I am a lover of Sherlock Holmes. As such I have read all 60 of Sir Arthur Conan Doyle’s stories featuring the Baker Street detective (56 short stories and 4 novels). In many ways the logic required for archaeological research is similar to that which Holmes employs in his investigations. Both Holmes and the archaeologist examine the scene in search of clues that will lead them to the right conclusion. Additionally, both Holmes and the archaeologist reason backwards to past events in light of currently available data. Having secured the data, both Holmes and the archaeologist must interpret it correctly. In this brief response I shall try to shed some light on the nature of archaeological investigation in general and minimalist argumentation in particular by evaluating them in light of the logic of Sherlock Holmes.

---

1Holmes’s ability to interpret the data is what sets him apart from Watson and the “official” authorities. They all have access to the same clues. But only Holmes is able to make sense of them, or to see beyond the apparent to the significant.

2It is ironic to note that there are both people who believe that Sherlock Holmes was an actual historical person (Howard Haycraft, Murder for Pleasure: The Life and Times of the Detective Story [New York: D. Appleton-Century, 1941], 57-58; John Lamond, Sir Arthur Conan Doyle: A Memoir [London: John Murray, 1931], 54-55) and people today who doubt that King David was (Philip R. Davies, In Search of “Ancient Israel” [Sheffield: Sheffield Academic Press, 1992], 54-55).
One thing that is similar between Holmes and the minimalist archaeologist is that they both appear to be deductive in their method (indeed, Holmes often states that his method depends upon deduction). The truth, however, is that neither Holmes nor the contemporary archaeologist (of any stripe, but minimalists in particular) is reasoning deductively. A brief word about different sorts of reasoning is in order here.

**Deduction, Induction, and Abduction**

People reason in one of three general ways: deductively, inductively, or abductively. Assuming that one’s argument is valid in form and each individual premise is true, the conclusions of deduction are logically **certain**. Induction and abduction yield no such necessary certainty. Induction is based upon observation of repeated experience, and thus leads one to a **probable** conclusion. Abduction is a type of common-sense reasoning, given its formal name by the American philosopher Charles Sanders Peirce (1839-1914). Clearly Peirce did not invent abduction, human beings have always practiced it. He did, however, give formal expression to something that people have always done, thus allowing future reasoning of this sort to be done in a more critically aware manner. Like induction abduction depends upon observation (a posteriori) and its conclusions are not guaranteed to be true. Unlike induction it is not simply about the probability of such and such being the case based upon repeated observation. (Nor does it reason from a particular instance to a general rule.) Abductive reasoning attempts to offer an explanation of the facts, why things are the way they are. In other words abduction seeks to determine the most
plausible solution to a problem. Despite the fact that neither induction nor abduction renders a conclusion certain\(^4\) both are nevertheless very important. The order of reasoning is also different in the three different types of reasoning. Deduction works from rule to case to result. Induction works from case to result to rule. Abduction works from rule to result to case. The differences in logical order between the three are illustrated below:

**Deduction**

<table>
<thead>
<tr>
<th>All A are B (rule)</th>
<th>Great kings have great kingdoms (rule)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C is A (case)</td>
<td>David was a great king (case)</td>
</tr>
<tr>
<td>Therefore C B (result)</td>
<td>Therefore David had a great kingdom (result)</td>
</tr>
</tbody>
</table>

**Induction**

<table>
<thead>
<tr>
<th>C is A (case)</th>
<th>David was a great king (case)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C is B (result)</td>
<td>David had a great kingdom (result)</td>
</tr>
<tr>
<td>Therefore all A are B (rule)</td>
<td>Therefore great kings have great kingdoms (rule)</td>
</tr>
</tbody>
</table>

**Abduction**

<table>
<thead>
<tr>
<th>All A are B (rule)</th>
<th>Great kings have great kingdoms (rule)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C is B (result)</td>
<td>David has a great kingdom (result)</td>
</tr>
<tr>
<td>Therefore C is A (case)</td>
<td>Therefore David is a great king (case)</td>
</tr>
</tbody>
</table>

But perhaps an actual example of Sherlock Holmes in action is in order.

The portly client puffed out his chest with an appearance of some little pride and pulled a dirty and wrinkled newspaper from the inside pocket of his greatcoat. As he glanced down the advertisement column with his head thrust forward and the paper flattened out upon his knee, I took a good look at the man and endeavored, after the fashion of my companion, to read the indications which might be presented by his dress or appearance.

\(^3\)Peirce also calls abduction “retroduction,” in part to emphasize the backwards direction of abduction.

\(^4\)One must bear in mind the difference between logical certainty and psychological certainty. Induction does render many things psychologically certain—so much so that we are functionally unable to doubt much of what we have learned through induction, which amounts to practical certainty.
I did not gain very much, however, by my inspection. Our visitor bore every mark of being an average commonplace British tradesman, obese, pompous, and slow. He wore rather baggy gray shepherd's check trousers, a not over-clean black frock-coat, unbuttoned in the front, and a drab waistcoat with a heavy brassy Albert chain, and a square pierced bit of metal dangling down as an ornament. A frayed top-hat and a faded brown overcoat with a wrinkled velvet collar lay upon a chair beside him. Altogether, took as I—would, there was nothing remarkable about the man save his blazing red head and the expression of extreme chagrin and discontent upon his features.

Sherlock Holmes's quick eye took in my occupation, and he shook his head with a smile as he noticed my questioning glances. "Beyond the obvious facts that he has at some time done manual labor, that he takes snuff, that he is a Freemason, that he has been in China, and that he has done a considerable amount of writing lately, I can deduce nothing else." Mr. Jabez Wilson started up in his chair, with his forefinger upon the paper, but his eyes upon my companion. "How, in the name of good-fortune did you know all that, Mr. Holmes?" he asked. "How did you know, for example, that I did manual labor? It's as true as gospel, for I began as a ship's carpenter."

"Your hands, my dear sir. Your right hand is quite a size larger than your left. You have worked with it, and the muscles are more developed."

"Well, the snuff, then, and the Freemasonry?"

"I won't insult your intelligence by telling you how I read that, especially as, rather against the strict rules of your order, you use an arc-and-compass breastpin."

"Ah, of course, I forgot that. But the writing?"

"What else can be indicated by that right cuff so very shiny for five inches, and the left one with the smooth patch near the elbow where you rest it upon the desk?"

"Well, but China?"

"The fish which you have tattooed immediately above your right wrist could only have been done in China. I have made a small study of tattoo marks and have even contributed to the literature of the subject. That trick of staining the fishes' scales of a delicate pink is quite peculiar to China. When, in addition, I see a Chinese coin hanging from your watchchain, the matter becomes even more simple."

Mr. Jabez Wilson laughed heavily. 'Well, I never!' said he. "I thought at first that you had done something clever, but I see that there was nothing in it, after all.\textsuperscript{5}

Unfortunately Holmes's description of what he does is inaccurate. He claims to be deducting conclusions about Mr. Wilson on the basis of observing various telltale signs. Strictly speaking, he is doing no such thing. In deductive reasoning, if the form is correct and the premises are true, one cannot help but obtain a true conclusion, but such is not the case with Holmes's reasoning. For example, consider Wilson's arc-and-compass breastpin, which leads Holmes to conclude that Wilson is a Freemason. If the reasoning were deductive, the argument would go something like this:

1. If one wears an arc-and-compass breastpin, then he is a freemason.
2. Mr. Wilson is wearing an arc-and-compass breastpin.
Conclusion: Therefore, Mr. Wilson is a Freemason.

Is this argument sound? Not even close. As a deductive argument it is not even valid because it commits the formal fallacy of affirming the consequent. Additionally the antecedent of premise 1 does not entail its consequent. Louis Pojman comments on this Holmes episode, “Imagine that Mr. Wilson, who is not a Freemason, bought a similar arc-and-compass breastpin at a pawnshop and wore it, thinking it was a beautiful bit of Moslem design. In that case, premise 1 would be false.” One can wear an arc-and-compass breastpin without being a Freemason. Because it is sensible that non-Freemasons wear that pin, the above deductive argument is not sound. Nevertheless the single most plausible explanation for Mr. Wilson wearing the arc-and-compass breastpin is that he

---

6The antecedent is the first portion of the first premise, the “If” section. The consequent is the following portion of the first premise, the “then” section.

indeed belongs to the Freemasons. What Holmes has really done is reason abductively, i.e., reason to the best explanation of the facts.

One is forced to ask, how exactly does one discover the best explanation? What characteristics does it have? How does one rank the various virtues of a good explanation? There are no definite answers to these questions, but it is generally agreed that certain traits are among the main characteristics of a best explanation. Pojman lists four:

- Coherence—Is the theory consistent with everything or nearly everything else that we hold true in a given field? [Also is it internally consistent?]
- Simplicity—Is the theory simpler than its rivals, does it demand fewer *ad hoc*, or auxiliary, hypotheses? [Simpler theories are less likely to fail because they have fewer opportunities to do so.]
- Predictability—Does the theory help us predict future events?
- Fruitfulness—Does the theory lead to new insight and discoveries?

I would like to add two others to Pojman’s four criteria:

- Comprehensiveness—Does the theory account for all the available data?
  Coherency and simplicity are much more easily attained if one disregards the data, but the conclusion is likely to be flawed.
- Consistency—Does the conclusion have the ring of authenticity? Which does it more nearly resemble: a real life explanation or a conspiracy theory?

---

*Ibid., 30.*
Would something highly out of the ordinary have to happen for which there is no explanation for the theory to work?

Another point needs to be noted here. Abduction is an ongoing process. The best explanation available at the moment may not ultimately prove true. Abduction is thus a type of critical realism in that it affirms that there is actual truth to be known (thus realism), but also is well aware of the fact that one’s conclusions must be open to revision upon further hypothesis testing, which must take place (thus critical).9 Therefore when evidence counter to an explanatory theory is produced, it must be addressed. At such time, one must determine whether a particular explanatory theory fails or if it merely needs to be adjusted at some point(s) and/or more finely tuned.10

I propose in the remainder of this response first to examine what I consider to be the strongest point of the minimalist argument for rejecting a 10th century BCE United Monarchy—the failure to find corroborating archaeological evidence at Jerusalem. I will first evaluate the structure of the (implicit) argument from a deductive perspective. Following that I will make a few brief observations concerning the minimalist position in general, evaluating it at points by application of some of the above criteria of abductive reasoning.

---

9Serious readers of Holmes will note that Holmes rarely tests his hypotheses. He merely assumes that they are correct and acts accordingly. Of this Marcello Truzzi states, “The simple fact is that the vast majority of Holmes’s inferences just do not stand up to logical examination. He concludes correctly simply because the author of the stories allows it so.” Truzzi, “Sherlock Holmes: Applied Social Psychologist,” *The Sign of Three: Dupin, Holmes, Peirce*, ed. Umberto Eco and Thomas A. Sebeok (Bloomington and Indianapolis: Indiana University Press, 1988), 70.

10In inductive reasoning one may conclude upon the basis of further repetition of an experiment that a particular experiment was incorrectly performed due to human error, a failure of control, etc.,
The (Apparent) Logical Structure of a Minimalist Argument

One minimalist argument against the presence of a united monarchy in the 10th century BCE runs: If there was a united monarchy in the 10th century BCE at Jerusalem, then we should be able to find some sign of it today. But we can find no evidence at Jerusalem of a 10th century BCE united monarchy. Therefore, there was no united monarchy in the 10th century BCE (or if there was, it was merely a loose confederation of tribes—hardly the picture one finds in the Old Testament of the kingdoms of David and Solomon).

The structure of this argument appears to be that of a modus tollens argument, a type of hypothetical syllogism. A hypothetical syllogism is an “If-Then” deductive argument. Therefore, when such arguments are properly constructed (valid) and their premises are true (with regard to the first premise, the hypothetical statement, the antecedent must necessarily entail the consequent), they are necessarily sound and their conclusions are certainly true. There are two types of valid hypothetical syllogisms. One is modus ponens (way of affirmation), the antecedent is affirmed and the consequent thereby proven true; the other is modus tollens (way of denial), where the consequent is denied and the antecedent thereby disproved. An example of each is stated below:

Modus Ponens (The way of affirmation)

If A, then B
A is true
Therefore, B

because one has recourse to repeated observation. Such is not generally the case in abductive reasoning in areas such as historical or archaeological investigation.
Modus Tollens (The way of denial)

If A, then B
B is not true
Therefore A is not true

As I understand the minimalist’s position, the argument runs:

1. If there was a united monarchy in the 10th century BCE, then evidence of such will be found at Jerusalem
2. Evidence of a 10th century BCE united monarchy is not found at Jerusalem

Conclusion: There was no 10th century united monarchy at Jerusalem

While the form of the argument is valid, the argument is nevertheless unsound. The problem with this argument deductively speaking is that the antecedent of the first premise does not entail the consequent. There is no good reason to believe that the existence of a united monarchy insures that evidence of such will be found 3,000 years later. A host of other conditions would have to obtain to reach such a conclusion. Steve makes this clear on pages 12-13 of his paper when he discusses several problems of archaeological preservation related to Jerusalem. The argument naively assumes that actual remains will be preserved when there are several sufficient reasons to reject the certainty of such an assumption.

Furthermore, if one should accept the soundness of the first premise, according to the rules of deductive reasoning, one could never prove that there was a united monarchy in the 10th century BCE, even if one were to find archaeological evidence of a great city such as would be expected from a 10th century BCE united monarchy at Jerusalem. As long as the first premise is maintained, and the second premise reflects the results of
archaeological investigation, one is left with either a valid *modus tollens* or the fallacy of affirming the consequent. The playing field is thus tilted to the negative side—the traditional view can’t win, whatever archaeological investigation finds.

But this is no real obstacle if the argument is not a deductive argument, but rather an example of abductive reasoning. The rules of deduction do not apply to abductive reasoning because they have different goals. So is the question of why no substantial remains of a 10th century BCE great city have been found at Jerusalem rendered unimportant in abduction? No, the question is important. But it is not all-important. Failure to find substantial evidence of a united monarchy at Jerusalem is serious but not fatal in abductive reasoning. It is not the nail in the coffin of a 10th century BCE united monarchy but rather the call for further investigation.

**Minimalist Interpretations and Abductive Criteria**

1. *Just because you don’t find it here does not mean that you can’t find it anywhere.* One must remember that an absence of evidence for a united monarchy at Jerusalem does not necessarily mean that there is a total absence of archaeological evidence for a united monarchy. Steve has in fact provided us with significant evidence for a united monarchy in several ways, including monumental evidence, settlement processes, and epigraphic evidence. Furthermore he has offered several possible, if not plausible, explanations for the absence of significant evidence of a united monarchy at Jerusalem.
2. **Relatively small shifts sometimes cause avalanches.** When one piece of data is interpreted in a new way, oftentimes many others must be moved as well. Such moves do not fare well in terms of abductive simplicity. A case in point is Finkelstein’s Low Chronology, and his dating of the Jezreel Enclosure to the 9th century BCE. This conclusion forces him to move “all assemblages that were previously dated 10th century BCE down to the 9th century BCE.

3. **After you’ve assembled your model, you don’t want to have leftover parts lying around.** Finkelstein’s Low Chronology leads him to redate Philistine Monochrome pottery to a later time. This in turn forces him to posit that over half the major sites in the southern Levant were abandoned. Yet he offers no explanation as to where “all these Iron Age people went at the end of the 12th century BCE” (8). To ignore data in this way creates a problem in terms of abductive comprehensiveness.

4. **Before you comment on a book, you had better read it.** Some minimalists maintain that biblical accounts of events during the united monarchy are meant to provide Israel with a glorious past (1-2). One has to ask why, if this is the case, do the biblical authors present such balanced and human pictures of Israel’s kings? According to Scripture David in addition to being a poet, warrior, musician, loyal friend to Jonathan, obedient son to his father, and respectful servant to his king, was a man after God’s own heart. But the Old Testament also portrays him as an adulterer, a murderer, a liar, a manipulator, a polygamist, a man who largely fails as a father, and a king who is anything but infallible. Many of the same things can be said about Solomon. But why should this be the case, if they are simply socio-political constructs rather than historical persons (as
radical minimalists argue)? Is this any way to create a glorious past? Furthermore, if the Jewish Scriptures are so straightforward on the conduct of King David and King Solomon, why should they be misleading concerning the grandeur of their kingdoms (as moderate minimalists posit)? The biblical pictures of David and Solomon read like descriptions of real life, flesh and blood, fallible human leaders. This creates a problem in terms of the abductive criterion of consistency. In comparison to Steve’s carefully worded, non-sensationalistic treatment of the evidence, and his sober conclusions regarding the united monarchy, the minimalist position sounds far fetched, to say the least.

5. *Nothing plus nothing equals nothing.* Proving a negative is very difficult to do. Disproving a negative only requires one example to the contrary. The lack of archaeological evidence for a united monarchy at Jerusalem proves only that no evidence has yet been found—it does not prove that there is no evidence to be found or that there never was a united monarchy situated in Jerusalem at all. Furthermore, given the critical realist nature of archaeological investigation, one cannot assume that such evidence will not be found in the future.

**Conclusion**

Minimalist arguments are sometimes given more credence than they deserve because they are taken to be deductive when in fact they are anything but. Furthermore the minimalist theories do not fare well by the standards of abductive evaluation. Given recent findings that support the traditionalist position and the nature of archaeological
investigation, it is likely that minimalists will either have to reshape their arguments or slip away quietly into the night.