TEXAS COURT OF APPEALS, THIRD DISTRICT, AT AUSTIN

NO. 03-18-00710-CV

Builder Services Group, Inc., d/b/a Johnson Insulation, Appellant

v.

**Alan Lynn Taylor and Donna Kay Taylor,
Individually and As Next Friend of Sarah Kaylyn Taylor, Appellees**

**FROM THE 33RD DISTRICT COURT OF SAN SABA COUNTY
NO. 9433, THE HONORABLE J. ALLAN GARRETT, JUDGE PRESIDING**

MEMORANDUM OPINION

Builder Services Group, Inc., d/b/a Johnson Insulation (Johnson) appeals the trial court's final judgment rendered after a jury found in favor of appellees Alan Lynn Taylor and Donna Kay Taylor, individually and as next friend of Sarah Kaylyn Taylor (collectively, the Taylors) on their claims arising out of Johnson's installation of spray foam insulation in their newly constructed home. The Taylors sued Johnson; Ron Farr, the project manager for the construction; and Icynene Corporation, the manufacturer of the spray foam insulation; asserting causes of action for negligence, violations of the Texas Deceptive Trade Practices-Consumer Protection Act (DTPA), and breach of contract. The Taylors alleged that Johnson installed the insulation in an improper manner causing it to fail to cure or adhere properly and, consequently, to off-gas chemical vapors into their home, causing them personal injuries and damage to their property. The Taylors also alleged that Johnson negligently exposed them to highly toxic vapors

and chemicals contained in the spray foam insulation that have caused each of them personal injuries. On appeal, Johnson contends that the evidence is legally insufficient to support the jury's findings that any of its acts or omissions caused the personal injuries or property damage the Taylors complain of. We will reverse the trial court's judgment and render judgment that the Taylors take nothing on their claims.

BACKGROUND

The Taylors hired Farr to oversee and manage construction of a new house on property they owned in San Saba County. Farr hired Johnson to install spray foam insulation manufactured by Icynene in the house being constructed for the Taylors. Johnson installed the spray foam insulation in the house in February 2013. While the installation was taking place, the Taylors entered the house. The Taylors claim that while they were in the house, they were exposed to chemicals contained in the spray foam insulation. The Taylors also claim that after they moved into the house, they continued to be exposed to harmful volatile organic compounds that were off-gassing from improperly installed spray foam insulation.

The Taylors sued Johnson, Farr, and Icynene alleging causes of action for breach of contract, negligence, and violations of the DTPA. The case was tried to a jury,[1] after which the jury returned a verdict in favor of the Taylors on each of theories of liability against Johnson. The trial court rendered judgment on the jury's verdict, and this appeal followed.

DISCUSSION

Johnson raises six issues on appeal, contending that the evidence is legally insufficient to support the jury's findings that (1) Johnson's conduct caused the Taylors' personal

[1] Before trial, Farr and Icynene each settled with the Taylors.

injury or property damage, (2) Johnson violated the DTPA, and (3) Johnson breached a contract between it and the Taylors. Johnson also challenged the legal sufficiency of the evidence supporting the jury's property damage award, asserted that the judgment violated the Texas one-satisfaction rule and the DTPA's prohibition against multiple recoveries for the same injury, and argued that the judgment failed to correctly apply and calculate a settlement credit, pre-judgment interest, and certain court costs.

Each of the causes of action asserted against Johnson requires a finding that Johnson's conduct caused the injuries complained of. *See Mustafa v. Pennington*, No. 03-18-00081-CV, 2019 WL 1782993, at *3 (Tex. App.—Austin Apr. 24, 2019, no pet.) (mem. op.) (breach of contract claim requires that plaintiff's damages were caused by breach); *Cruz v. Andrews Restoration, Inc.*, 364 S.W.3d 817, 823 (Tex. 2012) (in DTPA claim defendant must be producing cause of damages); *Nabors Drilling, U.S.A., Inc. v. Escoto*, 288 S.W.3d 401, 404 (Tex. 2009) (negligence claim requires that defendant must be proximate cause of plaintiff's damages). Both proximate and producing cause require a showing of cause-in-fact; i.e., that the defendant's conduct or product was a substantial factor in bringing about the plaintiff's injuries. *See Borg-Warner Corp. v. Flores*, 232 S.W.3d 765, 770 (Tex. 2007). The Taylors allege that both their personal injuries and their property damage were caused by exposure to chemicals contained in the spray foam insulation, either while the spraying was taking place or afterward due to off-gassing of toxic fumes due Johnson's improper installation of the product. In its first issue, Johnson challenges the sufficiency of the evidence supporting the jury's finding that any act or omission by Johnson caused the Taylors' injuries, either personal injury or property damage.

Johnson challenges the evidentiary sufficiency to support the jury's finding, under each of the Taylors' asserted theories of liability, that Johnson's acts or omissions were the cause

in fact of their injury (i.e., improperly installed spray foam insulation that emitted toxic fumes into their home). *See Del Lago Partners, Inc. v. Smith*, 307 S.W.3d 762, 774 (Tex. 2010) (explaining proximate cause as having two elements—cause in fact and foreseeability—and noting that test for cause in fact is whether act or omission was "a substantial factor in causing the injury without which the harm would not have occurred"). A finding of cause in fact may be based on either direct or circumstantial evidence, but it cannot be supported by mere conjecture, guess, or speculation. *Marathon Corp. v. Pitzner*, 106 S.W.3d 724, 727 (Tex. 2003).

Personal Injury

Under a traditional legal sufficiency standard of review, a reviewing court is to consider the evidence in the light most favorable to the verdict. *Bostic v. Georgia-Pac. Corp.*, 439 S.W.3d 332, 337 (Tex. 2014). The final test "must always be whether the evidence at trial would enable reasonable and fair-minded people to reach the verdict under review." *City of Keller v. Wilson*, 168 S.W.3d 802, 827 (Tex. 2005). However, the Texas Supreme Court has stated that when a sufficiency challenge involves the reliability of causation testimony of experts admitted at trial, "the reviewing court must undertake an almost *de novo*-like review and, like the trial court, look beyond the expert's bare testimony to determine the *reliability* of the theory underlying it." *Merrell Dow Pharms., Inc. v. Havner*, 953 S.W.2d 706, 710-20 (Tex. 1997); *see also Cooper Tire & Rubber Co. v Mendez*, 204 S.W.3d 797, 804 (Tex. 2006) (appellate review encompasses the entire record, including contrary evidence tending to show the expert opinion is incompetent or unreliable). To do otherwise would be to engage in a "meaningless exercise of looking to see only what words appear in the transcript of the testimony, not whether there is in fact some evidence." *Havner*, 953 S.W.2d at 712.

Expert testimony is unreliable if it is based on unreliable data or "if the expert draws conclusions from [his underlying] data based on flawed methodology." *Id*. at 714. "[I]f an expert's opinion is based on certain assumptions about the facts, we cannot disregard evidence showing those assumptions were unfounded." *Cooper Tire & Rubber Co.*, 204 S.W.3d at 804. Thus, when expert testimony is not grounded in the methods and procedures of science, it amounts to nothing more than subjective belief or unsupported speculation. *See E.I. DuPont de Nemours & Co. v. Robinson*, 923 S.W.2d 549, 557 (Tex. 1995). In this context, if the expert's testimony is unreliable, it is no evidence of causation and will not survive a sufficiency challenge. *Havner*, 953 S.W.2d at 713.

In *Havner*, the Texas Supreme Court discussed a plaintiff's burden in a toxic tort case to prove both general and specific causation. General causation exists when a substance is capable of causing a particular injury or condition in the general population. *Id.* Because when dealing with a toxic substance, direct experimentation may not be possible to prove causation, a plaintiff may try to demonstrate that exposure to the substance at issue increases the risk of the particular disease through epidemiological studies. *Id.* at 715. Such studies examine existing populations to determine if there is an association between a disease or condition and a factor suspected of causing the disease or condition. *Id.* The supreme court held "epidemiological studies showing that the population exposed to a toxin faced more than double the risk of injury facing the unexposed or general population could be used to establish causation." *Id.* at 708; *Bostic*, 439 S.W.3d at 347. However, this is not a "litmus test" or "bright-line boundary," and generally a single study will not suffice to establish legal causation. *Havner*, 953 S.W.2d at 718 ("[W]hen a number of studies have been done, it would not be good practice to pick out one to support a conclusion."); *Bostic*, 439 S.W.3d at 347.

When considering epidemiological studies, courts are also instructed to consider the "significance level" or confidence level of the studies. *Havner*, 953 S.W.2d at 723-24; *Bostic*, 439 S.W.3d at 347. To be considered scientifically reliable, an epidemiological study must (1) have a relative risk of 2.0 and (2) be statistically significant at the 95% confidence level. *Havner*, 953 S.W.2d at 732. An expert "cannot dissect a study, picking and choosing data, or 'reanalyze' the data to derive a higher relative risk if this process does not comport with sound scientific methodology." *Id.* at 720. The *Havner* court emphasized that "even if a statistically significant association is found, that association does not equate to causation." *Id.* at 724.

However, general causation is never the ultimate issue of causation tried to the finder of fact in exposure cases. *See Bostic*, 439 S.W.3d at 351. General causation as established through epidemiological studies may be relevant only insofar as it informs specific causation. *Id.* "Where direct evidence of specific causation is unavailable, specific causation may be established through an alternative two-step process whereby the plaintiff establishes general causation through reliable studies, and then demonstrates that his circumstances are similar to the subjects of the studies." *Id.* (discussing *Havner*). This burden includes proof that (1) the injured person was exposed to the same substance, (2) the exposure or dose levels were comparable to or greater than those in the studies, (3) the exposure occurred before the onset of injury, and (4) the timing of the onset of injury was consistent with that experienced by those in the study. *Id.* In *Bostic*, the supreme court emphasized that "proof of substantial factor causation requires some quantification of the dose resulting from [plaintiff's] exposure to [the] products." *Id.* at 355. However, the court conceded that those in the studies need not exactly match the plaintiff's exposure, but "the conditions of the study should be substantially similar to the claimant's circumstances." *Id.* at 359.

With these concepts in mind, we consider whether the Taylors' expert provided reliable and therefore legally sufficient evidence to establish a causal link between the plaintiff's exposure to spray foam insulation and the medical conditions they complain of.

To establish specific causation, the Taylors relied on the testimony of William Meggs, a medical doctor, clinician, and researcher who specializes in human medical toxicology. He received a B.S. in physics from Clemson University, a Ph.D. in physics from Syracuse University, and an M.D. from the University of Miami. Meggs is board-certified in the specialty of medical toxicology and works at East Carolina University's Brody School of Medicine. In preparation for rendering an opinion in this case, Meggs testified that he reviewed "medical records relating to the Taylor home." Meggs testified that Donna Taylor's treating physician has diagnosed her with asthma, an inflammation of the lower airway that is "environmentally triggered." According to Meggs, asthma can be triggered by stress, infections, chemical exposures, and allergens and can have a variable set of symptoms in different people at different times. The inflammation in the lower airway present in people with asthma causes a remodeling, or thickening, of the airway and causes sensory nerves in the airway to proliferate, which in turn causes people with asthma to be "more vulnerable to chemicals." Meggs testified that, in addition to stress, infections, and allergens, chemical irritants can trigger asthma and can induce that condition in people who have never had it before. The clinical presentation of irritant asthma can be similar to allergic asthma and Meggs testified that the only way to differentiate between the two is by a person's history of exposure to chemicals. Thirty percent of the population in North Carolina had "some degree of irritant sensitivity." Meggs stated that both Donna Taylor and Sarah Taylor were diagnosed with asthma based on their positive response to asthma medications.

To support his opinion that Donna Taylor and Sarah Taylor developed asthma as a result of being exposed to chemicals contained in the spray foam insulation, Meggs relied principally on the Materials Data Safety Sheet (MSDS) for Icynene LD-C-50, the spray foam insulation Johnson installed in the Taylors' home. The product has two components, an A side and a B side that when combined react to produce the foam insulation. Meggs stated that the A side contains methylene diphenyl diisocyanate (MDI), which he described as "public enemy number one." Meggs testified that workers exposed to isocyanates have been known to exhibit respiratory symptoms, airway inflammation, and asthma. The exposure limit for MDI, according to Meggs, is "5 parts per billion" although "immediate danger to life and health occurs at a higher level, maybe 10 parts per million." Meggs testified that the "onset of toxicity is highly variable," that isocyanates such as MDI are toxic at very small doses, and that isocyanate exposure is one of the most prominently featured causes of asthma in people who work with the product. Meggs stated, without referring to any specific authority, that it is "well studied and universally accepted that isocyanates are something people should not be exposed to even in small amounts."

Meggs was told that the Taylor family was in the house when the spray foam insulation was being applied in the house and that they were also in the house the next morning. Meggs did not indicate the length of time the Taylors were in the house, what part of the house they were in, or in what part of the house the spraying was taking place. Meggs testified that the MSDS states that people should "wear personal protective equipment at all times on premises during spraying and within 24 hours after spray is complete" and that "some reports indicate a reaction and sensitization can occur following a single sustained occupational exposure to isocyanates without proper protective equipment above the OSHA permissible exposure limit" of

5 parts per billion. The MSDS also states that "different individuals will react differently to the same exposure" and that "some will be more sensitive than others."

With respect to dose-response to MDI, Meggs testified that there is a "dose response curve" and that at "some high dose virtually everyone is going to get it." Meggs stated that as the dose increases, the percent of people who get chemical sensitization from the exposure increases. Meggs testified that he did not know what dose the Taylors were exposed to, but that that did not matter because all a dose meter can tell you is "how unlucky you are." Meggs explained that a person who gets chemical sensitization from a dose that would cause sensitization in only ten percent of people indicates that you are "unlucky."

As evidence of general causation, Meggs stated, without supporting epidemiological studies or other authority, that it is "well established and well known that isocyanate can cause what happened to the Taylor family." With regard to specific causation, Meggs stated

> And that to a reasonable degree of medical certainty, it was the foam insulation and the fumes that [the Taylors] were exposed to that night and the next morning that started the snowballing effect that's led to chronic illness to the point that, you know, last year Mrs. Taylor ended up in the emergency department being given nebulization treatment for her wheezing and bronchospasm and cough and terrible asthma attack, given Decadron, which is the most potent steroid medication that we have, that we use clinically.

To support this conclusion on specific causation, Meggs testified that he reviewed the Taylors' medical records and "basically ruled in or ruled out various causal connections." He did not conduct any physical exam of the Taylors or speak with them other than for a brief amount of time during trial. Meggs's review of the medical records revealed that Donna Taylor had a history of headaches, sinus infections, and hyperthyroidism before she was exposed to the spray

foam insulation. Meggs testified that her medical records indicate that after the exposure Donna Taylor had worsening headaches, coughing, chest tightness, burning eyes, and rhinitis. She developed an "intolerance to respiratory irritants and the increased stress." Meggs also testified that Donna Taylor's medical records indicate that she developed lower airway inflammation that had not been previously reported. Meggs noted that in May 2013, three months after she was in the house during the spray foam insulation installation, Donna Taylor complained to her gynecologist about right lower quadrant pain, pressure between her shoulder blades, and difficulty catching her breath. Meggs testified that pain with coughing, straining, or sneezing "could certainly be related to" exposure to spray foam insulation. Meggs opined that Donna Taylor's complaints in July 2013 that she was experiencing pain when coughing, sneezing, laughing, and straining were also quite possibly related to a February 2013 exposure to spray foam insulation. In August 2013, Donna Taylor was diagnosed with sinusitis and given antibiotics. Meggs found this significant because one risk factor for sinusitis is irritant sensitivity. Donna Taylor also had a bout of acute laryngitis, which Meggs testified could be caused by a virus, bacteria, irritant chemicals, or allergies. Meggs reviewed Donna Taylor's list of medications and described them as "full court press" for treating asthma.

Meggs found it significant that Donna Taylor had a history of headaches before February 2013 because the medical literature supports that people with preexisting conditions are more likely to have ongoing problems from chemical exposure. Meggs also testified that people with allergies but no asthma are more likely to get asthma after a chemical exposure. Meggs opined that Donna Taylor's medical records support a temporal association between the February 2013 exposure to spray foam insulation and her subsequent continued issues with headaches and other symptoms. He also opined that Donna Taylor's symptoms are consistent with irritant

sensitivities and that he believed that her illness was "initiated by the isocyanate exposure" in February 2013.

Sarah Taylor's medical records indicated that she had pediatric visits for some common childhood illnesses. Meggs stated that the medical records show that starting in September 2014 Sarah Taylor developed a significant intolerance to respiratory irritants and experienced nausea, vomiting, and gastrointestinal effects. Meggs testified that those symptoms often occur with "a large number of chemical exposures." Meggs also testified that he had learned that Sarah Taylor had an extreme reaction to Febreze and that he is currently conducting research on how fragrances and air fresheners can "set off" people with irritant sensitivity. Sarah's medical records indicate that in December 2013 she had a headache and fever after being exposed to influenza. She was prescribed Tamiflu, which Meggs stated was more often prescribed to people with chronic respiratory conditions because they can have more serious flu symptoms. Sarah's medical records report that in September and November 2014 she had a bout of nausea and vomiting. Meggs testified that nausea and vomiting "seem to be very prominent" in children who have been exposed to isocyanates. Sarah also has sinus related headaches that Meggs testified he believes are caused by isocyanate exposure because rhinitis is "consistent" with exposure to that chemical. Sarah's medical records included a lab report of a blood draw that showed "elevated levels of benzene, styrene, and above-expected levels of toluene," none of which could have come from the spray foam insulation. According to Meggs, this finding was "irrelevant" to his opinion because there was no indication where those chemicals came from. Meggs testified that the lab report indicates exposure immediately before the visit when the blood was drawn "so it's totally irrelevant to my opinion" that Sarah has irritant rhinitis caused by exposure to spray foam insulation. Meggs agreed, however, that irritant rhinitis can be caused

by things other than spray foam insulation, including pollutants in the air, toxins in cleaning products, and insecticides. He also stated that inflammation is influenced by food, amount of sleep, stress, and the quality of social relationships. Meggs stated that irritant rhinitis is a very common disease in the United States that has been found to be caused by vehicle exhaust, cement dust, grain dust, fragrances, perfumes, pesticides, chlorine, and bleach ammonia.

Alan Taylor's medical records indicated that he had occasional burning in one eye and the occasional headache. Meggs testified that "during the exposure [Alan] had a lot of problems with worsening eye burning and more headaches and more frequent headaches." Meggs described Alan Taylor as "stoic" and "hesitant to complain" but had admitted that certain things cause his eyes to burn and that he has headaches. Meggs stated that, compared to other family members, Alan Taylor's symptoms and illness "resulting from the exposure" are relatively mild. Meggs found this to be consistent with the MSDS, which advised that responses to exposure to icynene are highly variable. Meggs also noted that Alan Taylor's medical records indicated that in January 2014 he presented with fever, chills, congestion, cough, and stuffy head and felt fatigued at times. Alan Taylor was diagnosed with acute bronchitis, which Meggs stated could be caused by "a lot of different things as opposed to related to the spray foam." Meggs testified that, although he could not tell from the medical records that the bronchitis was caused by the spray foam insulation, because Alan was living in the house at the time "it certainly could have played a role."

Meggs stated that his opinion that there was a causal relationship between exposure to spray foam insulation and the Taylors' various reported medical conditions was based on the nature of the product, medical literature supporting that "this can happen," and the MSDS.

Meggs agreed, however, that sometimes people develop allergies and asthma independent of any chemical exposure.

Meggs unequivocally stated that he did not know what level of isocyanate exposure was experienced by any of the Taylors and, in fact, testified that he did not need to know because any level of exposure to isocyanate can cause the symptoms he read about in the Taylors' medical records. According to Meggs, information about the Taylors' exposure levels would simply tell him how "unlucky" they are. We understand Meggs to mean that if the exposure level was very low, that would indicate to him that the Taylors were either extremely sensitive to isocyanate or that they were very susceptible to chemical irritant sensitization. Scientific knowledge of the harmful level of exposure to a chemical, plus knowledge that the plaintiff was exposed to such quantities, are minimal facts necessary to demonstrate specific causation in a toxic tort case. *See Havner*, 935 S.W.2d at 715 (where direct evidence of specific causation is unavailable, specific causation may be established through two-step process whereby plaintiff establishes general causation through reliable studies and then demonstrates that his circumstances are similar to subjects of studies). Meggs's specific causation opinion was not based on sufficient information of the level of isocyanate the Taylors were exposed to, rendering it scientifically unreliable. Meggs provided no support for a general theory that exposure to isocyanate at any level can cause the medical conditions the Taylors complain of. Instead, Meggs's testimony is essentially that something caused the Taylors' medical conditions and that, in his opinion, that something was isocyanate from the spray foam insulation.

The Taylors maintain that Meggs's specific causation opinion was based on a differential diagnosis. A differential diagnosis is a clinical process whereby a doctor determines the cause of a plaintiff's injuries or disease by ruling out other possible causes. *See Coastal*

Tankships, U.S.A., Inc. v. Anderson, 87 S.W.3d 591, 604 (Tex. App.—Houston [1st Dist.] 2002, pet. denied). "[A]n expert's mere recitation that he has examined a patient and done a history of the patient and has concluded that X caused the patient to suffer Y would not be sufficient to prove specific causation." *Minnesota Mining & Mfg. Co. v. Atterbury*, 978 S.W.2d 183, 199 (Tex. App.—Texarkana 1998, pet. denied). If, however, a doctor explains the exact methodology he used in arriving at the conclusion, including discussing the exact other causes that have been ruled out and the generally accepted literature he relied on in making that conclusion, the differential diagnosis could be sufficient to prove specific causation. *Id.*[2] Although Meggs testified that there are many causes of asthma and rhinitis, he did not explain how he excluded those other possible causes other than to point to a temporal link between the Taylors' exposure to the spray foam insulation and the medical conditions he gleaned from a review of their medical records. "Care must be taken to avoid the *post hoc ergo propter hoc* fallacy, that is, finding an earlier event caused a later event merely because it occurred first. Stated simply, correlation does not necessarily imply causation." *Jelinek v. Casas*, 328 S.W.3d 526, 533 (Tex. 2010). "Evidence of an event followed closely by manifestation of or treatment for conditions which did not appear before the event raises suspicion that the event at issue caused the conditions. But suspicion has not been and is not legally sufficient to support a finding of legal causation." *Guevara v. Ferrer*, 247 S.W.3d 662, 68 (Tex. 2007). In this case, Meggs reviewed records related to a number of doctor visits for a variety of medical issues experienced by the Taylors in the year or so following their exposure to spray foam insulation. Meggs testified that some of the symptoms described in the Taylors' medical records had occurred prior to the

[2] But even this would still require scientifically reliable evidence of general causation, i.e., that isocyanate exposure at any level can cause asthma, evidence that is absent from this record.

exposure and he did not explain how he determined that the conditions reflected in the medical records resulted from the exposure as opposed to other equally plausible causes or the possibility that they represented the natural progression of preexisting conditions.

A reliable differential diagnosis generally requires (1) compiling all possible causes for the patient's symptoms and (2) eliminating each of these causes until arriving at one that cannot be ruled out or concluding that one cause is the most likely among those not excluded. *See Matt Dietz & Co. v. Torres*, 198 S.W.3d 798, 805 (Tex. App.—San Antonio 2006, pet. denied). Meggs, by contrast, appears to have assumed that isocyanate caused the Taylors' medical conditions and reviewed the medical records only for information consistent with that theory.[3]

In sum, Meggs' testimony did not present a specific-causation opinion based on reasonable medical probability. Meggs provided no scientific support for his theory that the Taylors' exposure to the spray foam insulation caused the conditions they complain of. The analytical gap between Meggs's causation opinion and the scientific data and medical records advanced to support that opinion was simply too wide. *See Moore v. Ashland Chem., Inc.*, 151 F.3d 269, 279 (5th Cir. 1998). Because the Taylors' causation expert provided opinion testimony that was mere conjecture and, therefore, not evidence, we hold that no scientifically reliable evidence supports the jury's verdict in favor of the Taylors on their personal injury claims. *See Havner*, 953 S.W.2d at 712.

Property Damage

Johnson also contends that the evidence is legally insufficient to support the jury's finding that Johnson proximately caused the complained-of property damage. The evidence is

[3] In fact, Meggs testified that when reviewing the Taylors' medical records he focused on "the things that are known to be induced by isocyanate."

legally insufficient if: (1) there is a complete absence of evidence of a vital fact; (2) the law precludes consideration of the only evidence offered to prove a vital fact; (3) the evidence offered to prove a vital fact is no more than a scintilla; or (4) the evidence conclusively establishes the opposite of a vital fact. *City of Keller*, 168 S.W.3d at 810-11. More than a scintilla of evidence exists if reasonable and fair-minded people can differ in their conclusions about its meaning. *Ford Motor Co. v. Ridgway*, 135 S.W.3d 598, 601 (Tex. 2004). In determining whether a finding is supported by legally sufficient evidence, we view the evidence in the light most favorable to the finding, crediting favorable evidence if a reasonable factfinder could, and disregarding contrary evidence unless a reasonable factfinder could not. *City of Keller*, 168 S.W.3d at 807. We indulge every reasonable inference that would support the finding. *Id.* at 822.

Johnson contends that there was no competent expert testimony to support either a finding that the spray foam insulation is in fact emitting harmful chemicals or that Johnson committed any act or omission during the installation of the spray foam insulation that would cause it to be improperly installed such that it emitted toxic fumes. Johnson asserts that the jury's finding could only, therefore, be based on mere speculation and not on legally sufficient evidence. *See Marathon*, 106 S.W.3d at 727-28 ("[A]s we have frequently said, some suspicion linked to other suspicion produces only more suspicion, which is not the same as evidence." (citations and internal quotations omitted).

"Proof other than expert testimony will constitute some evidence of causation only when a layperson's general experience and common understanding would enable the layperson to determine from the evidence, with reasonable probability, the causal relationship between the event and the condition." *Mack Trucks, Inc. v. Tamez*, 206 S.W.3d 572, 583 (Tex.

2006). Whether expert testimony is necessary to prove a matter or theory is a question of law. *Id.* (citing *FFE Transp. Servs., Inc. v. Fulgham*, 154 S.W.3d 84, 89-90 (Tex. 2004)). We conclude that whether spray foam insulation has been properly installed and whether its alleged improper application is causing it to emit toxic fumes are issues not within a layperson's general experience and common understanding. Therefore, the Taylors were required to prove these issues with expert testimony. After reviewing the evidence, we agree that it is insufficient to support the jury's verdict that any act or omission by Johnson was the proximate cause of the Taylors' damages. The evidence admitted at trial creates no more than a mere suspicion that the foam was improperly installed. Neither the experts' testimony nor any other evidence created anything more than a mere suspicion of a causal link between the spray foam insulation installed in the Taylors' home and the toxic fumes they allege have damaged their property.

The Taylors rely on the testimony of David Nicewicz, an organic chemistry professor with expertise in synthetic and polymer chemistry, and Michael Parks, one of Johnson's division managers, to demonstrate that the spray foam insulation was not installed correctly, causing "resin side material to be left behind immediately after spraying." The Taylors assert that the evidence establishes that the improper installation caused the spray foam insulation to be "off ratio" such that it continuously emitted toxic fumes into their home.

Nicewicz testified that spray foam insulation is a polymer produced by the chemical reaction of a two-component mixture with an "A side" and a "B side." Nicewicz analogized this process to making two-part epoxy resin during which two liquids are mixed together to produce a product that gets "tacky" and eventually hardens. Nicewicz described the polymerization process that produces spray foam insulation as a reaction between the reactive chemical on the A side, including isocyanates, and the polyether polyol on the B side that

produces a chain of molecules. As the chain of molecules gets longer, the product turns from a liquid to a solid. Nicewicz testified that heat is required for the chemical reaction to take place and that the reaction is faster at higher temperatures than at lower ones.

Nicewicz stated that the spray foam insulation used in the Taylors house needed to be heated to a certain temperature above room temperature in order to react completely and that if the required temperature is not reached, there "could be more of the A or B side remaining" after the spray foam insulation is installed. Nicewicz testified that "there is circumstantial evidence that would suggest that temperature did play a factor in the installation of—the incorrect installation of the spray polyurethane foam" but did not explain what evidence he was referring to. To support his opinion that the spray foam installation was "incorrect" and that the spray foam insulation as installed in the Taylors' home was "off ratio," Nicewicz stated that he had seen photographs in which the spray foam insulation looked "drippy" rather than looking like "spongy angel food cake" and that these photos "indicate an improper ratio installation for that particular spray foam."[4]

Nicewicz also testified that if spray foam insulation was "off ratio" it would off-gas its chemical components that had not reacted completely. Nicewicz reviewed the results of some air quality sampling done in the Taylors' home and noted that the home's air had "elevated [volatile organic compounds]" more than a year after the spray foam insulation had been installed. Nicewicz discussed the presence of Beta-Pinene, which he opined likely came from

[4] Although he stated that the spray foam insulation installation was "incorrect," Nicewicz did not provide any opinions about how the installation was done improperly. In fact, the trial court had previously granted Johnson's motion to exclude any testimony by Nicewicz on the standard of care related to spray foam insulation and ordered that Nicewicz's testimony was limited to "the relevant chemicals, chemical processes and effects."

the plywood used to construct the home. He also noted high levels of acetic acid, a non-toxic chemical that he described as "a direct oxidation product of acetaldehyde." Nicewicz noted that the air samples showed elevated levels of formaldehyde. Nicewicz stated that formaldehyde is not a component of spray foam insulation but that "slowly over time polyurethanes can degrade and release formaldehyde."[5] The air quality sample report indicated that typical sources of formaldehyde are paint, particle board, plywood adhesives, fiberglass insulation, and auto exhaust. Nicewicz stated that "not all of the chemicals found in the air quality reports are from the spray foam" and that there are various other building products in the home that emit chemicals, including wood.

On cross-examination, Nicewicz acknowledged that he does not know what the typical levels of volatile organic compounds are in a new home and that it would depend on the building products used. He also acknowledged that the volatile organic compounds found in the air sampling of the Taylors' home might be from sources other than the spray foam insulation. Nicewicz testified that he could not tell what levels of volatile organic compounds might come from "any particular source." Nicewicz stated that he had not evaluated other potential sources of formaldehyde in the Taylors' home. He reiterated that not bringing the compound to the proper temperature to achieve a complete reaction can result in "off ratio" insulation in which chemicals from either the A side or the B side remain and that those chemicals will "eventually" off-gas from the insulation.

Parks testified that Johnson used a truck with a heated barrel to heat the material components of the spray foam insulation and that the product was delivered from the barrel to

[5] Nicewicz stated that he has not done any research on whether polyurethane foam insulation emits formaldehyde under certain circumstances.

the spray tip using a 100 foot long hose. Parks stated that while Johnson was spraying the Taylors' home, there was a "hose heat malfunction" but that Johnson was still able to spray the insulation because bringing the product to the required temperature for the chemical reaction to take place occurred "using a machine and the barrels stay warm." Parks testified that the spray foam insulation in the Taylors' home, which he personally inspected, was not sticky and was not slow to cure. Parks stated that the peaks in the photographs that Nicewicz attributed to the product being "drippy" were instead the result of spray technique.

The Taylors argue that Nicewicz's testimony, coupled with Parks's testimony that there was a "hose heat malfunction" during the application process support a finding that Johnson installed the spray foam insulation incorrectly and that the result of the improper application was "off ratio" insulation that off-gassed volatile chemicals into the Taylors' home rendering it a toxic and uninhabitable environment.

The Taylors did not introduce any expert testimony on the proper method and standard of care for installing spray foam insulation. Instead, they rely on Nicewicz's testimony to establish both that the installation was improper and that as a result the insulation in the Taylors' home was off-ratio and created a dangerous environment inside the home. Nicewicz has no education or training about the proper application of spray foam insulation or the effects of improper application. Moreover, Nicewicz did not explain for the jury in what manner the spray foam insulation was improperly installed by Johnson. Although he testified that bringing the product to the correct temperature is necessary, he provided no testimony regarding either what the correct temperature is or what temperature the spray foam insulation was brought to by Johnson. Although Nicewicz alludes to "circumstantial evidence" that temperature played a role in the "incorrect" installation, he does not tie any issue with temperature to any act or omission

by Johnson. While the Taylors point to the "heat hose malfunction" that Parks testified to, there is no testimony that causally connects any issues with the temperature of the hose to the quality of the installation of the spray foam insulation.

Nicewicz also opined that when spray foam insulation is improperly installed, it will off-gas chemicals from either the A side or the B side due to an incomplete chemical reaction. But Nicewicz's testimony does not establish that any volatile organic compounds that were detected in the Taylors' home originated from the spray foam insulation itself. He did not identify a single organic compound that is definitively off-gassing from the spray foam insulation and, in fact, testified that he could not tell what level of volatile organic compounds came from what source. His ultimate conclusion that the spray foam insulation is "off ratio," therefore, amounts to nothing more than mere speculation. Similarly, his conclusory observation that the spray foam insulation was improperly installed based on photographs does not make the existence of any improper act or omission by Johnson any more or less probable. Even assuming that the spray foam insulation in the Taylors' home is, in fact, "off ratio," Nicewicz's testimony does not exclude, or even consider, other equally potential causes such as the product being defective, contaminated, or something else altogether. The mere fact that the spray foam insulation is "off ratio," without more, does not prove, either directly or circumstantially, that it was applied improperly or negligently by Johnson.

In sum, Nicewicz's testimony that the spray foam insulation was "off ratio" and looked "drippy" combined with his testimony about the presence of volatile organic compounds of unknow origin amounts to no more than a scintilla of evidence of proximate causation—i.e., that any act or omission of Johnson was a substantial factor in causing any off-gassing that could be attributable to the spray foam insulation. Nicewicz's conclusion that the spray foam

insulation in the Taylors' home is "off ratio" is too great an inferential leap to withstand legal-sufficiency review. *See Coastal Transp. Co. v. Crown Cent. Petroleum Corp.*, 136 S.W.3d 227, 232 (Tex. 2004) ("Opinion testimony that is conclusory or speculative is not relevant evidence, because it does not tend to make the existence of a material fact 'more probable or less probable.'") (citing Tex. R. Evid. 401)).

With regard to whether the spray foam insulation in the Taylors' house was "off ratio," we note that the record also includes contrary evidence that was not addressed or disputed by Nicewicz. Specifically, a senior engineer with Icynene, the product's manufacturer, testified that he visited the Taylors' house and inspected the spray foam insulation. He described it as "good quality, low density foam" with "uniform cell structure" and "smooth proper color." He examined the areas where samples of the foam had been removed for testing and "determined visually that the cell structure looked typical, looked normal." Icynene representatives also tested seven samples of spray foam insulation removed from the Taylors' house. Robert Gilmour, a technical services manager with Icynene, testified that the samples passed three different quality tests and that from that testing he determined that the spray foam insulation was properly mixed and that the installation was done properly. Gilmour testified that the samples indicated the spray foam insulation was of standard quality and that there was no indication that there was more A side than B side in the foam. Gilmour stated that his personal inspection and the lab testing revealed nothing to indicate that the spray foam insulation was off ratio. We conclude that a reasonable factfinder could not disregard this contrary evidence based on lab testing and personal inspection. *See City of Keller*, 168 S.W.3d at 807 (in determining whether finding is supported by legally sufficient evidence we disregard contrary evidence unless reasonable factfinder could not).

Whether the spray foam insulation was properly installed and whether it was off ratio such that it emitted toxic fumes into the Taylors' home are issues that are outside the general experience and common understanding of a layperson. The testimony the Taylors rely on is legally insufficient to support the jury's proximate-cause findings, especially in light of contrary evidence in the record that was not addressed by any expert witness. Nicewicz's testimony about the presence of volatile organic compounds present in the Taylors' home did not rule out sources other than the spray foam insulation. Nicewicz's testimony, even as supplemented by Parks's testimony, that there was a "temperature issue" with the spray foam insulation during the installation process is merely speculation from which he infers that there was an incomplete chemical reaction between the A side and the B side during installation. This evidence is legally insufficient to support the jury's verdict. *See E.I. du Pont de Nemours*, 923 S.W.2d at 558-59 (concluding that failure of expert to rule out other causes of damage rendered his opinion little more than speculation). The evidence of proximate causation here—i.e., that an act or omission of Johnson was a substantial factor in causing an improper installation of spray foam insulation such that it emitted toxic fumes—consists of nothing more than speculation and inference that require too great a leap for reasonable minds to make. "[A]n inference stacked only on other inferences is not legally sufficient evidence." *Marathon Corp.*, 106 S.W.3d at 728. "[I]n cases with only slight circumstantial evidence, something else must be found in the record to corroborate the probability of the fact's existence or non-existence." *Lozano v. Lozano*, 52 S.W.3d 141, 148 (Tex. 2001); *see also Marathon Corp.*, 106 S.W.3d at 728 (holding that evidence of proximate causation was legally insufficient because circumstances could give rise to any number of inferences, none more probable than another).

We sustain Johnson's issue asserting that the evidence is legally insufficient to support the jury's finding that Johnson's acts or omissions proximately caused either the personal injuries or the property damage the Taylors complain of. Because proximate causation was an element of each of the Taylors' theories of liability, our determination of that issue requires us to render judgment in favor of Johnson. *See Southwest Key Program, Inc. v. Gil-Perez*, 81 S.W.3d 269, 270 (Tex. 2002) (reversing and rendering judgment that plaintiff take nothing on his claim after holding that evidence is legally insufficient to support proximate-cause element of each of plaintiff's theories of liability). We thus do not reach Johnson's additional issues.

CONCLUSION

We reverse the trial court's judgment and render judgment that the Taylors take nothing on their claims.

Chari L. Kelly, Justice

Before Justices Goodwin, Kelly, and Smith
Concurring and Dissenting Opinion by Justice Smith

Reversed and Rendered

Filed: September 17, 2020