from: The Philosophy of Sherlock Holmes, ed. by P. Tallon & D. Baggett, University Press of Kentucky, 2012

# Sherlock's Reasoning Toolbox

*Massimo Pigliucci*

"It is simplicity itself. . . . My eyes tell me that on the inside of your left shoe, just where the firelight strikes it, the leather is scored by six almost parallel cuts. Obviously they have been caused by someone who has very carelessly scraped round the edges of the sole in order to remove crusted mud from it. Hence, you see, my double deduction that you had been out in vile weather, and that you had a particularly malignant boot-slitting specimen of the London slavey." So says Sherlock Holmes to a befuddled Dr. Watson in "A Scandal in Bohemia"[1] while explaining how he deduced that his old friend had gotten wet and that his servant had been careless—except that this was not an instance of deduction, in the philosophical sense of the term, but rather a form of induction. Understanding the difference between these two basic types of reasoning is fundamental to appreciate how Holmes operates, and it will lead us through a brief tour of logic, science, and the art of fine reasoning.

Conan Doyle tells us that Holmes doesn't know anything about philosophy, which perhaps accounts for why he refers to his logical method as deduction, while it is in fact a complex and highly effective mixture of different kinds of reasoning. Of course, Holmes does not always succeed in his endeavors, as for instance in the case of the scandal in the (now defunct kingdom of) Bohemia mentioned above. In that adventure, he is outfoxed by a woman from New Jersey, Irene Adler, whom he will subsequently always refer to as "the woman."[2]

## How to Guarantee Truth

Let us start our tour with deduction, the foundation of logic and mathematics. Deduction is what philosophers call a truth-guaranteeing type of rea-

soning, meaning that if the premises of a deductive argument are correct, then the conclusion must inescapably be true. Of course, the trick is in that all-important "if" clause. It was Aristotle (384–322 BCE) who first explored deductive reasoning, particularly as exemplified in the form of syllogism, arguably the most famous of which is a variant on the following:

PREMISE 1: All men are mortal.
PREMISE 2: Sherlock Holmes is a man.
CONCLUSION: Sherlock Holmes is mortal.

The above can be read as follows: If P1 is true, and if P2 is true, then C must necessarily be true—nice and elegant, exactly the sort of reasoning that would appeal to Holmes. In fact, the famous detective often displays a preference for simple and elegant reasoning, particularly if it leads to inescapable conclusions. In several stories, he tells Watson something along the lines of, "How often have I said to you that when you have eliminated the impossible, whatever remains, however improbable, must be the truth?"[3] In "The Priory School," he says that "it is impossible as I state it, and therefore I must in some respect have stated it wrong."[4] In both cases, the implication seems to be that a strict logical analysis of the facts leads to one and only one inescapable conclusion—a guarantee of truth.

The dream of developing a system of thought on the basis of which one can deduce facts about the world with absolute certainty goes back to Aristotle's mentor, Plato (428/427–348/347 BCE), and resulted in a long tradition of philosophical thought appropriately known as rationalism. That school arguably had for its last strong champion René Descartes (1596–1650). Descartes was a bold philosopher, most famous for his (ultimately failed) thought experiment known as radical doubt. He acknowledged that both our senses and our faculty of reasoning can be deceived, which means that we can never be sure of anything we say about the world. However, Descartes argued, we can be absolutely sure of at least one thing: I think, therefore I exist (the famous maxim *cogito, ergo sum*). There is absolutely no possibility of my being mistaken about this very simple but crucial fact. The idea is that even if I am systemically deceived, I have to exist in order to be deceived, so my very thinking that I may well be deceived is incontrovertible evidence of my existence—as a thinking being. I can't run this same thought experiment about you, nor you me, but you can run it for yourself. Having found this solid anchor, he then tried to logically deduce other facts about the world,



to reconstruct natural philosophy from scratch, as it were. That's where the trouble started: it turns out that the only way Descartes could move past the *cogito* was by invoking God as guarantor of truth, for which he lacked a noncircular argument. His attempt to establish God's existence appealed to the same rational faculties that he had earlier called into question. The attempt to appeal to God to guarantee the clear and distinct deliverances of reason while assuming that those same deliverances could be used to argue for God's existence led to what some commentators have dubbed the Cartesian circle. Descartes's approach using deduction to move from the certitude of some beliefs about oneself to certitude about beliefs concerning the external world and God failed. It was a remarkable enterprise and a seminal moment in the history of philosophy, and the failure of his effort was instructive.

None of the above implies that we should abandon the use of deduction, but it does mean that there are strict limits on what it can accomplish. In fact, although deduction is the essential tool in formal logic and mathematics, it won't do for science, everyday life, and of course criminal investigations. Why not? The answer becomes clear if we go back for a moment to our syllogism above and think about it more carefully. In particular, look at the two premises: "All men are mortal" (P1) and "Sherlock Holmes is a man" (P2). How do we know that these are, in fact, true? P2 is the result of direct observation (well, not exactly in Holmes's case, because he is in fact a fictional character and not a man, but you get the gist). We can examine any particular being and determine that because of his anatomy, physiology, or even DNA structure, he is indeed a member of the species *Homo sapiens*, and more particularly belongs to the male sex. Of course, observations are fallible, as Descartes painfully realized, so we cannot be 100 percent sure that Holmes is a man, regardless of how many tests we run on his biology. This is important because it introduces an element of probability (as opposed to certainty) into the whole affair, already undermining the idea that deductive reasoning is truth preserving. Holmes himself is aware of this problem, as is evident, for instance, from a comment he makes in *The Hound of the Baskervilles*: "We balance probabilities and choose the most likely. It is the scientific use of the imagination."[5]

But it gets worse—much worse. Let us turn again to P1, the premise that all men are mortal. It is necessary to state it in such absolute terms because if we were to say that most men are mortal, then the conclusion would not follow: Holmes may turn out to be one of the few exceptions and may never

die. But how do we know that all men—without exception—are mortal? The long and the short of it is that we don't. What we can say instead is that we have never observed a man who was immortal (leaving aside for a moment the not necessarily trivial problem of how, exactly, we would recognize an immortal in a crowd of mortals). That is, we are generalizing from a series of observations, what philosophers call induction. An induction, therefore, is at best as good as the data that we have available. In "The Copper Beeches," Holmes endeavors to help Miss Violet Hunter, who has been employed under most unusual circumstances by a fellow named Jephro Rucastle. It turns out that Rucastle was using Miss Hunter in an attempt to dissuade a man who was courting his own daughter (who resembled Hunter) from pursuing her. Rucastle wished to force his daughter to sign over her inheritance to him—a project that would have floundered had the lover kept up his romantic interests. (At the end of the story, Rucastle is attacked and maimed for life by his own starved mastiff dog.) Holmes cannot initially make sense of what is going on in the case, and in a rather uncharacteristic outburst of temper, he cries to Watson, "Data! Data! Data! . . . I can't make bricks without clay."[6]

## The Problem of Induction

More data, in and of itself, is still not going to be enough, according to philosopher David Hume (1711–76). Hume articulated one of the most difficult problems in epistemology—a problem that still haunts philosophers and scientists, and that would much bother Holmes, had he devoted more time to the study of philosophy during his retirement: the problem of induction. Remember that induction is a method of generalizing from a set of observations (Holmes's "Data! Data! Data!"). For instance, I can be highly confident that the sun will rise tomorrow even in the absence of any understanding of astronomy and planetary orbits, the reason being that there is a long record of observations of the sun doing just that. Because there have been no exceptions so far, it is reasonable—the inductivist would say—to assume that tomorrow is not going to be an exception either.

The famous logician Bertrand Russell (1872–1970), however, spoke of an example that should make the inductivist pause.[7] It is known as Russell's inductivist chicken, and it goes like this: when the chicken is brought into the farm, he may notice that he is being fed every day at the same time by the farmer. Being a cautious inductivist, though, the chicken doesn't jump to any conclusion and instead awaits for more data to come in. After a long time, he feels that his data sheet is detailed enough and he can confidently make the prediction that the following day, at the usual time, he will be fed. That happened to be the day, sadly, when the farmer wrings his neck. This little story illustrates the point that induction, unlike deduction, is not truth preserving, because it only produces probabilistic conclusions, which may very well turn out to be wrong in any particular instance—sometimes fatally so, as in the case of the philosophically naive chicken.



Hume's problem with induction, however, went much deeper. He noted that not only does induction not guarantee truth, but also that we do not really have any good justification for assuming that induction works as a way of reasoning about the world. The problem can be appreciated most starkly by simply asking the question, why do we think induction works? Pretty much the best answer we can give is, because it has worked in the past. However, a moment of reflection will show that the latter is itself an example of inductive reasoning. In other words, we are trying to justify induction by induction, thereby falling into another instance of the classical logical fallacy of begging the question or circular reasoning. This ought to be deeply troubling not only to philosophers but to criminal investigators because it potentially undermines Sherlock's cherished trust in logic and reason. (Hume, incidentally, was far too pragmatic a man to actually suggest that we should give up reasoning altogether; his point is that perhaps we should be a bit more humble about our much-vaunted powers of rationality.)

If all of the above isn't problematic enough, here is another bombshell dropped by Hume: even the otherwise truth-preserving method of deduction must, at some point, be based on inductive reasoning, which means that it falls prey to the same problem of induction articulated by Hume, and which has remained pretty much unsolved to this day. To see this, let us go again back to our simple syllogism about Holmes's demise: we have already noticed that P1, "All men are mortal," is not something deduced from first principles. It is not a logical necessity that men be mortal; it just happens to be the case.[8] This means that our premise that all men are mortal is in fact the result of generalizing from a set of observations—in other words, it is the result of induction! It turns out that this is a general situation: the premises of a deductive argument often are the result of preexisting induction, which means that even the truth-preserving character of deduction is in fact built on shaky foundations.[9]

In *A Study in Scarlet*, our hero manages to solve a complex case involving two murders that had baffled the police and that require the reader to go

through a lengthy excursion into a side story involving Brigham Young, the founder of the Mormon church. In one of his characteristic minilessons to Dr. Watson about the art of detecting, Holmes boldly states, "From a drop of water a logician could infer the possibility of an Atlantic or a Niagara without having seen or heard of one or the other."[10] We now know enough about logic to recognize that such aspirations, even for an ideal reasoner, are unfounded: the problem of induction and the failure of the rationalist program in philosophy pretty much guarantee that not even a mind as great as Holmes's own brother, Mycroft, could possibly achieve such a feat.

It is rather peculiar that Conan Doyle—who was well read and sensitive to the cultural debates of his time—did not pay more attention to the difference between deduction and induction in developing the character of Holmes. This is particularly so because he wrote his stories shortly after the great induction debate, which involved major figures of Victorian England, including John Stuart Mill (1806–73) and none other than Charles Darwin (1809–82). The great induction debate unfolded between two of the major British philosophers of Darwin's time, Mill and William Whewell (1794–1866), and was an early attempt to solve the problem posed by Hume.

Mill thought that scientists could use two kinds of induction, which would mutually reinforce each other. Enumerative induction is a process of generalization from observations to generalities supported by the principle of universal causation, the idea that all phenomena have causes and that it is logical to attribute similar causes to similar phenomena. Eliminative induction is an operation by which the causes of natural phenomena are discovered by successive elimination of unsuitable alternatives on the basis of tests as stringent as can be devised. Indeed, it is easy to see that Mill's approach has much in common with what Holmes does in many of his adventures.

Whewell, however, would have none of it because he thought that scientific investigation had to start with hypotheses, not observations, because hypotheses have the value of guiding one's inquiry, telling us where and how to observe. When a hypothesis is confronted with the data, one knows if it is true, according to Whewell, because of what he called consilience: "The cases in which inductions from classes of facts altogether different have thus jumped together, belong only to the best established theories which the history of science contains. And as I shall have occasion to refer to this peculiar feature of their evidence, I will take the liberty of describing it by a particular phrase; and will term it the Consilience of Induction."[11] Consilience is often referred to as abduction, or inference to the best explanation, and chapters 1 and 12 in this book will argue that this is what Holmes really did. Yet the case is far from settled; it is easy to find instances where the detective refuses to speculate in generating hypotheses á la Whewell. For instance, in two of the already mentioned adventures, *A Study in Scarlet* and "A Scandal in Bohemia," Holmes says that "it is a capital mistake to theorize before you have all the evidence. It biases the judgment."[12] Mill would have wholeheartedly agreed.



The great induction debate has to do with Darwin because Mill and Whewell, despite their differences, concurred that Darwin's work in *On the Origin of Species* was based on deduction and was therefore bad science. In the end, it became obvious that Darwin was correct: the theory of evolution is not a mass of conjectures but—ironically—an inductive argument along the very same lines proposed by Whewell. As Darwin himself put it (and pace Holmes): "How odd it is that anyone should not see that all observation must be for or against some view if it is to be of any service!"[13]

## How to Falsify Hypotheses

Be that as it may, we are still stuck with Hume's problem of induction. There are hints that Holmes himself foresaw one possible solution and made it part of his practice. In *The Sign of Four,* our hero is jolted out of a drug-induced stupor by the visit of Lady Mary Morstan. In the midst of the complex action that develops, Holmes at one point remarks, "I never make exceptions. An exception disproves the rule."[14]

This idea that exceptions disprove rules, and that therefore a single exceptional case demolishes a cherished hypothesis, is at the foundation of the boldest attempt yet to solve the problem of induction: Karl Popper's (1902–94) theory of falsificationism. Popper was interested in the distinction between science and pseudoscience, what he called the demarcation problem.[15] He was convinced, for instance, that Freudian psychoanalysis is not scientific (despite Freud's protestations to the contrary) for the simple reason that pretty much any observation about human behavior can be accommodated by the theory. If every possible new data can only confirm the theory and nothing can conceivably disconfirm or falsify it, then the theory is not a scientific one, according to Popper.

To see the contrast, consider a real scientific theory, like Einstein's general relativity. It makes specific predictions about the behavior of light (for instance, that it should bend by a certain degree around massive objects,

because the presence of mass makes space-time curve). Not only is it the case that such a prediction was not made by rival theories (like Newtonian mechanics, which predicted less bending), but it has withstood many experimental tests. Had the theory of relativity failed one such test, according to Popper, we should have abandoned it. Holmes, apparently, would agree. For instance, in "The Adventure of Black Peter," in which he is faced with a gruesome murder by harpoon, Holmes says that "one should always look for a possible alternative, and provide against it. It is the first rule of criminal investigation."[16] It is that "provide against it" that captures the essence of Popper's falsificationism.

Still, even falsificationism—despite Popper's high hopes—does not get us out of the trouble that started with Hume's problem of induction. To see why, let us consider how astronomers reacted to an apparent failure of Newton's laws of mechanics. In 1821, the astronomer Alexis Bouvard had calculated a series of tables predicting the position of what was then thought to be the outermost planet in the solar system, Uranus. The problem, as Bouvard soon recognized, was that there was a significant discrepancy between the predictions and the actual positions of the planet in the sky. According to a strict interpretation of falsificationism, Bouvard and his colleagues should have at that point rejected Newton's theory, as it was manifestly and systematically incompatible with a large set of data. But they didn't. Instead, Bouvard immediately intuited the obvious answer: there must have been another planet that was influencing Uranus's orbit, thus accounting for the anomaly. A few years later, on September 23, 1846, Neptune was discovered within one degree from the position calculated by the astronomer Urbain Le Verrier. Newtonian theory was safe, and the solar system had acquired a new member.

The episode illustrates that the actual practice of science is very different from what Popper at first proposed, and in particular that scientists do not throw out a hypothesis for which there is a lot of confirmatory evidence, even in the face of some disconfirming evidence, until they absolutely have to, and probably not until they have a better alternative handy. How do they do that? In a way that Holmes himself explained in "The Reigate Puzzle": "It is of the highest importance in the art of detection to be able to recognize, out of a number of facts, which are incidental and which vital. Otherwise your energy and attention must be dissipated instead of being concentrated."[17] What is "of extreme importance in the art of detection" happens to be also of extreme importance in the practice of science, which in fact is one reason why intuition and practice account for a lot more in science than a purely rationalistic interpretation of it might allow. Science may not be an art, but it surely isn't a mechanical method that could be automatically performed by a mindless piece of computer software—just like crime detection.



## Holmes the Pragmatic Scientist

So what, exactly, was the method used by Holmes so brilliantly in the four novels and fifty-six short stories of the original canon written by Conan Doyle between 1887 and 1927? We have seen that it is certainly not deduction, as so often maintained by Dr. Watson or by Holmes himself. For instance, in *A Study in Scarlet,* the great detective explains that "when a fact appears to be opposed to a long train of deductions, it invariably proves to be capable of bearing some other interpretation."[18] However, interpretation is not something that is particularly appropriate for deductive reasoning. Deduction is the sort of argument that mathematicians use to prove theorems, and facts cannot be opposed to deductive inference—unless those facts happen to be both part of one of the premises and empirically wrong.

It is one form or another of inductive reasoning that Holmes deploys throughout his adventures, but even so, his method is complex, sometimes even contradictory, which may help explain why Watson is so often dumbfounded by how his companion arrives at a given conclusion. In *The Sign of Four,* Holmes says, "I never guess. It is a shocking habit—destructive to the logical faculty,"[19] but as we have seen earlier, in *The Hound of the Baskervilles,* he claims that "we balance probabilities and choose the most likely. It is the scientific use of the imagination."[20] Yet probabilistic assessments, and even more so imagination, are quite incompatible with the rigid logical approach implied by the first quote.

Other stories give us additional clues to Holmes's modus operandi. In "The Problem of Thor Bridge" the detective is faced with an apparently open-and-shut case: the wife of a prominent senator is found murdered by a single shot of a Webley .455 revolver while clutching in her hand an incriminating note from the senator's lover. Moreover, the revolver is found, with just one shot fired, in the lover's wardrobe. Not convinced by what to everyone else seems obvious, Holmes declares that "we must look for consistency. Where there is a want of it we must suspect deception."[21] In this case, for instance, it seems odd that the lover should be so calculating in her plan, and yet so careless as to leave both the note and the revolver to incriminate

her. Rather, Holmes surmises, the whole affair smells much more clearly of framing. Sure enough, the solution lies in the conclusion that it was the scorned wife, not the lover, who had planned the whole thing, including her suicide and the planting of the incriminating evidence against her rival. Holmes even manages to find an identical pistol in the river near the bridge where the alleged murder had taken place—the pistol that had actually been used by the wife to kill herself and that had ended up in the river through an ingenious mechanism involving a stone and a string. The second pistol had been fired in advance to convince the police that it was the lover who killed the wife. None of this has much to do with deduction, and in fact not even with induction per se, but it is a splendid example of the combination of intuition and rigorous thinking that are truly Holmes's hallmark.

In "The Adventure of the Three Students," Holmes is faced with an unusual case when he uncovers which of three students at a prestigious college attempted to cheat on an important examination. If the plan had been successful, it would have embarrassed the college because of a large amount of money to be awarded through the examination in the form of a scholarship. Our detective at one point exclaims, "Let us hear the suspicions. I will look after the proofs,"[22] which seems an uncharacteristic case of Holmes being open to entertain hypotheses before searching for facts—the precise opposite of what he states in other stories.

Is Sherlock Holmes simply an inconsistent practitioner who is far less rational than he would like to make his companion believe? Not at all. In fact, Holmes is doing just what any reasonable scientist would do: using all the tools available to the investigative profession to aid logical thinking, and picking the right set of tools from a broad toolbox, depending on the characteristics of the problem at hand. Looked at it this way, it is not surprising that Holmes deploys different methods on different occasions, and that he even seems to be inconsistent about his approach. As philosophers like to say, just because you have a hammer it doesn't mean that every problem is a nail. It pays to have more than just a hammer in your logical toolbox.

The analogous conclusion—that there is no such thing as the scientific method—seems to be a consensus now among philosophers of science. The discipline went through a period in which philosophers were attempting to come up with a relatively simple criterion for telling science apart from other human intellectual activities. During the latter part of the twentieth century, the emphasis shifted to a more historically informed study of how science actually works, as opposed to how it should work. Over the last



twenty years or so, philosophers have joined forces with social scientists to situate science in the complex social web of human activities, meaning that—for instance—decisions about funding priorities and what counts as important science are not made only according to strictly logical procedures, but rather are a reflection of societal preferences and priorities, as well as, to some extent, the outcome of the very human quirks of individual scientists.

None of the above should be interpreted as saying that either science or rational reasoning is arbitrary, just like our analysis of how Holmes actually proceeds does not detract from the brilliance of his reasoning powers. Holmes, like modern scientists, is a pragmatic thinker, one who combines the intuition that comes from long practice with time-tested procedures and shortcuts for arriving at the truth. As the great detective himself put it in *A Study in Scarlet:* "The theories which I have expressed there, and which appear to you to be so chimerical, are really extremely practical—so practical that I depend upon them for my bread and cheese."[23] And this is as it should be.

## Notes

1. Sir Arthur Conan Doyle, "A Scandal in Bohemia," in *The Complete Sherlock Holmes* (New York: Doubleday, 1960), 161. All quotations are from this edition.

2. Holmes has a notoriously low opinion of women and never seems to have been involved romantically. Irene Adler is the classic exception to the rule, although his draw to her, not surprisingly, seems to be more intellectual than emotional.

3. I found this or an equivalent phrase in the following stories: *The Sign of Four,* "The Adventure of the Beryl Coronet," "Silver Blaze," "The Adventure of the Priory School," "The Adventure of the Bruce-Partington Plans," and "The Adventure of the Blanched Soldier."

4. "Priory School," 550.

5. *Hound of the Baskervilles,* 687.

6. "Copper Beeches," 322.

7. The reference to Russell's inductivist chicken is found in chapter 6 of his *Problems of Philosophy* (San Mateo, Calif.: Plain Label Books, 1936).

8. On the question of whether it really would be desirable to be immortal—as so many assume—see, for instance, Bernard Williams, "The Makropulos Case: Reflections on the Tedium of Immortality," in *Philosophy: Basic Readings,* ed. Nigel Warburton, 118–34 (London: Routledge, 2004).

9. In some cases, the premises of a deductive argument are axioms that are not derived from observation, as in the case of mathematical or geometrical theorems. It

would then seem that, at least in the case of mathematics, deduction really does deliver truth. It is on the basis of such assumption that Bertrand Russell and others during the early part of the twentieth century attempted to establish mathematics on entirely logical, self-consistent foundations, as recounted with humor and great imagery in Apostolos Doxiadis and Christos Papadimitriou's graphic novel *Logicomix* (New York: Bloomsbury, 2009). However, even mathematics is not safe after all: logician Kurt Gödel famously proved his incompleteness theorem in 1931, which demonstrates that it is not possible to find a complete and consistent set of axioms in mathematics. Logicians and mathematicians have not slept well since then.

10. *Study in Scarlet,* 23.

11. William Whewell, *The Philosophy of the Inductive Sciences* (J. W. Parker, 1840), 230, italic in the original.

12. *Study in Scarlet,* 27.

13. Charles Darwin, *More Letters of Charles Darwin: A Record of His Work in a Series of Hitherto Unpublished Letters,* vol. 1, ed. Francis Darwin and A. C. Seward (London: John Murray, 2003), 240.

14. *Sign of Four,* 96.

15. For more on the demarcation problem, see Massimo Pigliucci, *Nonsense on Stilts: How to Tell Science from Bunk* (Chicago: University of Chicago Press, 2010).

16. "Black Peter," 567.

17. "Reigate Puzzle," 407.

18. *Study in Scarlet,* 49.

19. *Sign of Four,* 93.

20. *Hound of the Baskervilles,* 687.

21. "Problem of Thor Bridge," 1065.

22. "Three Students," 600.

23. *Study in Scarlet,* 23.

# Watsons, Adlers, Lestrades, and Moriarties

## On the Nature of Friends and Enemies

*Philip Tallon*

In his *Nicomachean Ethics,* Aristotle praises friendship with powerful words. "For without friends no one would choose to live," he asserts, "though he had all other goods."[1] Friendship is helpful in nearly every stage and station in life (though Aristotle does pause to mention that bitter people and the elderly have a hard time making friends). Friendship comforts, protects, and corrects, and perhaps most beneficially, Aristotle writes, "those in the prime of life it stimulates to noble actions—'two going together'—for with friends men are more able both to think and to act."[2] Friendship can bring the best out of us.

Given the importance of friendship in Aristotle's mind, it makes sense that he would discuss it in his main treatise on ethics. It's still a bit of a surprise, however, that two out of the ten chapters in *Nicomachean Ethics* are devoted to friendship. For Aristotle (and others in the ancient world), friendship was a big deal. C. S. Lewis, writing in *The Four Loves,* notes that for the ancients "friendship seemed the happiest and most human of all the loves; the crown of life and the school of virtue."[3]

Yet in Lewis's estimation, the modern world ignores friendship and what is most unique about it: "Very few modern people think Friendship a love of comparable value or even a love at all."[4] As Lewis suggests, we often understand friendship as a kind of watered-down romantic love or perhaps displaced family affection. Lewis uses literature to make his point. Whereas romantic and parental love have been star players in the literature of the last few centuries (especially romantic love), friendship is lucky to get a part in the chorus. He writes, "I cannot remember that any poem since *In*