INDISCERNIBLE LOGIC: USING THE LOGICAL FALLACIES OF THE ILLICIT MAJOR TERM AND THE ILLICIT MINOR TERM AS LITIGATION TOOLS

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I. INTRODUCTION

Baseball, like litigation, is at once elegant in its simplicity and infinite in its complexities and variations. As a result of its complexities, baseball, like litigation, is subject to an infinite number of potential outcomes. Both baseball and litigation are complex systems, managed by specialized sets of rules. However, the results of baseball games, like the results of litigation, turn on a series of indiscernible, seemingly invisible, rules. These indiscernible rules are essential to success in baseball, in the same way the rules of philosophic logic are essential to success in litigation. This article will evaluate one of the philosophical rules of logic;[1] demonstrate how it is easily violated without notice, resulting in a logical fallacy known as the Fallacy of the Illicit Major or Minor Term,[2] chronicle how courts have identified this logical fallacy and used it to evaluate legal arguments;[3] and describe how essential this rule and the fallacy that follows its breach is to essential effective advocacy. However, because many lawyers are unfamiliar with philosophical logic, or why it is important, this article begins with a story about a familiar subject that is, in many ways, like the rules of philosophic logic: the game of baseball.

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1. *See infra* Part II pp. 106-112.
2. *See infra* Part III pp. 113-120.
3. *See infra* Part IV pp. 121-29.

From the bleachers along the third base line, on a warm August evening, the game of baseball seems simple. Players toss the ball around the field between innings. The pitcher stands atop the mound, preparing to throw the first pitch. As the first batter takes his last practice swing and approaches home plate, the pitcher thoughtfully waits for the sign from his catcher and deliberatively throws the ball across home plate. The batter patiently waits for the right pitch, and strikes the ball with his bat, before running to first base. The game moves along, at a thoughtful pace, almost as though if the rules were designed to ensure the spectators are afforded a fair chance to see everything that transpires. Americans have loved baseball for decades, in part because of its simplicity and unapologetically slow pace.

I became interested in the game of baseball as a teenager watching my younger brother, Jason, play high school baseball. My brother was a very talented baseball player. He played center field with equal measures of humility and confidence. I remember him, trotting out to his position in center field at the beginning of an inning, wearing his nonchalance on his sleeve. He might reach down to pick up a few pieces of center field grass, and toss them into the air, as though bored with the game or unimpressed with the competition. He would look around the outfield or into the stands as the batter approached the plate. His movements suggested disconnectedness with his duties or the contest itself. His actions were those of a player unprepared to field a ball to center field, a step or two out of position, void of the instinct to respond quickly to the hit, and lacking the strength or mettle required to field a hard-hit ball, bear down, and throw a runner out from the lonely depths of centerfield.

Contrary to his nonchalant, disinterested appearance, Jason had two remarkable baseball skills: an extremely fast first step and the ability to throw a baseball from home plate over the center field wall with surprising accuracy. Of course, skills like this must be used within the rules of the game. Even an athlete with great speed or great strength can be a lousy baseball player if he cannot put those skills to work in the context of the rules of baseball. Baseball rules are relatively simple. A player needs to hit the pitched ball into the field of play and advance from one base to the next.[4] If the runner can advance to home plate, then his team is

4. *Official Baseball Rules, Rule 5.03*, MLB.COM,

awarded a "run."[5] The team with the most runs at the end of the game wins. The defensive team is tasked with getting the offensive players "out"[6] by catching the hit ball in the air, striking them out, throwing them out before they reach a base, or tagging them out between the bases.[7]

And so it was, when Jason would play baseball. Batters would hit the pitches thrown to them. Some of those hitters would advance to first, or second, or even third base. Sometimes, a runner would advance to third base, and hope for a chance to run home to secure a "run" for his team. Those runners had the advantage of a coach, stationed at third base, who would help them make the important, potentially game-changing decision regarding whether and when they should advance to home plate. The third base coach faced the outfield, where he could see the fielders approach the ball and signal to the runner whether he should stop at third base or run to home plate. While it was the third base coach's decision to counsel the runner regarding whether they should run to home plate, or stay at third base, it was the center fielder's decision to throw a fielded ball to third base, home plate, or another station on the infield.

In a sense, Jason's job as a center fielder, like baseball, turned on very simple rules. If the ball was hit to him, he would position himself to field the ball and then throw the ball to one of his teammates in the infield. This was the conclusion required by a very simple substantive rule of baseball: "Any runner is out when . . . (c) He is tagged, when the ball is alive, while off his base."[8]

However, Jason made fools and enemies of more than a few third base coaches over his years of competition. He was able to do this, in part, because he could throw a baseball farther than

http://mlb.mlb.com/mlb/downloads/y2010/official_rules/2010_OfficialBaseball Rules.pdf (last visited Aug. 6, 2010) ("The pitcher shall deliver the pitch to the batter who may elect to strike the ball, or who may not offer at it, as he chooses."); *Id.* at 5.04 ("The offensive team's objective is to have its batter become a runner, and its runners advance.").

5. *Official Rules*, *supra* note 4, at 5.06 ("When a batter becomes a runner and touches all bases legally he shall score one run for his team.").

6. *Official Rules*, *supra* note 4, at 5.05 ("The defensive team's objective is to prevent offensive players from becoming runners, and to prevent their advance around the bases.").

7. *Official Rules*, *supra* note 4, at 6.05 & 7.08 (providing an exhaustive list of circumstances when a runner is out).

8. *Official Rules*, *supra* note 4, at 7.08.

anyone I have ever seen. Yet, in part, he was able to do this because he knew about the invisible rules of baseball.

These invisible rules of baseball do not appear anywhere in the Official Rules. They are the principles that allow players to connect the "official" substantive rules that the players, coaches, and umpires rely on to determine whether a player is "safe" or "out" with their ability to successfully execute a play to achieve a result of "safe" or "out" on the field.[9] For example, Jason knew that if one of his teammates could tag the runner with the ball while he was between third base and home plate, the runner would be out. That truth is made clear by Rule 7.08.[10] However, when he would make a play from center field, this rule was not the only rule he was thinking about. I remember Jason, more than once, fielding a ground ball while watching from his peripheral vision as the runner rounded third base. Jason would pick up the ball with the same disinterested, aloof body language that he exhibited when he trotted out to center field. He wanted to look casual and lackadaisical. He might even, subtly, fumble the ball for an instant. He knew that the third base coach was watching him intently. He knew that the runner at third could only be thrown out if the third base coach made the wrong decision and told the runner to run from third base to home place. He knew that nothing in the Official Rules of Baseball told a fielder how to ensure a third base coach makes the wrong choice by advising the runner to run for home and expose himself to being thrown out by an accurate and powerful center fielder.

This invisible rule of baseball, that a center fielder cannot throw out a runner if the runner stays on third but can throw the runner out if he makes a run for home plate, cannot be found in the Official Rules. However, a player who wants to really master the game of baseball will find that these invisible rules appear everywhere, filling in the gaps between the Official Rules and

9. Many commentators have observed a set of unwritten rules that are an integral part of baseball. *See, e.g.*, JERRY REMY WITH CORY SANDLER, WATCHING BASEBALL: DISCOVERING THE GAME WITHIN THE GAME 201 (2004) (discussing one of the unwritten rules); BASEBALL STRATEGIES: YOUR GUIDE TO THE GAME WITHIN THE GAME 207 (Jack Stallings & Bob Bennett eds., 2003) (discussing "one of the unwritten rules of baseball strategy"); DAN GUTMAN, THE WAY BASEBALL WORKS 102 (Dinah Dunn & Heather Moehn eds., 1996) (describing one of the maxims in "'the book'—a collection of unwritten rules that have been passed down through the generations").

10. *Official Rules*, *supra* note 4, at 7.08.

solutions to baseball's problems. A sophisticated center fielder knows that while the rule allows him to throw out a runner at home plate, he will never get the chance to throw the runner out, unless the runner makes a mistake. The runner will not make the mistake of improvidently running from third to home unless the center fielder gives him reason to run. One reason for the runner to try to make it to home plate from third base is if he thinks the center fielder is not playing the ball cleanly or aggressively. Accordingly, fielding the ball casually may tempt the third base coach to instruct the runner to sprint to home plate, giving the center fielder the chance to take advantage of Rule 7.08(c) by throwing the runner out. These unseen—but inescapable—rules make what might appear to be a simple, slow-paced game, something much more sophisticated, dynamic, and complex. More importantly, mastery of these invisible rules provides a distinct advantage over a player or coach who is not aware of them—just ask the third base coach.

Litigation is, in a sense, like baseball. Lawyers learn and use well-known, documented substantive rules of law. These substantive rules are analogous to the Official Rules of Baseball. They define in stark terms when someone is "out" and when someone is "safe." However, lawyers use a set of invisible rules to craft them into arguments, and persuade listeners to reach certain conclusions. These invisible rules are the rules of logic. They are the rules that determine the proper form of a legal argument and which dictate whether an argument is persuasive or not. In the same way that a center fielder utilizes invisible rules of baseball to ensure he has a chance to throw a runner out at home plate, a litigator must utilize the rules of logic to ensure his argument is logically sound and persuasive, and to ensure the substantive rules of law that he includes in his argument compel the result he intends.

However, like the casual fan at a baseball game, lawyers frequently know very little about these invisible rules. Lawyers are trained to focus on the substantive rules of law. They spend three years studying these substantive rules of law. Their libraries are full of these substantive rules of law. They have access to electronic databases filled with substantive rules of law. However, few lawyers are exposed to the rules of logic. Most lawyers lack formal education or familiarity with the rules of logic, are uncertain of these rules' precedential value in the courtroom, and under appreciate their important role in crafting persuasive

arguments. Even so, they have a sense of what logic is. In fact, it might seem to lawyers that these rules of logic come naturally. The rules of logic are, in a sense, instinctive to most lawyers. They are easy to master, respected by courts, and essential to effective advocacy.

Logic has been studied since at least the time of Aristotle.[11] The modern rules of logic have been forged from the more than 2,000 years of philosophical struggle to determine just what logic is and why it is so important.[12] The course of that struggle has

11. While Aristotle has been designated the first thinker to devise a logical system, certain logical inferences had been applied before Aristotle, though not formally articulated. Aristotle himself credited Zeno of Elea (490–430 B.C.E.) with being the "'founder of dialectic.'" I.M. BOCHENSKI, A HISTORY OF FORMAL LOGIC 29 (Ivo Thomas ed. & trans., 1961). Aristotle's mentor, Plato, was the first to grasp and formulate a clear idea of logic and the universally valid law. *Id.* at 33. Universally valid law is the idea that fundamental principles of logic are worldwide and unchanging; "no formal logic is possible without the notion of universally valid law." *Id.* Building on the ideas from Zeno of Elea and Plato, Aristotle combined logical form, opposition, and conversion to form the syllogism, Aristotle's "greatest invention in logic." Peter King & Stewart Shapiro, *History of Logic*, *in* THE OXFORD COMPANION TO PHILOSOPHY 496, 497 (Ted Honderich ed., 1995), *available at* http://individual.utoronto.ca/pking/miscellaneous/history-of-logic.pdf. The syllogism, as formulated in Aristotle's *Prior Analytics*, a part of his work known as THE ORGANON, consists of two premises and a conclusion. BOCHENSKI, *supra* at 98.

12. Theophrastus, a pupil of Aristotle, modified and developed Aristotelian logic in several ways. *See* WILLIAM KNEALE & MARTHA KNEALE, THE DEVELOPMENT OF LOGIC 111 (1962). He developed various doctrines to prepare the ground for later classical logic and developed a doctrine of hypothetical arguments to prepare for Megarian-Stoic logic. BOCHENSKI, *supra* note 11, at 99. The Megarian-Stoic School "elaborated a full propositional logic which complements Aristotelian term logic." King & Shapiro, *supra* note 11, at 497. More than anything, however, the Megarian-Stoic School devoted much time to exploring logical fallacies. BOCHENSKI, *supra* note 11, at 130.

Following the Megarian-Stoic period, the study of logic entered a phase known as Scholastic Logic, which differed from ancient logic in that it endeavored to "abstract the laws and rules of a living language," leading to the codification of thorough semantics and syntax. *Id.* at 251. Scholastic Logic can be divided into three periods: transitional period, creative period, and the period of elaboration. *Id.* at 149. The major figure from the transitional period is twelfth century logician Peter Abelard, who "is responsible for the clear formulation of a pair of relevance criteria for logical consequences." King & Shapiro, *supra* note 11, at 497. The following century, entering the creative period, through Abelard's teachings other logicians began to grasp details of Aristotle's texts which resulted in the first phase of supposition theory. *Id.* Peter of Spain developed the supposition theory in his book, JOHANNES XXI, SUMMULAE LOGICALES (Domus Editorialis Marietti 1947) (1277); BOCHENSKI, *supra* note 11, at 149. For more on the supposition theory, see KNEALE & KNEALE, *supra* at 263–74.

developed a set of rules of logic and, importantly, a name for arguments that violate those rules.[13] These illogical arguments,

The final period of Scholastic Logic was the period of elaboration, beginning in the fourteenth century and extending into the fifteenth century. King & Shapiro, *supra* note 11, at 497. The fourteenth century was the peak of medieval logical theory, containing comprehensive investigations of propositional logic, asserloric term logic, and modal logic. BOCHENSKI, *supra* note 11, at 251.

Since the beginning of the modern era, many contributions to logic have been made by mathematicians. *Id.* at 251. In this period, George Boole developed what is now known as Boolean algebra, which reduces all elemental values to "true" or "false." *See* KNEALE & KNEALE, *supra* at 404–27. Gottlob Frege is perhaps the most important logician from the mathematical logic era. He argued that arithmetic is identical with logic. This went farther than any of his predecessors including Boole and Boole's concept that logic was a part of mathematics and expanding it to logic being identical to mathematics. *Id.* at 435. In the early twentieth century, Kurt Gödel developed his theorems of Completeness and Incompleteness, which showed the relationship between validity in general logic to validity in propositional logic. *See id.* at 707–12. In recent years, Alfred Tarski came to develop definitions of truth and logical consequence, while Alonzo Church determined that "there is no algorithm for determining whether a given first-order formula is a logical truth." King & Shapiro, *supra* note 11, at 499–500.

13. Certain logical inferences had been applied before Aristotle. In this pre-Aristotelian period, logic was a matter of rules, not laws. BOCHENSKI, *supra* note 11, at 32. In other words, early logicians followed principles stating how one should proceed, not how one must proceed objectively. *Id*. One of the earliest logicians was Plato, though he is not considered a logician in the common sense of the word. KNEALE & KNEALE, *supra* note 12, at 24. Plato enunciated the principles of logic, but did not relate them in any formal manner. *Id.* at 12. Aristotle has a unique place in history in that he was the first formal logician and his developments have influenced the history of logic more than two thousand years. BOCHENSKI, *supra* note 11, at 40. Aristotle's the ORGANON, is the first logic textbook, comprising of six shorter books, which had governed logical thought until propositional logic became more prominent in logic training. PETER KREEFT, SOCRATIC LOGIC 15 (Trent Dougherty ed., 2004). *Prior Analytics* is a book contained in the ORGANON that contains Aristotle's doctrine of the syllogism. KNEALE & KNEALE, *supra* note 12, at 6.

Aristotle developed a set of six rules to check the validity of syllogisms. KREEFT, *supra* at 242–43. Richard Whately, a nineteenth century logician and theologian, also listed these six rules for the validity of syllogisms in his work, RICHARD WHATELY, ELEMENTS OF LOGIC 1 (1913); C. L. HAMBLIN, FALLACIES 196–97 (1970). It is important to note that Whately's six rules were deduced from an original twelve rules written in Latin by Henry Aldrich, a seventeenth century logician, which had expanded on Aristotle's six original rules. HAMBLIN, *supra*.

Philosopher and logician, C. L. Hamblin suggests eliminating the first two rules since they merely define what a syllogism is, independent of the validity of a syllogism. *Id.* at 199. He also suggests combining rules five and six because they do not operate independently from each other. *Id*. These two rules can be joined to state that "[t]here is an affirmative conclusion, a negative conclusion or no conclusion at all according as both premisses [sic] are affirmative, or only

called fallacies, can be identified by the pattern of an argument's form, which makes them easy to identify, describe, and discredit.[14] Even understanding just one of the rules of logic, and the logical fallacy that flows from it, can be an important tool in the hand of a litigator. One logical fallacy that appears in legal argument is called the Fallacy of the Illicit Process.[15] This article will describe what formal philosophical logic is, what a logical fallacy is, how to identify the fallacy of the Illicit Process, and describe how litigators can use this fallacy to identify and discredit legal arguments that fit into this fallacious pattern of reasoning.

II. PHILOSOPHICAL LOGIC, LOGICAL FALLACIES, AND WHY THEY ARE ESSENTIAL TO DISCIPLINE OF LEGAL REASONING

The study of formal logic is the study, not of the substance of an argument, but of its logical form. Formal logic is not focused on whether the claims made in an argument are true or false.[16]

one, or neither." *Id*. Therefore, Hamblin uses only rules three, four, and the combined five and six to provide a satisfactory theory of the validity for syllogisms. *Id.* Consequently, if rule three is broken, the Fallacy of the Undistributed Middle occurs; if rule four is broken, the Fallacy of Illicit Process occurs. *Id.* at 199–200.

14. Aside from Aristotle's six rules, there are other ways to check syllogisms for validity. KREEFT, *supra* note 13, at 237. One way is known as Euler's Circles, which provides a clear way to see the strategy of a syllogism in that the premises are diagramed by superimposing one over the other. *Id.* at 237–42. "This is possible because there is always a common term to any two propositions in a syllogism." *Id.* at 238. However, Aristotle's six rules provide a more comprehensible way of determining when syllogisms are fallacious and why they are so. *Id.* at 263.

15. The Fallacy of the Illicit Process can take one of two specific forms. Each form has a distinct name, either the Fallacy of the Illicit Major Term (sometime shortened to Fallacy of the Illicit Major), or the Fallacy of the Illicit Minor Term (sometimes shortened to Fallacy of the Illicit Major). *See* 2 J. WELTON, MANUAL OF LOGIC 236 (William Briggs ed., 1907).

16. Of course, while truth finding may not be the focus of the rules of formal logic, the rules are certainly a tool for evaluating the soundness of an argument's structure. It has been said:

> Whatever reference to truth or falsity there is in Formal Logic is wholly hypothetical. If the statements 'All donkeys are daffodils' and 'All dragons are donkeys' are both accepted, accepted as though they were true (whether, as a matter of act, they *are* true is here a completely irrelevant question), then Formal Logic insists that the statement 'All dragons are daffodils' must also be accepted, accepted as though it were true.

W. R. BOYCE GIBSON WITH AUGUSTA KLEIN, THE PROBLEM OF LOGIC 7 (reprt. 1930).

Instead, it focuses on the logical structure[17] of the argument and considers whether the form of the argument is reliable.[18] Philosophy has demonstrated that the logical form dictates whether the argument is one that is deductively valid. The form determines whether it is an argumentative structure where the premises, if true,[19] ensure the truth of the conclusion. This is important because logical argument is about proper inference.[20] When we make an argument, we lead the listener, one step at a time, from

17. One writer aptly refers to formal logic in legal argument as the "architecture of argument." *See* James C Raymond, *The Architecture of Argument*, 7 THE JUD. REV.: J. OF THE JUD. COMMISSION OF N.S.W. 39 (2004) (Austl.), *available at* http://www.benchandbarinternational.com/files/The_Architecture_of_Argument.pdf.

18. Philosophers have debated what logic is and what makes a study of logic "formal." "Logic, in the most extensive sense in which it has been thought advisable to employ the name, may be considered as the Science, and also as the Art, of Reasoning." WHATELY, *supra* note 13, at 1. "Formal Logic is a prop□deutic which is abstractly concerned with consistency of reasoning without any reference to the truth or the falsehood of the accepted premisses, [sic] or to the knowledge or the ignorance of the reasoner." GIBSON WITH KLEIN, *supra* note 16, at 157. "Pure or Formal Logic is the science of the necessary laws of thought. It has *thought* rather than *language* for its adequate object-matter; for though it must express itself in language, and is very much concerned with it, language comes in only as the minister of thought. It is a *science*;—a science rather than an *art*." J. LACY O'BYRNE CROKE, LOGIC 3 (1906) (footnote omitted). "[F]ormal logic, is devoted to thought in general and those universal forms and principles of thought which hold good everywhere, both in judging of reality and in weighing possibility, irrespective of any difference in the objects." 1 HERMANN LOTZE, LOGIC IN THREE BOOKS, OF THOUGHT, OF INVESTIGATION AND OF KNOWLEDGE 10–11 (Bernard Bosanquet ed., London, Oxford University Press 2d ed. 1888).

19. Logicians recognize a distinction between an argument that is logically valid and an argument that is true. Logical validity is a function of conformity to rules of logic. If the rules are followed, then the form of the argument is valid, and the argument is said to be logically valid. However, an argument in valid form does not necessarily mean the conclusion is true. Truth (or falsity) is an attribute of the individual proposition that appear within an argument. Accordingly, the logical form of an argument is either valid or invalid. It is neither true nor false. Conversely, the premises of an argument are either true or false; they are neither valid nor invalid. However, these distinct concepts of truth and falsity, validity and invalidity work together. When the logical form of an argument is valid, and its premises are true, then the argument requires that the conclusion be true. If either a premise is false, or the form is invalid, the conclusion cannot necessarily be true. IRVIN M. COPI & CARL COHEN, INTRODUCTION TO LOGIC 30–31 (13th ed. 2008).

20. "Argument is *discourse containing inference*." J.S. COVINGTON, JR., THE STRUCTURE OF LEGAL ARGUMENT AND PROOF: CASES, MATERIALS, AND ANALYSES 201 (2d ed. 2006).

one truth to the next, and ultimately to our final conclusion. However, if an argument's structure is bad, then there is no reason for the listener to infer one truth from another, and therefore, there is no reason to take "the next step." Without some reliable reason to go from one step to the next, there is no reason to believe that the argument compels a particular conclusion. The proper inference of one step in the argument from the previous step is essential to the reliability of the argument's conclusion.

It is a little like giving someone directions from the eastbound interstate expressway exit to the gas station in my hometown. The driver should exit to the right, stop at the stop sign, turn left at the stop sign, travel approximately one mile, stop at the intersection but do not turn, travel approximately 300 feet and turn right at the gas station. If I was to articulate those directions to a stranger in town she could tell, from the form of the directions that she can ensure a way to the gas station. Importantly, if the directions are accurate, then the directions *must* ensure that the stranger will get to the gas station without trouble.

However, if my directions are of a form that is unreliable, then they cannot ensure the truth of the conclusion. For example, if I tell the same driver to exit to the right, stop at the stop sign, ***turn*** at the stop sign, travel approximately one mile, stop at ***an intersection***, travel approximately 300 feet and turn right at the gas station, the form of my directions no longer ensure that the driver will get to the gas station. I may know exactly where the gas station is; I may know how to get to the gas station. In fact, the substance of my directions is entirely and undeniably true. However, I do not specify where to turn at the first stop sign; I do not specify whether a turn is required at the following intersection. All of the landmarks described in my directions may be accurate, but the form of my directions is unreliable. In a sense, there are rules that must be followed when we give someone directions. If you tell someone to turn, you must tell them which direction to turn. If you give someone a landmark, you must specify what to do at the landmark. These rules about how to give someone directions are necessary to give someone reliable directions, since they ensure the integrity of inferring the truth of one step in the directions to another.

It is much the same with the form of the logic of argument.

Deductive logic is the "logic of necessary inference."[21] In deductive logic, the argument formed claims its conclusion is necessarily supported by its premises.[22] That is, in deductive logic, if the premises are true, and the form of the argument is valid, then it is logically impossible for the conclusion to be false.[23]Of course, an argument that can be demonstrated to be logically valid makes for powerful advocacy. Conversely, an argument that can be demonstrated to be logically invalid has no persuasive value.

Deductive arguments can be organized into logical structures called syllogisms. The syllogism has been described as "[t]he most rigorous form of logic, and hence the most persuasive."[24] A

21. "A deductive argument is an argument in which the arguer claims that it is *impossible* for the conclusion to be false given that the premises is true." PATRICK J. HURLEY, A CONCISE INTRODUCTION TO LOGIC 31 (Steve Wainwright et al. eds., 9th ed. 2006). In the context of legal proof it has been said that "[i]nference is the essence of proof; proof is good or bad according to the quality and number of inferences drawn from facts to conclusions." COVINGTON, *supra* note 20, at 2.

22. COPI & COHEN, *supra* note 19, at 26. Deductive logic is different from inductive logic. Inductive logic, involves an argument that claims its conclusion is supported by its premises, but not necessarily required by them. Accordingly, a valid deductive argument has the potential to be a more persuasive device for argumentation.

Lawyers frequently focus on another form of reasoning—analogical reasoning—without fully understanding the persuasive value of deductive logic. The distinction between the two methodologies has been described this way:

> While analogies are thus useful in legal *reasoning,* they play a more limited role in legal *argument*. The obvious inadequacy of the use of analogy in constructing a legal argument is an analogy's inability to answer the question, "so what?" . . . It takes a syllogism to provide the answer to the "so what" challenge. That is, the logical force of an analogy comes from the syllogism to which it contributes, not from the persuasiveness of the analogy itself. Or, put another way, an analogy is a way of defending a premise of a syllogism; by itself, it is not an argument but merely a small piece of an argument.

JAMES A. GARDNER, LEGAL ARGUMENT: THE STRUCTURE AND LANGUAGE OF EFFECTIVE ADVOCACY 11 (1993).

23. DOUGLAS WALTON, INFORMAL LOGIC: A PRAGMATIC APPROACH 138 (2d ed. 2008).

24. ANTONIN SCALIA & BRYAN A. GARNER, MAKING YOUR CASE: THE ART OF PERSUADING JUDGES 41 (2008). *See also* COVINGTON, *supra* note 20, at 199 ("The enticing thing about the syllogism is that it yields a necessary conclusion, which means that if the listener accepts the premises, then the listener must accept the conclusions or contradict himself. The early European intellectual prized the power of the syllogism to the point that much of medieval university training was about intricate points in disputation based on the syllogism."); GARDNER, *supra* note 22, at 8 ("The power of syllogistic argument leads to the only significant rule about crafting legal arguments: *every good legal argument is cast in the form of a syllogism*."). Courts have long

syllogism is an argumentative structure, made up of two distinct but related premises and a conclusion.[25] There are different types of syllogisms.[26] One common syllogism used in legal argumentation is a categorical syllogism. In a categorical syllogism, the conclusion follows from the relationship between the concepts in the premises and their membership in certain categories.[27] "Categorical propositions are regarded as being about classes, the classes of objects designated by the subject and predicate terms."[28] For example, when a legal issue revolves around whether a certain act meets a definition, it may very well fit into a categorical syllogism. Similarly, when a legal issue focuses on whether a party met the requirements of a term of a contract,

recognized the syllogism as a legitimate and persuasive form of legal argument. *See, e.g.*, 44 Liquormart, Inc. v. Rhode Island, 517 U.S. 484, 511–12 (1996); Ford v. Georgia, 498 U.S. 411, 421 (1991); Fort Stewart Schs. v. Fed. Labor Relations Auth., 495 U.S. 641, 650 (1990); Ry. Express Agency, Inc. v. Virginia, 358 U.S. 434, 443 (1959); Phelps Dodge Corp. v. NLRB, 313 U.S. 177, 191 (1941); Lynch v. Alworth-Stephens Co., 267 U.S. 364, 370 (1925); William J. Moxley Corp. v. Hertz, 216 U.S. 344, 356 (1910); Pease v. Dwight, 47 U.S. 190, 200 (1848); Bukuras v. Mueller Grp., L.L.C., 592 F.3d 255, 265 (1st Cir. 2010); Pace Elecs., Inc. v. Canon Computer Sys., Inc. 213 F.3d 118, 123 (3d Cir. 2000); United States v. One 1973 Rolls Royce, V.I.N. SRH-16266, 43 F.3d 794, 813 (3d Cir. 1994); Jung Hyun Sook v. Great Pac. Shipping Co., 632 F.2d 100, 102–03 (9th Cir. 1980); United States v. Josephson, 165 F.2d 82, 90 (2nd Cir. 1947); Madden v. Lancaster County, 65 F. 188, 190 (8th Cir. 1894).

25. ALEXANDER BAIN, LOGIC: DEDUCTIVE AND INDUCTIVE 134 (N.Y., D. Appleton & Co. 2d ed. 1880); 1 CHRISTOPH SIGWART, LOGIC 374 (J. H. Muirhead ed., Helen Dendy trans., N.Y., MacMillan & Co. 2d ed. 1895); AUGUSTUS DE MORGAN, FORMAL LOGIC 88 (A. E. Taylor ed., The Open Court Co. 1926) (1847).

26. There are three principal kinds of syllogisms: the categorical syllogism, the disjunctive syllogism, and the hypothetical syllogism. COPI & COHEN, *supra* note 19, at 301. The disjunctive syllogism "contains a compound, disjunctive (or alternative) premise asserting the truth of at least one of two alternatives, and a premise that asserts the falsity of one of those alternatives." *Id.* The hypothetical syllogism contains "one or more compound, hypothetical (or conditional) propositions, affirming that if one of its components (the antecedent) is true then the other of its components (the consequent) is true." *Id.*

27. "A *categorical syllogism* is defined as a form of argument consisting of three categorical propositions which contain between them three and only three terms. Two of the propositions are premises, the third is the conclusion." MORRIS R. COHEN & ERNEST NAGEL, AN INTRODUCTION TO LOGIC AND SCIENTIFIC METHOD 77 (1934); *see also* COVINGTON, *supra* note 20, at 437 (defining categorical syllogism as "[a] form of argument in which the antecedent and the consequent of the major proposition places subjects in categories, such as all A are B").

28. COPI & COHEN, *supra* note 19, at 189.

that issue may fit neatly into a categorical syllogism.[29]

Logicians have cataloged the various forms of syllogisms, and developed a set of six[30] rules for syllogisms of deductive logic. The six syllogistic rules have been typically stated as: (1) avoid four terms (i.e., a categorical syllogism must contain three terms, and the terms must have the same meaning each time they are used in the argument.); (2) distribute the middle term in at least one premise (a discussion of the logical term "distribute" follows); (3) any term distributed in the conclusion must be distributed in the premises; (4) avoid two negative premises; (5) if either premise is negative the conclusion must be negative; (6) from two universal premises no particular conclusion may be drawn.[31] Concluding that a deductive argument is logically well-formed and has a valid logical structure requires strict adherence to all of these rules. Where an argument's form violates even one of these rules, the argument is fallacious.[32] Fallacies of deductive logic are simply

29. For example, the following is an example of a categorical syllogism:
Any party to the contract who fails to make a timely installment payment is a defaulting party under the contract.
Defendant failed to make a timely installment payment required by the contract.
Therefore, Defendant is a defaulting party under the contract.

30. Not all logicians have agreed on the number of rules or their numeration. *See, e.g.*, HURLEY, *supra* note 21, at 256, 257–59 (articulating five rules but noting "logicians of today generally settle on five or six [rules of syllogism]"). Hurley explains the distinction between five and six rules by stating, "[s]ome texts include a rule stating that the three terms of a categorical syllogism must be used in the same sense throughout the argument." *Id.* Hurley and others incorporate this rule into the definition of "categorical syllogism." *Id.*

31. *See, e.g.*, COPI & COHEN, *supra* note 19, at 244–49. However, compare, C. L. Hamblin's discussion on historical variations on the rules of validity of syllogisms and his proposition that three concise rules could adequately encompass the requirements. HAMBLIN, *supra* note 13, at 196–203.

32. Scholars have comprehensively debated the meaning of the term "fallaciousness" as a philosophical subject. For a thorough discussion of the historical meaning of fallacy throughout the history of the philosophy of logic, see Hans Vilhelm Hansen, *The Straw Thing of Fallacy Theory: The Standard Definition of 'Fallacy,'* 16 ARGUMENTATION 133 (2002). Hansen considers a variety of definitions of fallacy: "A fallacious argument, as almost every account from Aristotle onwards tells you, is one that *seems to be valid* but *is not so*." *Id.* at 133 (quoting HAMBLIN, *supra* note 13, at 12). "It has been customary for books on logic to contain a separate section or chapter on *fallacies*, defined as *errors in reasoning*." *Id.* at 137 (citing COHEN & NAGEL, *supra* note 27, at 376). The term 'fallacy' is often used to refer to any kind of mistaken belief, however arrived at. In this sense it may be said, for instance, that the belief that women

descriptions of various arguments' failures to adhere to one or more of these six logical rules.

Even understanding one of the six rules can help a lawyer spot and respond to fallacious reasoning. Knowledge of even one fallacy might be all a lawyer needs to diffuse an opponent's argument. Two common fallacies—the Fallacy of the Illicit Major Term and the Fallacy of the Illicit Minor Term—follow from the failure to observe just one of those six rules.The third[33] of those six rules—the rule that requires that any term distributed in the conclusion must be distributed in the premises—must be observed in order to meet the test of validity.[34] When an argument fails to

are illogical is a 'fallacy.' For our present purpose, this sense is too wide, and we shall consider only errors in *reasoning*. . . . We . . . adopt the following definition: A *fallacy* is an argument that *seems* to be sound without being so in fact. An argument is 'sound' for the purpose of this definition if the conclusion is reached by a reliable method and the premises are known to be true. This definition agrees well with *one* common meaning of 'fallacy.'

Id. at 138 (quoting MAX BLACK, CRITICAL THINKING 229–30 (1952)).

Sophistical reasoning appears to be genuine reasoning but actually is fallacious. Sophistics, therefore, is that part of logic concerned with the defective syllogism. A sophistic argument is a syllogism that seems to infer a conclusion from probable premises but, because of one fallacy or another, does not really do so. The defect in the argument occurs either on the part of matter alone or on the part of both matter and form.

Id. at 138 (quoting JOHN OESTERLE, LOGIC: THE ART OF DEFINING AND REASONING 253 (2d ed. 1963)). "'Strictly speaking, the term 'fallacy' designates an unacceptable mode of reasoning. However, the term is usually extended to include types of improper definition.'" *Id.* at 139 (quoting EDITH W. SCHIPPER & EDWARD SCHUH, A FIRST COURSE IN MODERN LOGIC 24 (1959)). "The word 'fallacy' is used in various ways. One perfectly proper use of the word is to designate any mistaken idea or false belief, like the 'fallacy' of believing that all men are honest. But logicians use the term in the narrower sense of an error in reasoning or in argument. A fallacy, as we shall use the term, is a type of incorrect argument." *Id.* at 139 (quoting IRVING COPI, INTRODUCTION TO LOGIC 52 (2d ed. 1961)). "The word 'fallacy' is sometimes used as a synonym for any kind of position that is false or deceptive, and sometimes it is applied in a more narrow sense to a faulty process of reasoning or to tricky or specious persuasion. We will use 'fallacy' in the latter sense so that one may say a fallacy occurs where a discussion claims to conform to the rules of sound arguments but, in fact, fails to do so." *Id.* at 141 (quoting WARD FEARNSIDE &WILLIAM HOLTHER, FALLACY: THE COUNTERFEIT OF ARGUMENT 3 (1959)). "A *fallacious* argument in logic is an incorrect argument. It is also customary to restrict the word 'fallacious' to incorrect arguments which in certain contexts *seem* to some to be correct." *Id.* at 141 (quoting JAMES D. CARNEY & RICHARD K. SCHEER, FUNDAMENTALS OF LOGIC 11 (2d ed. 1974)).

33. Those who reduce the number of rules to five might refer to this as the second rule. *See, e.g.*, HURLEY, *supra* note 21, at 257.

34. COPI & COHEN, *supra* note 19, at 246–47.

comply with this rule, the result is an argument that suffers from the Fallacy of the Illicit Major Term or the Fallacy of the Illicit Minor Term. An explanation of what it means to "distribute" a term and which terms are the "major term" and "minor term" in any given syllogism will demonstrate how to spot this fallacy and why it is the hallmark of a formally invalid argument.

III. THE FALLACIES OF THE ILLICIT MAJOR TERM AND THE ILLICIT MINOR TERM

The names of these fallacies—the "Fallacy of the Illicit Major Term" and the "Fallacy of the Illicit Minor Term"[35]—are intended to capture the essence of why these patterns of argument are inherently unreliable. While logicians have endeavored to name this and other fallacies in ways that are descriptive,[36] these descriptions are bound by the unfamiliar nomenclature of formal logic. Accordingly, neither the term "illicit" nor the words "major term" or "minor term" will have immediate significant meaning to most lawyers or jurists. However, these names and the fallacy they stand for make sense with an understanding of some of the basic terminology and concepts of formal logic. Understanding this terminology begins with understanding the structure logicians use to evaluate the logical form of arguments: the syllogism.

Evaluating an argument's structure begins with subdividing the argument into components, and assembling those subdivisions into a uniform structure called a syllogism. Instead of using all of the precise words used in an argument, it is simpler and equally effective, to eliminate and paraphrase some of the words in the argument before arranging them in the syllogism.[37] It may even be possible to further simplify the argument by reducing some of those words to symbols. Furthermore, at times it is appropriate to add implied words into the framework of the syllogism to ensure consistency in the intended meaning of the terms of the argument.

35. These two fallacies are sometimes described generally as a Fallacy of Illicit Process.

36. Examples of some formal logical fallacies include "Affirming the Consequent," "Denying the Antecedent," "Fallacy of the Undistributed Middle Term," "Fallacy of Exclusive Premises," and the "Existential Fallacy." COPI & COHEN, *supra* note 19, at 246–49, 300–01.

37. *See* COPI & COHEN, *supra* note 19, at 12–19 (describing in detail the process of converting complex arguments or arguments with implied terms into syllogistic form).

Ultimately, this process reduces the argument to a series of phrases or letters or symbols that represent the essential components of the argument and the relationships between and among those components. This arrangement of components in a standard form is called a syllogism.[38]

The form of a syllogism consists of two premises and a conclusion.[39] A premise is comprised of "propositions"[40] which are used to support the truth of a conclusion. Each premise consists of terms. For example, one might argue, "All prosecutors are lawyers." This premise has two terms: "[persons who are] prosecutors" and "[persons who] are lawyers." If we add a second premise, "No public defenders are prosecutors," we see that it too, contains two terms: "[persons who are] public defenders" and "[persons who] are prosecutors." To complete the syllogism, we might attempt to add the following conclusion: "Therefore, no public defenders are lawyers."[41] We could then arrange these two premises and the conclusion this way:

38. *Cf.* F. C. S. SCHILLER, FORMAL LOGIC 222 (1912). ("Now, to put an argument in syllogistic form is to strip it bare for logical inspection. We can then see where its weak points must lie, if it has any, and consider whether there is reason to believe that it is actually (*i.e.* materially) weak at those points.").

39. *See* COPI & COHEN, *supra* note 19, at 224.

Legal argument generally has three sources of major premises: a text (constitution, statute, regulation, ordinance, or contract), precedent (caselaw, etc.), and policy (i.e., consequences of the decision). Often that major premise is self-evident and acknowledged by both sides. The minor premise, meanwhile, is derived from the facts of the case. There is much to be said for the proposition that "legal reasoning revolves mainly around the establishment of the minor premise.

SCALIA & GARNER, *supra* note 24, at 42 (footnote omitted).

Of course, some arguments are too complex to reduce to a simple syllogism. Frequently, components of an argument are not essential to its truth or fallacy. Similarly, portions of an argument are sometimes not expressed at all. Such arguments are called enthymemes. RUGGERO J. ALDISERT, LOGIC FOR LAWYERS: A GUIDE TO CLEAR LEGAL THINKING 61 (3d ed. 1997). Conversely, sometimes a single syllogism is insufficient to fully embody all of the terms of an agreement. In this situation, a series of syllogisms can be linked together, with the conclusion of one syllogism forming the premise of a subsequent syllogism, to form a polysyllogism. *Id.* at 64.

40. A proposition is an assertion that something is the case, or that it is not the case. COPI & COHEN, *supra* note 19, at 5. Logicians sometimes use the term "statement" in place of the term "proposition." *Id.*

41. Of course this conclusion is factually incorrect. The conclusion is also the result of a logically invalid argument. *See* COPI & COHEN, *supra* note 19. We will understand why the argument is logically invalid after exploring the Fallacies of the Illicit Minor and Major terms, *infra* pp. 17–18.

All prosecutors are lawyers.
No public defenders are prosecutors.
Therefore, no public defenders are lawyers.

Accordingly, we have crafted a syllogism with three terms: "prosecutors," "lawyers" and "public defenders." In a valid categorical syllogism, there must be a common term that appears in each of the two premises. This common term is called the middle term.[42] In this example syllogism, the term "prosecutors" is the middle term, since it appears in both premises. Additionally, we have names for the remaining two terms. The term that is the predicate of the conclusion is the "major term."[43] The term that is the subject of the conclusion is the "minor term."[44] Accordingly, the conclusion, "no public defenders are lawyers" identifies the predicate "public defenders" as the major term and the antecedent "lawyers" as the minor term.

The Fallacies of the Illicit Minor Term and the Illicit Major Term focus on the two terms that appear in the conclusion of the syllogism.[45] These fallacies result from the violation of the third law of deductive logic which focuses on the requirements for the minor term[46] and major term[47] in a syllogism. The rule provides that if the conclusion "distributes" one of these terms, then the term must also be distributed in at least one of the premises. In logic, when a term is used in a way that "refers to all of the members of the class" referenced by that term, that term is said to be "distributed."[48] For example, if one states that "all prosecutors

42. COPI & COHEN, *supra* note 19, at 225.

43. *Id.*

44. *Id.*

45. The middle term is the subject of another, similar rule regarding distribution of terms. Violating that rule results in a different fallacy: the Fallacy of the Undistributed Middle Term. *See* Stephen M. Rice, *Conventional Logic: Using the Logical Fallacy of Denying the Antecedent as a Litigation Tool*, 79 MISS. L.J. 669 (2010).

46. The minor term is the term that is the subject of the conclusion. *See, e.g.*, JAMES H. HYSLOP, THE ELEMENTS OF LOGIC, THEORETICAL AND PRACTICAL 171 (Charles Scribner's Sons 1892).

47. The major term is the term that is the predicate of the conclusion. *See, e.g.*, HYSLOP, *supra* note 46, at 171.

48. COPI & COHEN, *supra* note 19, at 189. *See also* RICHARD WHATELY, *supra* note 13, at 28 ("[A] term is said to be 'distributed,' when it is taken universally, so as to stand for every thing it is capable of being applied to; and consequently 'undistributed,' when it stands for a portion only of the things

are lawyers," the term "prosecutors" is distributed, since it refers universally to all prosecutors. Similarly, in the example syllogism below, the conclusion "no public defenders are lawyers" distributes the term "public defenders" but does not distribute the term "lawyers."

> All prosecutors (distributed) are lawyers (undistributed).
> No public defenders (distributed) are prosecutors (distributed).
> Therefore, no public defenders (distributed) are lawyers (distributed).

The argument is fallacious, because it violates the third law of logic: "no term must be distributed in the conclusion that was not distributed in the premise in which it arose."[49] While the conclusion is patently untrue, the structure of the argument is also logically flawed. Try to explain what is wrong with the preceding argument without discussing common knowledge or the rules of formal logic. You might be able to explain why it is untrue without any training in formal logic by saying: "Everyone knows that public defenders are lawyers. Yes, they are not prosecutors, but they meet the definition of lawyers." However, if you offered such a common sense explanation, you would be missing the point. Furthermore, you would have neither completely nor accurately described the problem. You cannot fully explain what is wrong with this argument, unless you understand something about formal logic. That is because while both of the premises in this syllogism are uncontrovertibly true, the logical form of this argument is faulty. It is the ability to offer and explain this logical justification for the falsity of the conclusion that is so valuable to a lawyer. This is particularly true when the conclusion is not as obvious as a public defender's status as a lawyer.

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signified by it . . . ."); CHRISTOPHER W. TINDALE, FALLACIES AND ARGUMENT APPRAISAL 45 (2007) ("A term is said to be 'distributed' in a proposition when it is meant to refer to all members of the class of things that proposition denotes."); JAMES A. WINANS & WILLIAMS E. UTTERBECK, ARGUMENTATION 69 (1930) ("A term is said to be distributed if it refers to a class of things in its entirety."); NICHOLAS BUNNIN & JIYUAN YU, THE BLACKWELL DICTIONARY OF WESTERN PHILOSOPHY 188 (2004) ("A term is distributed if it refers to all members of the class to which it is referring and is explicitly or implicitly prefixed by a universal quantifier.").

49. *See* COPI & COHEN, *supra* note 19.

Since putting people in categories is the gist of the argument above, the rule of logic that governs the distribution of the terms in the conclusion ensures the logical integrity of the conclusion. In order to ensure the integrity of such a conclusion, the term in the conclusion must be consistent in their levels of distribution. If distribution is not consistent from the premises to the conclusion, then the possibility exists that conclusion states a proposition beyond that found in the premise. If such possibility exists, then the conclusion cannot ensure the integrity of the argument and is logically unreliable.

The reason that this syllogism is logically flawed, is because the term "lawyers" is undistributed in the premise in which it arose, but distributed in the conclusion. Accordingly, the term is said to be "illicit." The fact that *some* lawyers are prosecutors does not allow us to reach any conclusion about *all* lawyers.

From this example, we see the essence of this type of syllogistic argument and why it must be fallacious. This syllogism reaches a conclusion by putting people in categories.[50] That is why logicians call this form of argument a categorical syllogism.[51] It is the relationship between the categories that justifies drawing a valid inference from the premises in the conclusion. When a syllogism treats undistributed terms as if they were distributed terms, the reliability of the inference breaks down. Once the reliability of the inference breaks down, we can no longer rely on the argument's conclusion. That is why we call the argument

50. W. EDGAR MOORE, CREATIVE AND CRITICAL THINKING 194 (1967) ("[A] *categorical* proposition names or describes two classes and states a relationship between them.").

51. More precisely, a categorical syllogism is made up of "categorical propositions."

> A categorical proposition is made up of four components, the quantifier, the subject term, the copula, and the predicate term. A quantifier is of one of two types: the universal quantifier 'all' or the particular (existential) quantifier 'some'. A term is a word that stands for a class of individuals, called the 'extension' of that class. For example, the term 'stunt pilots' stands for the class of stunt pilots. A copula is a form of the verb 'is' or 'are' that joins one term to another. The subject term stands for a class said to belong, or not to belong, to another class, denoted by the predicate term. In the example . . . 'Some accountants are daredevils' is a categorical proposition, because it can be paraphrased as 'Some accountants are individuals who are daredevils.'

DOUGLAS N. WALTON, FUNDAMENTALS OF CRITICAL ARGUMENTATION 54–55 (2005). *See also* 1 J. WELTON, MANUAL OF LOGIC 156 (2d ed. 1904) ("A Categorical Proposition is one which simply asserts or denies some fact; as 'Gold is yellow'; 'True bravery is not rash.'").

fallacious.

This is where our example argument, above, goes wrong. The minor term "lawyers" is undistributed in the minor premise ("All prosecutors are lawyers"), but distributed in the conclusion ("Therefore, no public defenders are lawyers"). It violates the third rule of logic. If we understand the justification behind this rule of logic, (i.e., it exists to manage the consistent distribution of terms, and the sound inferences that follow from consistent distribution of terms) what is wrong with this conclusion becomes clear. From one perspective, the syllogism attempts to make a universal conclusion about lawyers (that no public defenders are lawyers) based on an example of one subcategory of lawyers (prosecutors). The logical form of the argument expressly ignores the possibility that prosecutors and public defenders might be two mutually exclusive subcategories of lawyers.

Just as this rule applies to a minor term in the conclusion that is distributed in the conclusion but not distributed in one of the premises resulting in the Fallacy of the Illicit Minor Term, it may also apply to a major term. Where the conclusion distributes the major term in the conclusion, without it being distributed in at least one premise, it is referred to as the Fallacy of the Illicit Major term. Both fallacies result from violations of the same law of logic: if a term is distributed in the conclusion, then it must be distributed in at least one premise.

We encounter arguments that take this form frequently in litigation and elsewhere. Where they are made, their logical structure is not always readily apparent. Two reasons explain how easily camouflaged formal logical fallacies tend to be. First, logically fallacious fallacies are generally made with seemingly true premises. The fact that the arguer claims a conclusion results from two truthful premises, suggests that there is something sound about the conclusion. While logic tells us this is not the case, there seems to be a psychological tendency in some cases to find a conclusion, "truthful by association."[52] Where a conclusion keeps

52. Psychology has revealed that we are psychologically predisposed to sometimes accept certain conclusions just because they take a particular syllogistic form. Psychologists have studied one theory known as the "Athmosphere Effect." Some researchers have considered the moods of the premises created by an "atmosphere" regarding the types of conclusions we are prone to accept as valid. DEBORAH J. BENNETT, LOGIC MADE EASY 88 (2004). Psychologists have argued that "if two premises are of the same logical form,

the company of two seemingly truthful premises, we tend to give the conclusion the "benefit of the doubt" unless and until we scrutinize it.

Second, the syllogism, like good poetry, has an inviting meter to it. Because the syllogism is a natural and ancient form of argument, we are comfortable with it. It tends to have, by its argumentative form alone, some credibility with us. Accordingly, when an argument is formed this way, we are comfortable with accepting it. However, a lawyer, armed with an understanding of those laws of logic that allow us to accept the logical form of a syllogism, will know the difference between an argument that merely "sounds good" and one that "must be sound."

Of course, most judges are unfamiliar with philosophical logic, the necessity of proper distribution, or the laws of deductive logic. Accordingly, it is important to find formal logic's place, not only in philosophy, but in jurisprudence as well. Several case examples of courts identifying and relying upon the Fallacy of the Illicit Major Term and the Fallacy of the Illicit Minor term are helpful to illustrate the manifestation of this fallacy in legal reasoning. They also provide authoritative precedent for the place of formal logic generally, and these fallacies specifically, in jurisprudence.

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then 'atmosphere' makes it likely that a conclusion of that form will be thought to follow." N.E. Wetherick & K.J. Gilhooly, *'Atmosphere', Matching, and Logic in Syllogistic Reasoning*, 14 CURRENT PSYCHOLOGY 169, 2 (1995). However, if the premises are of different logical forms, two supplementary principles are required: The Principle of Quality, which states that "whenever one or more of the premises is negative, the preferred conclusion is negative; and The Principle of Quantity, which is "whenever one or more of the premises is particular, the preferred conclusion will be particular." JONATHAN ST. B.T. EVANS ET AL., HUMAN REASONING 235 (1993). A subject who has some grasp of logic often comes to think of the Atmosphere Effect as a shortcut to giving a correct response because it is often successful. *Id.* But it is not a surefire way to successfully concluding a syllogism. *Id.* In many studies, there is evidence of an attempt at logical processing. *Id.* at 236. Because the effects of atmosphere were more marked on invalid than valid syllogisms, there is a finding based on the assumption that the subjects are at least making an attempt at reasoning. *Id*. "The atmosphere of the premises has been shown to be a contributing factor to difficulties in syllogistic deduction." BENNETT, *supra*, at 88. Knowing that our psychology sometimes works against our ability to think logically, should lead those of us committed to the discipline of legal reasoning to be that much more vigilant in understanding the logical framework of the arguments we employ and refute.

IV. COURTS HAVE RECOGNIZED THE FALLACIES OF ILLICIT MAJOR AND ILLICIT MINOR PREMISES AS FALLACIOUS REASONING, AND REJECTED THESE ARGUMENTS AS LOGICALLY INVALID AND UNRELIABLE

The logical Fallacies of the Illicit Major and Illicit Minor Terms are practical tools with utility for lawyers that go beyond their historical uses as a theoretical tool of philosophy. Courts searching for theoretical justification and a metalanguage for describing what is wrong with a legal argument, have used deductive logic generally and other formal logical fallacies specifically to analyze the validity of arguments and articulate what is logically right or wrong with them. For example, courts have employed the formal logical fallacies of Denying the Antecedent,[53] Affirming the Consequent,[54] the Fallacy of the

53. *See* Carver v. Lehman, 528 F.3d 659, 671 (9th Cir. 2008), *withdrawn*, 540 F.3d 1011 (9th Cir. 2008); Agri Processor Co. v. NLRB, 514 F.3d 1, 6 (D.C. Cir. 2008); E. Armata, Inc. v. Korea Commercial Bank, 367 F.3d 123, 132 n.10 (2nd Cir. 2004); TorPharm Inc. v. Ranbaxy Pharm., Inc., 336 F.3d 1322, 1329 & n.7 (Fed. Cir. 2003); Crouse-Hinds Co. v. InterNorth, Inc., 634 F.2d 690, 703 (2nd Cir. 1980); Nw. Steel Erection Co. v. Zurich Am. Ins. Co., 2008 U.S. Dist. LEXIS 4082, at *4 n.5 (D. Neb. 2008); Bell Atl. Corp. v. MFS Commc'ns Co., 901 F. Supp. 835, 849 (D. Del. 1995); Villines v. Harris, 11 S.W.3d 516, 520 n.2 (Ark. 2000); Thomson v. Beuchel, 2007 Cal. App. Unpub. LEXIS 6242, at *18 n.6 (Cal. Ct. App. 2007); Thompson v. Clarkson Power Flow, Inc., 254 S.E.2d 401, 402 n.1 (Ga. Ct. App. 1979); French v. State, 362 N.E.2d 834, 843 n.1 (Ind. 1977) (DeBruler, J., dissenting); Mark v. Comm'r of Pub. Safety, No. A04-1905, slip op. at 5 n.3 (Minn. Ct. App. May 10, 2005); Health Pers. v. Peterson, 629 N.W.2d 132, 134 n.3 (Minn. Ct. App. 2001); State v. Clifford, 121 P.3d 489, 501 (Mont. 2005) (Nelson, J., concurring); State v. Wetzel, 114 P.3d 269, 275–76 (Mont. 2005) (William, J., dissenting); Dep't 56, Inc. v. Bloom, 720 N.Y.S.2d 920, 923 (N.Y. Sup. Ct. 2001); Iams v. DaimlerChrysler Corp., 883 N.E.2d 466, 478–79 (Ohio Ct. App. 2007); Edwards v. Riverdale Sch. Dist., 188 P.3d 317, 321 (Or. Ct. App. 2008); Hale v. Water Res. Dep't, 55 P.3d 497, 502 (Or. Ct. App. 2002); *In re* Luna, 175 S.W.3d 315, 320 & n.4 (Tex. App. 2004), *withdrawn*, *In re* Luna, 275 S.W.3d 537, 538 (Tex. App. 2008); Thompson v. State, 108 S.W.3d 269, 278 (Tex. Crim. App. 2003) (Keasler, J., concurring in part and dissenting in part); Zinpro Corp. v. Ridenour, 1996 Tex. App. LEXIS 3380, at *10 n.4 (Tex. App. Aug. 1, 1996).

For a discussion of the Fallacy of the Undistributed Middle Term and its treatment in case law, see Stephen M. Rice, *Conventional Logic: Using the Logical Fallacy of Denying the Antecedent as a Litigation Tool*, 79 MISS. L.J. 669 (2010).

54. Gilliam v. Nev. Power Co., 488 F.3d 1189, 1197 n.7 (9th Cir. 2007); Stewart Foods, Inc. v. Broecker (*In re* Stewart Foods, Inc.), 64 F.3d 141, 145 n.3 (4th Cir. 1995); United Tel. Co. v. Fed. Commc'ns Comm'n, 559 F.2d 720, 725–26 (D.C. Cir. 1977); Topliff v. Wal-Mart Stores E. LP, 2007 U.S. Dist.

Undistributed Middle Term,[55] and the Fallacy of Negative Premises.[56] Just as courts have found use for these fallacies in evaluating legal argument, lawyers, too, should use them to test the logic of their own arguments, as well as the logic of their opponents' arguments. Here we will consider a few examples of

LEXIS 20533, at *183 (N.D.N.Y Mar. 22, 2007); Adams v. La.-Pac. Corp., 284 F. Supp. 2d 331, 338 n.7 (W.D.N.C. 2003), *rev'd in part*, *vacated in part*, *and remanded*, 177 F. App'x 335 (4th Cir. 2006); United States v. Balcarczyk, 52 M.J. 809, 812 & n.12 (N-M Ct. Crim. App. 2000), *In re* Jeffery, 2008 Cal. App. Unpub. LEXIS 7976, at *25 n.8 (Cal. Ct. App. 2008); Pirtle v. Cook, 956 S.W.2d 235, 248 (Mo. 1997) (Price, Jr., J., dissenting); City of Green Ridge v. Kreisel, 25 S.W.3d 559, 563 & n.2 (Mo. Ct. App. 2000); Paulson v. State, 28 S.W.3d 570, 572 (Tex. Crim. App. 2000), Culton v. State, 95 S.W.3d 401, 405 (Tex. App. 2002).

55. *See, e.g.*, Spencer v. Texas, 385 U.S. 554, 578 (1967) (Warren, C.J., dissenting); Funk Bros. Seed Co. v. Kalo Inoculant Co., 333 U.S. 127, 134 (1948) (Frankfurter, J., concurring); Allied Erecting & Dismantling, Co. v. USX Corp., 249 F.3d 191, 202 n.1 (3rd Cir. 2001); Aylett v. Sec'y of Hous. & Urban Dev., 54 F.3d 1560, 1569 (10th Cir. 1995); Hernandez v. Denton, 861 F.2d 1421, 1438–39 (9th Cir. 1988) (Aldisert, J., concurring in part, dissenting in part), *vacated and remanded on other grounds*, 493 U.S. 801 (1989); Regalado v. City of Chicago, No. 96 C 3634, 1999 U.S. Dist. LEXIS 14902, at *3 (N.D. Ill. Aug. 31, 1999); British Steel PLC v. United States, 20 Ct. Int'l Trade 663, 673 n.11 (1996); Lucas Aerospace, Ltd. v. Unison Indus., L.P., 899 F.Supp. 1268, 1287 (D. Del. 1995); Foster v. McGrail, 844 F.Supp. 16, 21 (D. Mass. 1994); Pearson v. Bowen, 648 F.Supp. 782, 792 n.26 (N.D. Ill. 1986); United States v. Gambale, 610 F.Supp. 1515, 1525 (D. Mass. 1985); Amusement Equip., Inc. v. Mordelt, 595 F.Supp. 125, 130 n.4 (E.D. La. 1984), *aff'd in part, rev'd in part*, 779 F.2d 264 (5th Cir. 1985); Menora v. Ill. High Sch. Ass'n, 527 F.Supp. 632, 636 (N.D. Ill. 1981); Lakeland Constr. Co. v. Operative Plasterers & Cement Masons Local No. 362, No. 79 C 3101, 1981 U.S. Dist. LEXIS 11584, at *4 n.2 (N.D. Ill. Mar. 24, 1981); Desilu Prods., Inc. v. Comm'r, 24 T.C.M. (CCH) 1695 (1965); Batty v. Ariz. State Dental Bd., 112 P.2d 870, 873 (Ariz. 1941); Nickolas F. v. Superior Court, 50 Cal. Rptr. 3d 208, 222 n.17 (Cal. Ct. App. 2006); People v. Martinez, 74 P.3d 316, 321 (Colo. 2003); Royer v. State, 389 So. 2d 1007, 1016 (Fla. Dist. Ct. App. 1979); Barham v. Richard, 692 So. 2d 1357, 1359 (La. Ct. App. 1997); State v. Star Enter., 691 So. 2d 1221, 1229 n.8 (La. Ct. App. 1996); Wein v. Carey, 362 N.E.2d 587, 590–91 (N.Y. 1977); Hicks v. State, 241 S.W.3d 543, 546 (Tex. Crim. App. 2007); State v. Zespy, 723 P.2d 564, 570 n.1 (Wyo. 1986) (Urbigkit, J., concurring in part and dissenting in part).

56. *See, e.g.*, Cook v. Moffat, 46 U.S. (5 How.) 295, 299 (1847); Walmsley v. City of Philadelphia, 872 F.2d 546, 554 (3d Cir. 1989) (Aldisert, J., dissenting); Posey v. State, 2005 WL 1168401, at *2 (Ark. Ct. App. 2005); State v. Lackey, 208 P.3d 793, 797 (Kan. Ct. App. 2009); Ochsner v. IdeaLife Ins. Co., 945 So. 2d 128, 135 (La. Ct. App. 2006) (Kirby, J., dissenting); Bailey v. State, 294 A.2d 123, 129 n.4 (Md. Ct. Spec. App. 1972); Council of Org. & Others for Educ. about Parochiaid v. Governor of Mich., 548 N.W.2d 909, 920 n.7 (Mich. Ct. App. 1996) (O'Connell, J., dissenting). *See generally In re* Collom's Estate, 28 Pa. D. 503, 505 (1919).

judicial opinions that have employed the Fallacies of the Illicit Major and Illicit Minor Terms, providing precedential support for the use of these logical fallacies as litigation tools, as well as practical examples of how the fallacies are manifest in arguments that might not seem to immediately fit into the form of the syllogism.

In *Central Dauphin School District v. Pennsylvania Manufacturer's Association Insurance Co.*,[57] the court focused its analysis, as categorical syllogisms frequently do, on the definition of a term. The court turned its attention to the definition of the word "sudden." Central Dauphin School District claimed it was entitled to recover the cost of abating soil contamination caused by a leaking underground storage tank from its insurer, Defendant Pennsylvania Manufactures' Association Insurance. The insurance policy limited coverage to contamination that was "sudden and accidental." Accordingly, the issue in the case was whether the oil contamination was "sudden."

The Court used formal logic to answer this question. Central Dauphin School District argued that a "sudden" event is one that is unexpected. The school district further argued that the oil leak was unexpected. It concluded, therefore, that the oil leak was sudden.[58] The Court recognized the problem with the plaintiff's argument was one of logic:

> Thus: a sudden event is unexpected.
> This was an unexpected occurrence.
> Ergo, it is sudden.[59]

The Court recognized that the logical flaw in the argument was the Fallacy of the Illicit Major Term, remarking, "of course, all things sudden are not unexpected. Some may be. Plaintiff falls into the fallacy known in logic as the illicit major (or minor) premise."[60] The Court rejected the plaintiff's argument that the leak was sudden, and dismissed the plaintiff's claim.[61]

57. 16 Pa. D. & C.4th 289, 295–97 (1992).
58. *Id.* at 296.
59. *Id.*
60. *Id.*
61. *Id.* at 297.

In *State of Kansas v. Deal*,[62] the defendants in a criminal case argued for a Sixth Amendment right to a trial transcript for purposes of arguing a motion for a new trial.[63] The gist of the defendants' argument in *Deal* was that the Sixth Amendment ensures the right of an indigent defendant to a trial transcript as a component of the right to counsel in that the transcript is necessary to perfect an appeal.[64] Since a trial transcript was just as essential to arguing a motion for a new trial, as it would be for perfecting an appeal, Deal argued that the Sixth Amendment also entitled him to a trial transcript for the purpose of arguing a motion for a new trial.[65] The Court characterized the argument this way:

Although Deal characterizes his argument as an analogy, it reads like a partial syllogism or enthymeme.

Deal's argument can be reconstructed as follows: All appellate attorneys in perfecting appeals from indigent defendants are constitutionally entitled to trial transcripts [Major Premise];

Some trial attorneys (that are appointed after trial to handle posttrial motions for indigent defendants) are like appellate attorneys [Minor Premise];

Deal's two-part deduction leaves out an essential statement:

Therefore, all trial attorneys who are appointed after the trial to handle posttrial motions for indigent defendants should be entitled to trial transcripts [Conclusion].[66]

The Court's syllogistic articulation of Deal's argument, suggests what it would next conclude:

Deal moves from considering part of the category of attorneys (appellate attorneys) that are constitutionally entitled to trial transcripts to broadening his claim to include all the attorneys mentioned in the conclusion. Deal's argument commits the fallacy of the illicit minor term. This results "[w]hen the minor term is undistributed in the minor premise but distributed in the conclusion." Here, the minor term [some trial attorneys who are appointed after trial to handle posttrial motions for indigent defendants] is not distributed in the minor premise, where it appears as the subject term in a particular affirmative categorical

62. 206 P.3d 529 (Kan. Ct. App. 2009).
63. *Id.* at 544.
64. *Id.*
65. *Id.*
66. *Id*.

proposition.[67]

In *State of Wyoming v. Zespy*,[68] a judge used the logical fallacy of the Fallacy of the Illicit Major or Minor Term to evaluate an evidentiary issue. *Zespy* involved the admissibility of expert testimony.[69] In his separate opinion, concurring in part and denying in party, Justice Urbigkit described the State's argument regarding the admissibility of expert testimony this way:

It is not logical to contend, as did the witness (Coleman), and now the State of Wyoming in this bill of exceptions, that if the witness challenges the validity of specific processes he can also logically deny the validity of all processes without first demonstrating knowledge and expertise about every possible process or combination of processes that may or may not have been utilized by the examining expert witness on the subject of constitutionality and statutorily required absence of mental illness or deficiency.[70]

Judge Urbigkit, described the State's syllogism this way:

I am an expert about some evaluative processes.

Those processes are invalid

All evaluative processes are invalid.

Some evaluative processes are invalid.

67. *Deal*, 206 P.3d at 544–45 (citing ALDISERT, *supra* note 39, at 153). The Court went on to aptly explain this logical conclusion:

Deal's conclusion goes beyond what the premises warrant. His conclusion makes an assertion about all trial attorneys appointed after trial. Nevertheless, the premises make no such contention. They say nothing about all trial attorneys appointed after the trial. Moreover, we acknowledge that for Deal to drive home his point, he would have to broaden his claim to all trial attorneys appointed after trial. Otherwise, Deal's argument is drastically weakened if he is contending that only some trial attorneys appointed after trial should be entitled to trial transcripts. Based on the latter assertion that only some trial attorneys appointed after trial should be entitled to trial transcripts, Deal's argument is enormously less appealing. For example, Deal would have to argue that his appointed trial counsel was a member of the class of some attorneys appointed after trial. Also, he would have to argue that his appointed trial counsel was a member of the class of those trial attorneys that should be entitled to trial transcripts. This second argument is very difficult. Under a particular affirmative proposition, there may be only one member of both classes. Moreover, Deal's appointed trial counsel may not have been that one member of both classes.

Deal, 206 P.3d at 545.

68. 723 P.2d 564 (Wyo. 1986).

69. *Id.* at 570 (Urbigkit, J., concurring in part and dissenting in part).

70. *Id.*

Other experts may use those processes.

The conclusions of those experts are invalid.

This appears to be the fallacy of an undistributed middle term and illicit process of a major or minor term.[71]

While Judge Urbigkit properly recognizes the Fallacy of Illicit Process here,[72] it is difficult to discern it in the syllogistic form presented by the Judge Urbigkit's opinion. It is more easily seen if we use consistent terms and place them in a more familiar syllogistic form, as follows:

Some evaluative processes are processes that yield invalid conclusions.

Some of the expert's methods include those evaluative processes.

Therefore, all of the expert's methods include processes that yield invalid conclusions.

Reduced even further to letter symbols, the form of the syllogism is:

Some A are B.

Some C are A.

Therefore all C are A.

We see the minor term is *C*. In the premise, *C* is undistributed ("[s]ome C"). In the conclusion, *C* is distributed ("all C"). Accordingly, the argument suffers from an Illicit Process of the Minor Term, and is unreliable.

In *Hernandez v. Denton*, the plaintiff claimed that he was sexually assaulted while incarcerated.[73] His claim was based, in large part, on the fact that he awoke with needle marks on his arm and that he must have been sexually assaulted while drugged unconscious. In a concurring opinion, Judge Aldisert, deconstructed the logic of the Plaintiff's claim:

Even assuming appellant's rape fantasy had some basis in rationality, his complaints are utterly devoid of any allegations establishing the personal involvement of any of the defendants. His

71. *Id.* at 570 n.1 (citing STUART CHASE, GUIDES TO STRAIGHT THINKING, WITH 13 COMMON FALLACIES 205 (1956)).

72. The first syllogism exemplifies another fallacy of distribution: the Fallacy of the Undistributed Middle. *See supra* note 48. This article focuses on the second syllogism and the Fallacy of the Illicit Process.

73. 861 F.2d 1421, 1422 (9th Cir. 1988).

contentions depend upon the following prosyllogisms[74] and episyllogisms[75]:

. . . .

Major Premise: One who is drugged can be raped without his knowledge.

Minor Premise: I was drugged.

Conclusion: Therefore, I was raped.[76]

Judge Aldisert goes on to describe how the syllogism suffers from the Fallacy of the Illicit Major Term:

Syllogism 'B' discloses the formal fallacy of the illicit major term. Here, the major term in the syllogism ('raped') is undistributed in the major premise ('can be raped'), but distributed in the conclusion ('was raped'). The resulting fallacy is obvious. Hundreds of physical or mental consequences can possibly follow injection or ingestion of drugs; being raped is only one possible consequence.[77]

In *Schiaffo v. Helstoski*,[78] the Court recognized the Fallacy of Illicit Process in the plaintiff's argument and rejected the argument based on logical grounds. *Schiaffo* involved a Congressional

74. In a chain of interlocking categorical syllogisms, a *prosyllogism* is where the conclusion of one syllogism becomes the premise of the succeeding syllogism. Nugent v. Ashcroft, 367 F.3d 162, 177 (3d Cir. 2004). For examples of *prosyllogisms*, see United States v. Tapia, 309 F.3d 1283, 1290 (10th Cir. 2002); Inter-Tribal Council of Nevada, Inc. v. Hodel, 856 F.2d 1344, 1350 (9th Cir. 1988). "A *sorites* is a series of four or more categorical statements with one of the statements designated as the conclusion and the rest designated as premises." PAUL HERRICK, THE MANY WORLDS OF LOGIC 320 (1999). In other words, a *sorites*, also known as a *polysyllogism*, is a series of propositions chained together to produce one long syllogism. BENNETT, *supra note* 52, at 85. A chain of categorical syllogisms, connected by the conclusion of the first, which is a premise of the second, is sometimes called a *polysyllogism* or *sorites*. COPI & COHEN, *supra* note 19, at 294.

75. An *episyllogism* is a syllogism where one premise is the conclusion of a preceding syllogism. *Nugent*, 367 F.3d at 177. For examples of *episyllogisms*, see Blasland, Bouck & Lee v. City of North Miami, 283 F.3d 1286, 1296 (11th Cir. 2002); Portable Embryonics v. J.P. Genetics, 810 P.2d 1197, 1198–99 (Mont. 1991).

76. Hernandez v. Denton, 861 F.2d 1421, 1438–39 (9th Cir. 1988), *vacated and remanded on other grounds*, 493 U.S. 801 (1989) (Aldisert, J., dissenting in part and concurring in part). Judge Aldisert also arranges Plaintiff's argument in two other logical forms. In both forms, the argument commits another formal logical fallacy: the Fallacy of the Undistributed Middle.

77. *Id.*

78. 492 F.2d 413 (3rd Cir. 1973).

candidate's[79] claim alleging violation of the franking privilege statute[80] by an incumbent candidate. The issue in the case was whether Judge Schiaffo had standing to sue Congressman Helstoski for alleged abuse of the franking privilege by mailing documents to citizens outside of the Congressman's district.[81] The Court analyzed Judge Schiaffo's standing as that of an individual taxpayer, since he had lost his election for Congress at the time of the suit. Accordingly, if Judge Schiaffo were to have standing to sue, he would be required to be "'within the zone of interest to be protected . . . by the [franking] statute.'"[82] Judge Schiaffo's claim was that the United State Postal Service was not policing Congress' use or abuse of the franking privilege, and thus, individual citizens, like Judge Schiaffo were within the "zone of interest" and therefore had standing.[83] Judge Ruggero Aldisert,[84]

79. In 1972, Plaintiff Honorable Alfred D. Schiaffo was Henry Helstoski's opposition in the general election for a seat as a member of the United States House of Representatives, representing the Ninth Congressional District in New Jersey. *Id.* at 415. Judge Schiaffo served as a member of the New Jersey State Senate in 1967 and was re-elected in 1971. He served as New Jersey Senate Majority leader in 1973. Subsequently, he was appointed Judge in Bergan County, New Jersey by Governor William Cahill and was later appointed Superior Court Judge by Governor Brendan T. Byrne. Obituaries, *Alfred D. Schiaffo, 68, Judge and Politician*, N.Y. TIMES (Nov. 8, 1988), http://www.nytimes.com/1988/11/08/obituaries/alfred-d-schiaffo-68-judge-and-politician.html.

Henry Helstoski served six terms in Congress. In 1976, he was charged with taking more than $8,000 for introducing legislation allowing several Chileans to immigrate to the United States. The charges against Congressman Helstoski were ultimately dismissed after the United State Supreme Court determined that the evidence of legislation introduced by Congressman Helstoski was inadmissible against him. United States v. Helstoski, 442 U.S. 477, 487–89 (1979). *See also* Helstoski v. Meanor, 442 U.S. 500 (1979) (holding that that mandamus was an inappropriate means of challenging validity of the indictment against a member of Congress and that direct appeal to Court of Appeals was appropriate).

80. The franking privilege is the privilege afforded to congressmen allowing them to use the mail to communicate with constituents without charge. "Franking" refers to the act of an authorized person using their autographic or facsimile signature to transmit documents through the mail without prepayment of postage. *Schiaffo*, 492 F.2d at 415, 415 n.1.

81. *Id*. at 421–25.

82. *Id.* at 420 (quoting Data Processing Service Orgs. v. Camp, 397 U.S. 150, 152–53 (1970)).

83. *Id.* at 437.

84. Ruggero J. Aldisert, Senior Judge for the United States Court of Appeals for the Third Circuit, sitting by designation. Judge Aldisert has written several opinions discussing faulty logic in legal argument. He is the author of

writing a concurring opinion, couched his analysis of this issue in terms of formal logic:

If it be true that the Postal Service has not taken steps to enforce, there can be two and only two reasons for inaction: one, that there was not Congressional abuse to merit Postal Service intervention; or two, such abuse did exist, but the Postal Service did nothing about it.

The majority ignores the first possibility completely, and without any supportive evidence in the record, it makes a factual assumption that congressmen did abuse the privilege. The majority then conclude that since the Postal Service has 'abandoned' its regulatory activities, the franking statute may be enforced by private attorney general actions 'if the intent of the statutes, as expressed by Congress, is to be effectuated.'

I refuse to be associated with any assumption that congressmen from 1968 to 1972 abused the franking privilege. Nor do I believe that it is appropriate for the federal judiciary, a correlative branch of the federal government, to proceed from such an assumption and to render a legal conclusion severely critical of Congressional practices.

> . . . Since the plaintiff is placed in the "zone of interest" only by an inferential process, since these inferences are based on two illicit minor premises—that there is no enforcement commitment in a governmental agency and implied Congressional abuses exist which go unchecked by governmental entities or agencies—the proffered syllogism is analytically unsound; being invalid it must be rejected.[85]

Judge Aldisert uses the concept of logical distribution to describe the logical failing of the majority opinion. The fact that the Postal Service had not enforced the franking statute in the past does not mean that the Postal Service will never enforce the franking statute. Judge Aldisert argues that the Court is distributing this term in the conclusion, when it is undistributed in

two other works specifically addressing formal logic in legal reasoning, in addition to several other books focusing on the judicial process. *See* Ruggero J. Aldisert et al., *Logic for Law Students: How to Think Like a Lawyer*, 69 U. PITT. L. REV. 1, 2 (2007),

85. *Schiaffo*, 492 F.2d at 437–38 (footnotes omitted).

the minor premise. As a result, the argument commits the Fallacy of the Illicit Minor Term and must be rejected.

Each of these cases exemplifies the pattern of argument that reveals a violation of the second rule of logic. Where the arguer does not conform to this rule of distribution, the argument's logical form cannot ensure the truth of its conclusion.

V. DISCERNABLE LOGIC

Lawyers spend so much time focusing on substantive rules of law, the rhetoric of written and oral advocacy, and reasoning by analogy that they frequently take the rule of deductive logic in legal argument for granted. While they use it day in and day out, and while it pervades every legal subject matter, lawyers spend little time mastering it. In fact, when it comes right down to it, most lawyers are experts in the law, but cannot call themselves experts in logic. Accordingly, they are often like a third base coach in baseball, anxiously watching the runner round second base in the foreground of his vision, while monitoring the centerfielder picking up ball in deep right center field. The third base coach knows the runner is fast, he knows the Official Rules inside and out, he knows that the score is tied, and that there are two outs and that his team is down by just one run. His moment arrives. It is time for him to give the best advice to the runner, whose determined stare waits for the coach to assemble his experience, knowledge, and perceptions of the centerfielder's movements and position to give the runner the direction he needs. Should he tell the runner to slide safely into third base, or should he signal to the runner to sprint to home plate.

Unless the coach understands that the soundness of his advice has very little to do with the Official Rules of Baseball, he is likely to make a grave error. The centerfielder has a capable arm. The coach's decision rests not so much on the Official Rules, but on the coach's ability to scrutinize the movements of the centerfielder. Based on the centerfielder's appearances, he appears like he is not committed to field the ball cleanly. On the surface, he does not appear to have the fortitude to set his feet, bear down, and throw a baseball from deep center field to home plate with the kind of surprising accuracy and velocity required to throw the runner out and end the game. However, beneath the surface, he is fully prepared to make a perfect throw. He is just waiting. He is

watching, out of the outmost limit of his peripheral vision, to see if the third base coach will take the bait, rely solely on the Official Rules, and send the runner home. Only then will the third base coach realize that the centerfielder, having mastered the invisible rules of baseball, has made the better play, and will throw the runner out to win the game.

In the same way, lawyers face off, much like the centerfielder and third base coach. Generally, lawyers know the substantive law very well. But the difference between winning a legal argument and losing one frequently has little to do with how well the lawyers know the law. It has more to do with how skilled they are at mastering the rules of logic to craft a persuasive, even compelling, argument. Understanding the form of an argument empowers a lawyer with the ability to critically analyze his argument, and his opponent. While philosophical logic is an enormous philosophical doctrine that takes many years of study to master, the philosophical device of the logical fallacy provides a simple, easily understood tool that lawyers with no formal training in philosophy can use. Fallacy-based legal reasoning provides lawyers with a shortcut. It is an "off the shelf" method for using philosophical logic to solve legal problems.

While understanding something of the theoretical basis of formal logic is helpful, one fallacy—the Fallacy of the Illicit Process—can be learned in just a few minutes, and can be employed simply by looking for and indentifying a common pattern of argument. Once the Fallacy of the Illicit Process is identified, explaining the fallacy is as simple as citing other cases, legitimizing the use of logical fallacy as a basis for discrediting a legal argument, identifying the syllogistic components of the argument, and labeling the argument as fallacious and necessarily unreliable.

Lawyers who ignore the logical form of their opponents' arguments frequently get by. They focus on substantive rules. They argue by analogy. They use their rhetorical talents, and make arguments that frequently amount to explanations of why their opponent's argument might be "good," their argument is "better." However, unknown to them, the rules of philosophical logic frequently reveal proof that their opponent's argument is not "good," instead it is fallacious, illogical, and must be rejected by the court. Revealing these otherwise invisible and indiscernible rules of logic, and using fallacy-based reasoning, provides a device

for establishing that, instead of fighting a battle between "good" and "better," a lawyer fights a batter between "right" and "wrong." Mastering the rules of logic makes for compelling advocacy, sound and consistent analysis, and provides an authoritative basis for the credibility of legal argument. Ignoring the rules of logic exposes an advocate to the risk that he is making decisions like the third base coach who only knows the Official Rules of baseball. The advocate who knows nothing of formal logic runs the risk that, like the centerfielder, opposing counsel knows something the advocate does not. If so, the advocate is about to face embarrassment, because opposing counsel has mastered a simple, powerful, but otherwise indiscernible rule.