

# The Engineer, the Arborist, and the Lay Juror: Courts Still Struggle to Define When Expert Testimony Is Required in Product Liability Cases

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An ultracrepidarian expresses views on matters outside the scope of their knowledge or expertise. The word derives from the Latin *ultra* (“beyond”) and *crepida* (“shoe, sandal”), invoking a line from Pliny the Elder attributed to the painter Apelles of Kos. Apelles, having asked a cobbler to advise him as he painted a sandal, rebuked the cobbler for criticizing how he had painted the subject’s knee. Apelles was of the view that a “cobbler should not judge beyond his shoe,” which later inspired the English proverb: “let the cobbler stick to his last.”

A recent ruling by the District of Maryland in *Garcia v. Sherril, Inc.*<sup>[1]</sup> demonstrates the ongoing struggle by courts to distinguish between when plaintiffs must produce expert testimony in product liability cases and the danger that courts may permit jurors to comment beyond their shoes in cases involving technical subject matter. The shoes in *Garcia* were the Gecko Ultra Light Climbing Spikes, which attached to a user’s feet and legs so that they can climb trees. The plaintiffs, a husband and wife, asserted that the spikes, which attached via a lower strap around the ankle and an upper strap that fastens around the calf with Velcro, are defective. The husband, who worked in the tree-cutting industry, claimed he was using the spikes to cut the top from a tree with a chainsaw when he felt something get stuck on the Velcro strap and caused it to come undone. This made him lose his balance, cut through his own safety rope, and fall 30 feet to the ground. He and his wife asserted claims for negligence, strict product liability, breach of warranty, and loss of consortium.

The plaintiffs offered three expert witnesses: an engineer with experience in product testing, a board-certified master arborist, and a product safety specialist. The defendant moved for summary judgment, arguing that the plaintiffs’ expert testimony was inadmissible, and without any such testimony, the plaintiffs could not establish that the climbing spikes were defectively designed. The court disagreed, finding most of the proposed testimony reliable, but also ruled that expert testimony was not required at all because the case concerned “matters of general knowledge.”<sup>[2]</sup>

## Daubert Challenges

On the *Daubert* challenges, the court first considered the engineer’s testimony.<sup>[3]</sup> The court noted the expert’s experience in “the fields of industrial engineering, methods engineering, and product safety, design, and manufacturability” and that he was “retained for a specific purpose: ‘to measure peel strength of a Velcro hook and loop upper strap on a pair of exemplar Gecko Ultra Light Climbing Spikes.’”<sup>[4]</sup> The court explained that the “peel

strength” was the amount of force necessary to open a Velcro strap, which the engineer calculated with 30 tests using a calibrated Wagner FDX 100 Digital Force Gauge. In finding the engineer’s testimony reliable, the court noted the error rate of the force gauge he used, how he applied his “training in engineering principles” to design his tests, and that he “used a technical data sheet as a control, specifically, a 2018 data sheet” that “list[ed] peel strength values for Velcro.”<sup>[9]</sup> The court also found his testimony “relevant to a central issue in this case: whether Velcro is a safe and effective means to secure the Gecko climbing spikes to a user’s legs,” and that his opinion would “assist the trier of fact in understanding how easily the Velcro can be peeled apart, which in turn is relevant to the question of whether the product was negligently designed.”<sup>[10]</sup>

The court then considered the master arborist, who was to “provide expert opinions on whether the Velcro upper straps on the Gecko climbing spikes were an adequate and secure means of attaching the climbing spikes to a person’s legs and whether a buckle fastener provides a safer alternative.”<sup>[11]</sup> The arborist performed an experiment with ivy vines of varying diameters to determine whether they could cause the Velcro straps to come apart and compared those results to tests using a competitor’s product that used buckles to secure the straps. He concluded that the Velcro was “easy to compromise by penetration forces of English Ivy.”<sup>[12]</sup> The defendant challenged the admissibility of his opinion, arguing that he had no experience in product design or safety. The court disagreed, pointing to his expertise with safety and design practices and his own experience using climbing spikes in arboriculture.<sup>[13]</sup> The court permitted his testimony that a buckle was a safer alternative and that the spikes did not comply with ASTM requirements, although it curtailed his broader testimony on safety and causation due to his lack of experience as an engineer and lack of data establishing real-world conditions.

Lastly, the court noted that the plaintiffs’ third expert—a board-certified product safety expert—reviewed documents and testimony but did not perform any of his own tests or physically inspect the climbing spikes. The court found that while he was not required to perform his own testing or inspections, his specialized experience was limited to other types of products, and that he did not “appear to have any meaningful experience relating to Velcro or products using Velcro.”<sup>[14]</sup> But while the court determined that the expert was not qualified to testify that the climbing spikes were defectively designed, it permitted his opinions on whether the defendant “took reasonable steps to ensure the safety of its product” and included appropriate warnings on the products.<sup>[15]</sup>

### **Necessity of Expert Testimony**

Having disposed of the *Daubert* challenges, the court turned to the defendant’s argument that the plaintiffs could not sustain product defect claims without reliable expert testimony. Even though the court had ruled there was reliable expert testimony supporting the plaintiffs’ claims, it nevertheless clarified that the plaintiffs were not required to introduce expert testimony to prove their case, explaining that “[e]xpert testimony is not required on matters of which the jurors would be aware by virtue of common knowledge.”<sup>[16]</sup> Applying this principle, the court concluded that:

the design of the Velcro straps on the Gecko climbing spikes, while having some technical aspects, is not beyond the understanding of the average person. Velcro is a material with which most if not every juror will be familiar and have experience, and the issue of whether it provides a safe means of securing the Gecko climbing spikes is not so intertwined with science that it cannot be understood and evaluated by a juror without the aid of expert testimony.<sup>[17]</sup>

On the one hand, the court’s view makes sense. The basic mechanics of Velcro are not so complicated, and most individuals have some experience with it. But on the other hand, the court had explained that Velcro peel strength varies and understanding whether the design and materials used were adequate required the plaintiffs’ engineering expert to apply engineering principles, run tests under different force conditions with a calibrated force gauge, and compare the results against control data. Similarly, the court found the master arborist’s conclusion that a buckle was a safer alternative was reliable and admissible because of the expert’s experience with product safety standards in the relevant industry, his experience using climbing spikes for their intended purpose, and his tests using the specific type of ivy that allegedly caused the plaintiff’s straps to come undone.

It may seem obvious to a juror that a buckled strap is potentially more secure than a Velcro strap, but that does not necessarily mean the as-designed climbing spikes were defective or unsafe when used as intended. Indeed, if a

general understanding of Velcro and buckles is all that is needed to determine whether the product was unreasonably dangerous, it is hard to see how the data and expertise proved by the plaintiffs' experts would aid lay jurors at all. And moreover, the court's determination that two of the plaintiffs' experts had no basis to conclude that the climbing spikes were defective and unreasonably dangerous implies that reliably assessing whether they were appropriately designed requires detailed information about the component materials and intended application.

The *Garcia* decision illustrates the contradictory conclusions courts sometimes reach regarding the necessity of expert testimony in certain product liability matters. Compare, for example, the District of New Jersey's ruling in *Mykolaitis v. Home Depot U.S.A., Inc.*<sup>[14]</sup> There, while similarly noting that expert testimony "is not mandated" where an "average juror can deduce what happened without resort to scientific or technical knowledge,"<sup>[15]</sup> the court still granted summary judgment because the plaintiff did not introduce expert testimony in support of his product defect claim related to a ladder design. The court concluded that "[a] stepladder is a subject matter beyond the common knowledge and experience of an average juror, and thus, expert testimony is required."<sup>[16]</sup> The court also found that "[w]ithout an expert testifying as to the age of the ladder, whether the ladder underwent normal 'wear and tear,' and how the various parts of a ladder interact with one another, the jury is left to speculate as to the cause of Plaintiff's accident."<sup>[17]</sup> A stepladder may be more complex than climbing spikes, but the average juror probably has more experience with the former and has likely even used it for its intended use. Yet it seemed as obvious to the court in *Garcia* that expert testimony was *not* needed to assess whether climbing spikes were defectively designed as it was to the court in *Mykolaitis* that it *was* needed to assess whether a ladder was defectively designed.

## Strategic Takeaways

While the need for expert testimony may be obvious in cases involving complex products, the *Garcia* ruling and the contrasting opinion in *Mykolaitis* illustrate the difficulty courts sometimes face delineating between common knowledge and technical subject matter in certain product liability matters and suggest that judges continue to draw this distinction based on their general impressions rather than any principled analysis or methodology. These cases highlight the importance of canvassing product liability cases in relevant jurisdictions to determine how courts have handled this issue.

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<sup>[1]</sup> 2023 WL 2245250 (D. Md. Feb. 27, 2023).

<sup>[2]</sup> *Id.* at 11.

<sup>[3]</sup> *Id.* at 3.

<sup>[4]</sup> *Id.* (citations omitted).

<sup>[5]</sup> *Id.* at 4.

<sup>[6]</sup> *Id.* at 5.

<sup>[7]</sup> *Id.*

<sup>[8]</sup> *Id.* (citations omitted).

<sup>[9]</sup> *Id.* at 6 (citing *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 150 (1999)).

<sup>[10]</sup> *Id.* at 9.

<sup>[11]</sup> *Id.* at 10.

<sup>[12]</sup> *Id.* at 11 (citation omitted).

<sup>[13]</sup> *Id.*

[14] 2016 WL 590213 (D.N.J. Feb. 11, 2016).

[15] *Id.* at 3.

[16] *Id.*

[17] *Id.* at 4.

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[Kyllan Gilmore](#)

[Rand Brothers](#)

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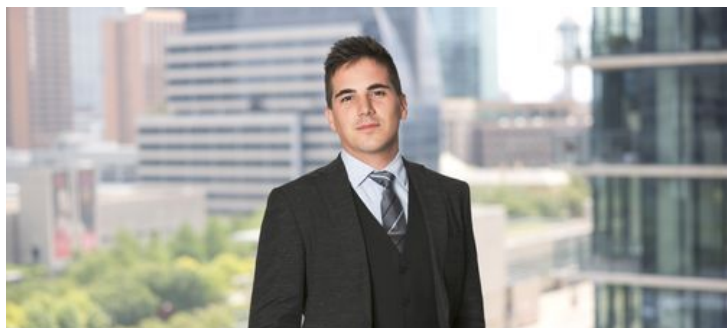
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