvement in patient care, such as changing diapers and bed clothing and even volunteering to clean the bathroom in the room.

Assume that the medical staff observes this vigilance and attentiveness and regularly praises the mother, commending her for staying with the children day and night. Also assume that the mother of the children is observed to drop a syringe while in the immediate vicinity of one of the children and is observed to attempt to hide the syringe from medical staff and then disposes of that syringe.

MR. TUCCI: Are you done with your question? Or do you have more?

MR. TYSON: Oh, I'm still going.

THE COURT: Mr. Tucci, don't do that. Let him finish.

MR. TUCCI: I just -- I want to interject an objection at the proper time. That's the only reason I asked.

THE COURT: He's not finished yet.

MR. TUCCI: Okay.

THE COURT: Let him alone.

MR. TUCCI: Will you allow me to make an objection when he's finished with his question?

THE COURT: Have I not allowed you to make an objection in this case?

MR. TUCCI: Of course not.

THE COURT: All right. Go ahead, Mr. Tyson.

MR. TYSON: Thank you.

BY MR. TYSON:

Q. Also assume as true, Doctor, that on another occasion, the mother is observed to have her hands near the injection port on the IV tubing of the same child while having something clutched in her hand and throws into a

trash can another syringe which is found to have a white foreign substance in it.

Also assume that on another occasion, the mother of the children is observed attempting to persuade one of the children to drink from a soda cup, and the child is heard to say that she did not want to drink from the cup, because the liquid in the cup tastes gross, yet the child is observed to readily drink liquids offered by other people in the same time period. Also assume as true that the mother of the children is observed to dispose of that soda cup, that it's recovered and found to contain a liquid which has some foreign material in it, and that liquid is determined to contain Clonidine.

Also consider as true that several members of the medical staff, in attempting to take a complete medical history of the family, asks the mother on several occasions what medications she was taking, and the mother lists numerous medications but omits the fact that she has been prescribed Clonidine for a number of years.

Also assume as true that the mother of the children displays an unusual calmness and flatness of affect when discussing the death of one child and the deterioration of the health of her other child shortly after the death of the first child.

Also assume as true that the mother of the children later displays an attitude described as challenging and bordering on insulting when stating the doctors were unable to determine what is happening.

And also assume as true, Doctor, that the sudden, unexpected deterioration of the physical conditions of the children and their sudden mental status changes seems to start when the mother is present; and when mother is separated from the surviving child, all of the symptoms, including the mental status changes, disappear.

Based upon those assumptions, your Honor – or Doctor, do you have an opinion based upon reasonable scientific certainty whether those circumstances are consistent with factitious disorder by proxy?

MR. TUCCI: Objection. It is seeking an improper opinion and it seeks to invade the province of the jury upon an ultimate issue -- ultimate issue of fact in this case. It's absolutely improper.

THE COURT: Overruled.

BY MR. TYSON:

Q. You may answer the question.

A. [Dr. Armour] It's my opinion that the circumstances you outlined are consistent with factitious disorder by proxy.

Q. All right. Now, the -- can the diagnosis of factitious disorder by proxy or Munchausen by proxy occur in the absence of a major mental illness such as schizophrenia, bipolar disorder, or any other disorder that would indicate that the person is psychotic?

A. Yes. The individual does not have to suffer from one of those major mental illnesses in order to engage in this kind of behavior.

Q. And can a person have a diagnosis of Munchausen by proxy and still be very deliberate and reality oriented?

MR. TUCCI: Objection. In terms of deliberate, that invades the province of the jury and seeks an improper opinion.

THE COURT: Overruled.

BY MR. TYSON:

Q. Doctor, let me ask you another hypothetical question then. Please assume as true the following circumstances: The mother of the two children brings them to the hospital, and they are suffering from symptoms of gastroenteritis. That the mother gives varying stories to medical staff regarding the symptoms, causing the staff to be led in various directions trying to determine why the children are sick and trying to determine how to treat them.

Assume as true the mother grinds up Clonidine pills, which is a medication that she is prescribed. Assume as true that the mother of the children puts ground-up Clonidine pills into a syringe, creates a solution in the syringe, and then injects it into the medicine ports on intravenous tubing connected to her children.

Assume as true that after the sudden, unexplained death of one of her children, the mother grinds up more Clonidine pills, puts them in a soda cup containing soda and attempts to get the surviving child to drink from the cup.

Also assume as true that when the child refuses to drink from the cup, the mother puts the cup on a hospital food tray; and when the mother comes

back for the cup, when she's told that the tray has been taken away, she begins searching trash cans for it.

Also assume as true that the mother is seen to drop a syringe while attending to her surviving child; and when a patient care assistant observes this, the mother steps on the syringe, asks the PCA to do something which causes her to turn away momentarily, and then gets rid of the syringe.

Also assume as true that the mother is observed by another patient care assistant to pretend to untangle the surviving child's intravenous lines and then to throw an item into a trash can, and that item is recovered and found to be another syringe which contains a foreign white substance.

Also consider as true, Doctor, that before the second incident with the syringe happens, the mother pulls the privacy curtain around the side of the bed, blocking the view from other visitors in the room.

Now, if those circumstances are true, your Honor -- or Doctor, do you have an opinion based upon these facts whether the mother is acting in a manner which would indicate she is rational and in touch with reality?

MR. TUCCI: Objection. Seeks an improper opinion. It invades the province of the jury toward the ultimate issue in fact, and it's absolutely improper.

THE COURT: Overruled.

A. Based on the circumstances you described, it's my opinion those are rational and deliberate behaviors in the absence of any other symptoms of a major mental illness.

Q. Now, is the diagnosis of Munchausen by proxy, factitious disorder by proxy, or factitious disorder not otherwise specified a mental disease or defect which would exclude responsibility for criminal acts if you were to find that to be a diagnosis of somebody?

A. In my opinion it would not qualify.

Q. And in other words, is this diagnosis of factitious disorder by proxy or Munchausen by proxy either an excuse or legal defense to charges of murder, assault and child abuse?

MR. TUCCI: Objection. Calls for a legal conclusion.

MR. TYSON: I'm asking what he would have diagnosed had he seen somebody with these symptoms.

THE COURT: That's not what you're asking. Sustained.

MR. TUCCI: Is my objection sustained, your Honor?

THE COURT: Yes, it is.

MR. TUCCI: Thank you.

BY MR. TYSON:

Q. Munchausen by proxy is not a mental disease or defect that would exclude responsibility for those actions; is that correct?

A. In my opinion, it is not.

Q. Thank you.

MR. TYSON: No further questions.