

Responding to  
Table Pounding

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To be relevant and reliable, evidence must be logical. The case law demonstrates that courts do draw upon formalistic logic; learn how you can, too.

# Defense Through the Exposure of Fallacies

While formalistic logic alone is unlikely to carry the day, the application of established principles of logic may elevate an already sound response to a plaintiff’s argument to one that is unquestionably persuasive. In the defense of

drug and medical device product liability actions, defense counsel frequently encounter seemingly convincing arguments that are based more on rhetoric than on the law, the facts, or both.

All trial lawyers are familiar with some form of the following legal aphorism:

If you have the facts on your side,  
pound the facts.

If you have the law on your side,  
pound the law.

If you have neither on your side,  
pound the table.

The customary response to “table pounding” is to point out that the facts and the law govern—not the rhetoric of opposing counsel. Such a response can be buttressed by pointing out that “table pounding” is a fallacious argument with a formal name:

an “argument by vehemence”—a “fallacy of relevance” that falls within the category of an “appeal to the people” (*argumentum ad populum*). If a plaintiff’s counsel also uses emotionally charged language, the traditional response can be enhanced by noting that the use of visceral language constitutes a fallacious argument by emotive language, which is also an “appeal to the people.”

Attorneys frequently use arguments, which, although rhetorical and persuasive, are logically misleading or fallacious and thus unreliable and without merit. An investigation into the discipline of logic reveals that logical principles form the basis of established theories of toxicology, epidemiology, and other sciences encountered in product liability

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litigation. The law of evidence also has a sound basis in logic. Recognizing the logical errors in the arguments of opposing counsel, correctly naming the logical errors, and delineating the invalid nature of the arguments (with the appropriate references to case law and logic texts) can be powerful tools in refuting conclusions based on logically defective premises and

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(when appropriate) arguing for the exclusion of evidence.

Defense counsel are accustomed to responding to logically defective arguments—but not in a manner that invokes principles of logic. The purpose of this article is not to make the reader an expert in the field of logic; rather it is to sensitize defense counsel to the facts that (1) logical principles can enhance a defendant’s argument, and (2) there are a myriad of published cases (some more than a century old) in which courts have ruled on matters using principles of logic. With regard to fallacies, for example, courts have not only named and defined them, but on more than one occasion, they have

cited logic texts in support of their rulings. Furthermore, many of these decisions involve issues that are relevant to the defense of pharmaceutical and medical device claims.

Defense counsel may be tempted to forego consideration of this potential defense based on the following argument: *Take pity on defense counsel. They have no real training in the principles of logic, for which reason it would be an insurmountable task for them to invoke principles of logic.* This argument is a woefully inadequate *argumentum ad misericordiam* (appeal to emotion: pity or misery). *Butler v. Kmart Corp.*, No. 05-257-P-A, 2007 U.S. Dist. Lexis 61141 (N.D. Miss. Aug. 20, 2007). Furthermore, the endeavor is not as daunting as one might think.

With regard to fallacies, for instance, a simple online search of the term “fallacies” will return multiple sources that explain these principles with names and definitions that are readily understandable. The reader will likely be astonished to find out just how many fallacies are encountered in the everyday practice of law. Defense counsel will be delighted to find that certain of the fallacies beg for citation because, among other things, they accurately describe the conduct of opposing counsel, to wit: proof by verbosity (*argumentum verbosium*)! Having piqued (hopefully) the curiosity of the reader with regard to matters of incorrect reasoning, a more detailed discussion follows.

### What Is Logic?

What is logic? “Logic is the study of the methods and principles used to distinguish correct from incorrect reasoning.” Irving M. Copi, Carl Cohen, & Kenneth McMahon, *Introduction to Logic 2* (14th ed. 2011). The application of principles of logic is a component in the determination of the admissibility of evidence in product liability litigation. With regard to the admissibility of evidence, “the general spirit and mode of reasoning of the courts substantially illustrates the dictates of scientific logic.” 1A *Wigmore on Evidence*, §32, at p. 996 (Tillers rev. 1983).

There are two principal forms of argument: (1) deduction and (2) induction. Deductive argument is sometimes referred to as “top-down” argument. The proponent

of the deductive argument begins with the premises and develops a conclusion that necessarily follows if the premises of the argument are indeed true. Of note is the fact that there is no way to test the validity of the premises from which the conclusion supposedly follows. Thus, even though an argument is logical (that is, it is not fallacious), it does not necessarily follow that the conclusion is valid.

The logical validity of an argument is rooted in its internal consistency. Despite its internal consistency, an argument may be wrong if it is based upon false premises. Consider the following example:

If the sky is blue, it is warm. (Premise.)

The sky is blue. (Premise.)

Therefore it is warm today.

(Conclusion.)

Because the premise is untrue, the conclusion may also be wrong.

Inductive argument is the form of argument generally used in court: “[I]n the offering of evidence in court the form of argument is always inductive.” 1A *Wigmore on Evidence*, §32, at p. 984 (Tillers rev. 1983). It is “bottom-up” reasoning in that the proponent begins with some data then builds upon that to argue that certain conclusions follow.

Inductive reasoning differs from deductive reasoning in two ways: (1) induction fails to preserve the truth (true premises may lead inductively to false conclusions); and (2) adding true premises to an already sound induction may make it unsound. John Vickers, “The Problem of Induction,” *The Stanford Encyclopedia of Philosophy* (Edward N. Zalta ed., Spring 2016 ed.), <http://plato.stanford.edu/>.

So, “[t]he particular danger, then, of inductive proof is that there may be other explanations than the desired one for the fact taken as the basis of proof.” 1A *Wigmore on Evidence*, §32, at p. 992 (Tillers rev. 1983).

Further, “[a]n inductive argument claims that its premises give only some degree of probability, but not certainty to its conclusions.” Copi, Cohen, & McMahon, *supra*, at 12. As a result, inductive reasoning is also known as hypothesis construction because any conclusions made are based on current knowledge and predictions. Inductive Approach, Research Methodology, [64 ■ For The Defense ■ September 2016](http://research-</a></p></div><div data-bbox=)

methodology.net/ (explaining inductive reasoning) (“Patterns, resemblances and regularities in experience (premises) are observed in order to reach conclusions (or to generate theory).”). See also James Hawthorne, “Inductive Logic,” *The Stanford Encyclopedia of Philosophy* (Winter 2014 ed.), *supra*. While inductive reasoning may operate to generate a hypothesis, it fails to establish as true the suggested conclusion.

Deduction and induction are not, in and of themselves, sufficient to prove anything. Thus, if the fallacious features of a plaintiff’s argument can be identified, a position that initially appears to be logical (but is nothing more than rhetoric) may easily be refuted.

In the legal arena, the recognition of logical flaws requires sensitivity to their presence. In argument—whether written or oral—attorneys attempt to persuade a third party of the validity of their positions. In doing so they frequently resort to, among other things, rhetoric, charm, sympathy, and emotion, which are not logic based. It is arguably more important to be persuasive than logical. Exposing the logical flaws in a seemingly convincing argument not only defuses the argument but assails the credibility of its proponent.

Recognizing logical fallacies involves a multi-step procedure. Initially, the party wishing to attack an argument must carefully analyze the argument, dissect the argument into its various steps, and identify any disconnects between the premises and the conclusion. Developing a general awareness of the existence and the names of the major fallacies is critical. A simple online search reveals that fallacious arguments abound. See, e.g., A List of Fallacious Arguments, <http://www.don-lindsay-archive.org/skeptic/arguments.html>.

Demonstrating that a particular argument is fallacious, and thus defective, requires (1) an understanding of the fallacy at issue, and (2) knowledge of the formal name of that fallacy. As explained elsewhere, “[t]he power to name a common fallacy, the power to give the classical, one-sentence description of the great flaw, is the power to reveal what is missing from the proponent’s argument, the absence in evidence or reasoning that the fallacy is supposed to conceal.”

Michael Cavendish, *Fallacy and the Profession*, *The Bench* July/Aug. 2015, at 23.

Fallacies are either formal or informal. In “formal fallacies” the arguments contain errors in logic that are readily apparent in the argument’s form. In contrast, “informal fallacies” take into account the illogical content of the argument. Typically, formal fallacies are created through the use of deductive arguments, whereas informal fallacies occur in arguments that could be at best inductively strong. Informal fallacies can be grouped under four headings: (1) fallacies of relevance; (2) fallacies of defective induction; (3) fallacies of presumption; and (4) fallacies of ambiguity. Copi, Cohen, & McMahon, *supra*, at 107. Within these four categories are a plethora of fallacies that are frequently encountered in the defense of product liability actions—only a few of which will be discussed in this article.

### Fallacies of Relevance

Fallacies of relevance fail to provide adequate reasons for believing the truth of their conclusions. A classic example is the “red herring,” a fallacy of irrelevant conclusion. A red herring occurs when correct reasoning is manipulated by the introduction of some factor that misleads the audience and thus hinders rational inference. In *Frank v. Hon. Maloney Comm’r of Soc. Sec.*, No. 14-501, 2015 U.S. Dist. Lexis 56422, at \*2–4 (W.D. Mich. Apr. 30, 2015), the plaintiff argued that the lack of treatment of her ailments could not be considered as evidence contrary to a finding of disability because (she claimed) she did not have the treatments because she could not afford it. The court noted “that argument suffers the fallacy known as a red herring.” *Id.* at \*4. The administrative law judge found that “the claimant’s record of back pain treatment and mental health impairment spartan.” *Id.* (quoting ECF No. 7-2 ALJ Dec. Page ID 109). The administrative law judge further explained that the record of the plaintiff’s treatment was “spartan” because the medical evidence indicated there was little to treat and that her pain was effectively managed with medication. *Id.* at \*4.

The attack on the person (*argumentum ad hominem*), another fallacy of relevance, occurs when correct reasoning

is replaced by an attack upon the character of the opponent. In *Huntington Beach City Council et al v. The Superior Court of Orange County*, 115 Cal. Rptr. 2d 439, 448 (2002), the court identified and rejected an argument based on this fallacy, stating:

It appears from the trial court’s comments that it was troubled by the “ad ho-

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minem” quality of the city’s statement. Ad hominem arguments, of course, constitute one of the most common errors in logic: Trying to win an argument by calling your opponent names... only shows the paucity of your own reasoning. (Of course, it happens all the time in real world politics.)

### Fallacies of Defective Induction

In fallacies of defective induction, the premises may be relevant to the conclusions, but they are far too weak or ineffective to support the conclusions. A classic example of this is an appeal to ignorance (*argumentum ad ignorantiam*), when it is argued that a proposition is true on the ground that it has not been proved false, or when it is argued that a proposition is false because it has not been proved true. See, e.g., *Ala. Tombigbee Rivers Coalition v. Kempthorne*, 477 F.3d 1250, 1257 (11th Cir. 2007).

In *Guinan v. A. I. DuPont Hosp.*, the defendants were allegedly liable for damages resulting from the implantation of a stent into the heart of the plaintiff—a stent that had not received FDA approval. 597 F. Supp. 2d 485 (E.D. Pa. 2009), *affirmed in part and reversed in part*, *M.G. v. A. I. DuPont Hosp. For Children*, Nos. 09-2426, 09-3598, 09-4120, 2010 U.S. App. Lexis

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17711 (3d Cir. Aug. 24, 2010). With regard to the testimony of the plaintiff's expert on the issue of whether the stent was safe the court ruled:

The expert testimony on which Plaintiff relies fails to support an inference that the stent was defective. Damaska testified that while the stent was not "shown to be safe," neither was the stent "shown to be unsafe."... Plaintiff maintains that Damaska's testimony that the stent was not "shown to be unsafe" supports an inference that the stent was unsafe or defective. Plaintiff therefore relies on an absence of evidence of defect as support for the proposition that a defect exists. Plaintiff commits the logical fallacy of argumentum ad ignorantiam, [sic] that is, an argument from ignorance. "An argument from ignorance is 'the mistake that is committed whenever it is argued that a proposition is true simply on the basis that it has not been proved false, or that it is false because it has not been proved true.'" *Ala.-Tombigbee Rivers Coalition*

*v. Kempthorne*, 477 F.3d 1250, 1257 (11th Cir. 2007) (citing Irving M. Copi & Carl Cohen, Introduction to Logic 93 (8th ed. 1990)). Plaintiff mistakenly assumes that an absence of evidence to support its proposition establishes the proposition. However, an absence of evidence that the stent was defective does not establish defectiveness.

*Id.* at 485.

Plaintiffs frequently take a similar position in toxic exposure cases when they argue that because there is no known safe dose of a product, the product is defective and caused the injury at issue. This argument constitutes an appeal to ignorance by attempting to avoid the dose-response requirements of toxicology and epidemiology, and it also attempts to shift the burden of proof to the defendant. Just because there is no "known" safe dose does not mean that there is no "actual" safe dose.

Another fallacy of deductive reasoning is the appeal to inappropriate authority (*argumentum ad verecundiam*). This fallacy occurs when a conclusion is accepted as true for the simple reason that an expert said it is true. Although the formal name of the fallacy was not used, the U. S. Supreme Court addressed this very issue in *General Electric v. Joiner*, 522 U.S. 136 (1997), when it made its frequently cited "*ipse dixit*" statement:

Trained experts commonly extrapolate from existing data. But nothing in either *Daubert* or the Federal Rules of Evidence requires a district court to admit opinion evidence that is connected to existing data only by the *ipse dixit* of the expert. A court may conclude that there is simply too great an analytical gap between the data and the opinion proffered. See *Turpin v. Merrell Dow Pharmaceuticals, Inc.*, 959 F. 2d 1349, 1360 (CA 6), *cert. denied*, 506 U. S. 826 (1992). That is what the District Court did here, and we hold that it did not abuse its discretion in so doing.

*Id.* at 139.

Similarly, an appeal to inappropriate authority occurs when a party cites statutes, regulations, or other reference sources that have no dispositive effect. *Cresap v. Pac. Inland Navigation Co.*, 478 P.2d 223 (Wash. 1970). In *Cresap*, the court stated:

I am reluctant to accept as harmless the additions of source references where the statute, rule or regulation has no dispositive effect... When the source of law is not significant per se, the only effect of citation is rhetorical. In formal logic the device is known as *argumentum ad verecundiam*, playing on the prestige of the source.

*Id.* at 228.

Last but not least, appeals to inappropriate authorities are seen every day in television commercials when athletes, movie stars, and other celebrities give testimonials to the alleged superiority of a myriad of products.

The fallacy of *post hoc ergo propter hoc*, positing that because a second event followed a first, the first event caused the second, is frequently encountered in product liability litigation involving pharmaceuticals and medical devices. In a product liability case against a pain-pump manufacturer, the Eleventh Circuit defined this fallacy and affirmed a decision of the trial court excluding as unreliable the opinion of the plaintiff's expert based upon such a fallacy:

Kilpatrick cannot overcome the fact that Dr. Poehling's specific causation testimony is rooted in a temporal relationship. "[P]roving a temporal relationship... does not establish a causal relationship.... [S]imply because a person takes drugs and then suffers an injury does not show causation." *McClain*, 401 F.3d at 1243 (emphasis in original). This is a classic "post hoc ergo propter hoc" fallacy which "assumes causation from temporal sequence. It literally means 'after that, because of this'.... It is called a fallacy because it makes an assumption based on the false inference that a temporal relationship proves a causal relationship." *Id.* Dr. Poehling made clear that he reached his conclusions with respect to Kilpatrick's injuries merely by looking at Kilpatrick's shoulder before and after the use of Breg's pain pump. The district court did not abuse its discretion in finding Dr. Poehling's methodology to establish specific causation unreliable under *Daubert*.

*Kilpatrick v. Breg, Inc.*, 613 F.3d 1329, 1343 (11th Cir. 2010) (alterations in original).

The hasty generalization (converse accident), also a fallacy of deductive reason-



ing, occurs when one, in a cavalier fashion, develops a universal conclusion based upon very few instances or events. In *Downs v. Perstorp Components, Inc.*, 126 F. Supp. 2d 1090, 1098 (E.D. Tenn. 1999), the court rejected the proposition that a single exposure to Rubiflex could cause chronic neurological impairment:

If general causation cannot be determined, defendants point out, specific causation cannot be determined either. Dr. Kilburn had no experience with Rubiflex prior to seeing plaintiff, and he cannot rely upon his experience to support his proposition that a single exposure to Rubiflex can cause chronic neurological impairment, and Dr. Kilburn has not located any support for his proposition in the relevant scientific and medical literature [Kilburn Depo. at 127, 138; Doc. 45, Exhibit E]. Dr. Kilburn testified in his deposition that Rubiflex is an “epoxy-type product,” but defendants point out that Dr. Kilburn’s experience with epoxy exposure is limited to five other patients he has seen [Kilburn Depo. at 127; Doc. 45, Exhibit E]. Even assuming that Dr. Kilburn could properly use information about the health effects of epoxy to draw conclusions about the effects of Rubiflex, defendants point out that Dr. Kilburn’s attempt to use a few case studies of epoxy to prove that Rubiflex can cause neurological impairments is a classic example of another logical fallacy—the Converse accident (hasty generalization). *O’Conner v. Commonwealth Edison Co.*, 807 F. Supp. 1376, 1391 (C.D. Ill. 1992). The fallacy of Converse accident occurs when a person erroneously creates a general rule from observing too few cases. *Id.* at 1395.

Hasty generalizations are frequently seen with stereotyping, racism, sexism, and racial profiling.

In *O’Connor v. Commonwealth Edison Co.*, 807 F. Supp. 1376, 1391 (C.D. Ill. 1992), another court rejected a conclusion based upon the fallacy of hasty generalization. In doing so the court defined another fallacy—the fallacy of accident (which will be discussed more below in the next section):

Based on the five patients he has observed with cataracts induced by radiation therapy, he developed his “binding universal rule” that he applied to

O’Conner, thus committing the logical fallacy known as the Converse Accident (hasty generalization). The logical fallacy of Accident is the improper application of a general rule to a particular case. The logical fallacy of Converse Accident (hasty generalization) is the reverse. It occurs when a person erroneously creates a general rule from observing too few cases. Dr. Scheribel has illogically created a “binding universal rule” based upon insufficient data.

*Id.* at 1391.

In *DiLello v. Union Tools*, 2004 Vt. Super. Lexis 17, at \*5–6 (May 13, 2004), the court denied the plaintiff’s motion for summary judgment in a case involving an alleged defective spading fork:

In this case, plaintiff argues that he meets these burdens because he has established evidence that he did not misuse or modify the product and that the defendant manufacturer and seller are liable as a matter of law. This suggests a fallacy of hasty induction, namely “if there was an accident there must have been a manufacturing defect.” Despite any relaxed standards of proof under strict products liability, plaintiff must still establish that the spading fork’s brashness (or another defect) caused his accident and that the spading fork contained the brashness (or another defect) at the time of sale. *Dobbs*, §354, at 977-78 (noting that the Restatement (Third), like the Restatement (Second), continues to premise liability solely on defective products rather than perfectly made products.).

Therefore, defining and defending against the hasty generalization can mean the difference between the admission and the exclusion of an adversary’s expert testimony or the grant or the denial of summary judgment.

### Fallacies of Presumption

With fallacies of presumption the logical mistake in the argument arises from relying upon a proposition that is assumed to be true but is actually without a valid basis. The accident, the complex question, and the begging the question fallacies are all examples of this fallacy.

The fallacy of accident (*dicto simpliciter*), sometimes referred to as “destroying

the exception,” occurs when one mistakenly applies a generalization to an individual instance to which it does not properly apply. Such an analysis takes simplistic rules, applies simplistic rules generally, and ignores legitimate exceptions to such rules. In *McClendon v. City of Albuquerque*, 630 F.3d 1288, 1292–93 (10th Cir. 2011), the court identified the fallacy of accident:

### Begging the question

(also known as “circular argument” and *petitio principii*) is an informal fallacy in which the truth of the conclusion of the argument is assumed in one of the premises.

While the defendants are correct that a final judgment is the paradigmatic “final decision” appealable under §1291, *see Midland Asphalt Corp. v. United States*, 489 U.S. 794, 798, 109 S. Ct. 1494, 103 L. Ed. 2d 879 (1989), it doesn’t follow from this fact that every case with a final judgment in it is appealable. The defendants are too quick to generalize and in doing so run afoul of the logical fallacy of accident. *See generally* Nicholas Bunnin & Jiyuan Yu, *The Blackwell, Dictionary of Western Philosophy* 248 (2004). Just because all the people you’ve met lately are kind doesn’t mean all people are kind.

The fallacy of accident requires that one conflate the generalization (“usually” or “almost always”) with the categorical statement (“always”).

The complex question fallacy (*plurium interrogatorum*) involves two unrelated points that are combined and treated as a single proposition. Through the improper use of the word “and,” the listener is encouraged to accept or reject two separate propositions when really only one propo-

sition is acceptable. The classic example is the following question: “Have you stopped beating your wife?” If the listener responds “yes,” it implies that he no longer beats his wife, but did in the past. If the listener responds “no,” it implies that he continues to beat his wife. More appropriately, one should first ask: “Have you ever beaten your wife?” If an affirmative response results, a

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second question may be asked: “Have you stopped?” The complex question argues by asking a question in such a way as to presuppose the truth of some assumption buried in that question—an assumption which may or may not be true.

Begging the question (also known as “circular argument” and *petitio principii*) is an informal fallacy in which the truth of the conclusion of the argument is assumed in one of the premises. Copi, Cohen, & McMahon, *supra*, at 155. In *Milward v. Rust-Oleum Corp.*, No. 15-1996, 2016 U.S. App. Lexis 7420 (1st Cir. Apr. 25 2016), a toxic tort case alleging that Acute Promyelocytic Leukemia (APL) developed from workplace exposure to benzene, the

district court rejected the causation testimony of the plaintiff’s expert for a number of reasons—including the fact that the differential diagnosis testimony of this expert was circular.

In affirming the ruling of the trial court, the First Circuit noted the reasoning of the trial court: “The [district] judge also stated that Dr. Butler’s reasoning was circular: she “ruled out” an idiopathic APL by “ruling in” benzene as a cause, but she had failed to provide a scientifically reliable method of “ruling in” benzene in the first instance.” *Id.* at \*14.

### Fallacies of Ambiguity

With fallacies of ambiguity, the mistakes in argument arise as a result of a shift in the meaning of the words or phrases, from the meanings that they have in the premises, to different meanings in the conclusion. There are five fallacies of ambiguity: equivocation, accent, composition, division, and amphiboly. Copi, Cohen, & McMahon, *supra*, at 148.

The fallacy of equivocation occurs when the same word or phrase is used with two or more meanings, deliberately or accidentally, in formulating an argument. An example of the fallacy of equivocation can be found in *Powers v. Tex. Mut. Ins. Co.*, No. 11-08-00088, 2010 Tex. App. Lexis 587 (Tex. App. Jan. 29, 2010), in which the court discusses the appellant’s equivocation of the word “gap”:

Powers’ challenge on appeal is that the blood alcohol test results should not have been admitted as evidence because there were gaps in the chain of custody; therefore the expert opinions of Dr. Avery and Hambrick that relied on the blood sample should have been excluded. Powers cites *Gammill v. Jack Williams Chevrolet, Inc.*, 972 S.W.2d 713, 726 (Tex. 1998), for the proposition that expert testimony is unreliable if “there is simply too great an analytical gap between the data and the opinion proffered.” The part of this argument that relies on *Gammill* is one of analytical reasoning. The “gap” challenged here is whether the chain of custody from the time the blood sample was taken until it was analyzed by Hambrick was established by the evidence; it was not a “gap” in an expert’s analytical reasoning.

*Id.* at \*9–10.

Clearly, the word “gap” has two separate and distinct meanings. Powers’ misuse of the word gap, whether such misuse was accidental or deliberate, is a fallacy of equivocation.

The fallacy of accent occurs when a shift of meaning arises within an argument as a consequence of changes in the emphasis given to its words or parts. The fallacy of accent can be seen with the use of italics or boldface type to mislead the reader regarding the full truth of the statement. Another example of the fallacy of accent occurs when something is taken out of context through the use of typographical techniques such as the use of all capitals, italics, or double underlining. Though the typographical technique may make it appear as though the reader is yelling, such a tactic does not have bearing upon the credibility or the accuracy of the statement that the proponent is trying to convey.

Another fallacious argument often used by counsel arises when they piece together arguments based upon “sound bites.” Taken out of context, snippets can be the basis of a very persuasive argument. It is important to understand that such arguments are tantamount to a fallacy of accent.

Moreover, to take a bit of evidence here and a bit there from this witness and that—bits torn from explanatory context, the thread of the witness’s discourse—I deem unphilosophical and misleading in so heavy a case weighted down as it is with infinite details. There is danger in that course of merely amplifying the fallacy of accent mentioned in books on logic.

*Turner v. Anderson*, 168 S.W. 943, 947–48 (Mo. 1914).

More recently, the Ninth Circuit identified the fallacy of accent in *United States v. Swisher*, 811 F.3d 299, 322 (9th Cir. 2016), stating:

Consider, for example, Charlie Chaplin’s classic exchange in *The Great Dictator* (1940). When Chaplin mutters “this is a *fine* country to live in,” he is arrested, but escapes punishment by explaining that all he said was “this is a fine country to live in.” Joseph G. Brennan, *A Handbook of Logic*, 213 (2d ed. 1961) (describing this as an example of the informal “fallacy of accent”).

The meaning of the sentence is changed by placing emphasis on the word “fine.”

The fallacy of amphiboly occurs when one of the statements in an argument has more than one plausible meaning due to the loose or awkward manner in which certain words are used. In *Boutwell v. State*, 719 S.W.2d 164 (Tex. Crim. App. 1985), the Texas Court of Criminal Appeals considered the applicability of the Texas Equal Rights Amendment, referred to as the “promiscuity defense,” to homosexual behavior in the context of sexual abuse by a male of several boys. The court stated:

But clearly, a female defendant situated similarly to appellant—that is, a female who had engaged in deviate sexual intercourse with a child 14 years or older who was of the same sex—would likewise be denied the “promiscuity” defense under §21.10. Thus, appellant’s reasoning proceeds upon a fallacy of amphiboly: his complaint is not that he is discriminated against on the basis of “sex” in the sense of “gender;” but rather, that his “sex” act is entitled to protection equal to that given heterosexual conduct under the law as stated in §21.10(b).

*Id.* at 169 (emphasis in original).

With each of the fallacies of ambiguity, errors in logic result from a shift in the meaning of a word or phrase.

The fallacy of composition occurs when one reasons mistakenly from the attributes of a part to the attributes of the whole, or when one reasons mistakenly from the attributes of an individual member of some collection to the attributes of a totality of that collection. This is the opposite of the fallacy of division, in which one reasons mistakenly from the attributes of a whole to the attributes of one of its parts, or when one reasons mistakenly from attributes of some collection of entities of the attributes of individual entities within that collection. While both patterns of reasoning are not always fallacious, caution must be used in using such reasoning.

An example of the fallacy of composition, sometimes referred to as “the whole is nothing more than the sum of its parts,” is negating the safety or nutritional value of a product based upon the attributes of one ingredient in the product, no matter how little trace of that ingredient the product may contain. *Rosen v. Unilever United States, Inc.*, No. 09-2563, 2010 U.S. Dist. Lexis 43797, at \*16 (N.D. Cal. May 3,

2010). In *Rosen*, the court cautioned that the composition of things may have different properties than the sum of its individual parts:

Here, Plaintiff’s allegations are based on the premise that the use of non-nutritious oils makes the blend non-nutritious. Besides the lack of any facts to support this transformation, it does not logically follow from the fact that one oil in a blend does not have the nutritional properties of other nutritious oils, that the blend is rendered devoid of being nutritious.

*Id.*

In *Moore v. P&G-Clairol, Inc.*, 781 F. Supp. 2d 694, 703 (N.D. Ill. 2008), the court refused to admit the plaintiff’s expert testimony, stating: “As a matter of logic, products that contain dangerous chemicals are not, per se, unreasonably dangerous.”

The fallacy of division, which is the inverse of the fallacy of conversion, occurs when the proponent argues that the individual components have the same characteristics as the composite product. For example, the fact that a product may be nutritious overall does not mean that each ingredient, standing on its own, is nutritious. The court in *Rosen* identified the flaws in the plaintiff’s reasoning:

To reason that since a blend of oils is represented as being nutritious, if partially hydrogenated oil is part of the blend, it must also be nutritious commits the fallacy of division. Inherent in [p]laintiff’s allegations is the fallacious reasoning that in order to be part of what is represented to be a “blend of nutritious oils,” partially hydrogenated oil must have the same characteristics of the other oils in the blend.

2010 U.S. Dist. Lexis 43797, at \*16–17.

In litigation it can be expected that there will be some play with the nuances of language or argument. Understanding fallacies of ambiguity can be useful in explaining and refuting arguments based upon rhetorical distortion.

### Conclusion

In *Terry v. Caputo*, 875 N.E.2d 72 (Ohio 2007), the plaintiffs alleged that their illness resulted from mold exposure. To support their claims the plaintiffs sought to introduce expert testimony on general and

specific causation. The trial court and the court of appeals admitted the expert testimony on general causation but excluded it regarding specific causation because it was found to be unreliable. In affirming, the Supreme Court of Ohio noted: “The trial court’s *Daubert* responsibilities, however, do not end with reliability, because the trial court’s gatekeeping function also requires

## The fallacy of division,

which is the inverse of the fallacy of conversion, occurs when the proponent argues that the individual components have the same characteristics as the composite product.

it to judge whether an expert’s testimony is relevant to the task at hand in that it logically advances a material aspect of the proposing party’s case.”

*Id.* at 78. In short, regarding the determination of relevancy and reliability, judges have the responsibility for quality control, which requires a consideration of logical principles.

To be relevant and reliable, evidence must be logical. Conversely, “evidence” that is fallacious is faulty and inadmissible. As fallacies frequently appear in plaintiffs’ rhetorical arguments, defense counsel must be vigilant to their existence. When fallacious arguments exist, the first clue to their existence will be the presence of some type of “disconnect.” Upon discovering this “disconnect,” resorting to a list of fallacies should reveal more about the fallacy—including its name and definition. Armed with this information, defense counsel should search for reported cases and consider reviewing texts and articles on logic. Those efforts should provide the ammunition necessary to draft a compelling refutation.