

Three Criteria of Historical Study

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Historical study involves the investigation of the world as it is (evidence) combined with logical conjecture about how it got to be that way (argument and interpretation). Anyone who is involved in scholarly study should be able to collect the evidence, analyze it and the arguments and interpretations about it, and reach their own conclusions using their own thought processes. Merely accepting authority, invoking political considerations, or agreeing with the instructor or textbook is neither sufficient nor necessary for determining one's own views. On the contrary, such uncritical accepting, invoking, and agreeing are corrupting influences that tend to hinder the development of independent thinking. The Buddha is reputed to have said: "Believe nothing just because you have been told it, or it is commonly believed, or because it is traditional or because you yourselves have imagined it. Do not believe what your Teacher tells you merely out of respect for the Teacher. But whatsoever, after due examination and analysis, you find to be conducive to the good, the benefit, the welfare of all beings—that doctrine believe and cling to, and take as your guide."¹

One might well ask what is wrong with accepting established and well-respected authorities. Jeremy Bernstein has raised this question in regard to Albert Einstein, certainly one of the most well-respected authorities of the twentieth century.² If we were physicists in 1905 and were asked to judge Einstein's three ground-breaking papers on relativity and Brownian movement, on what basis would we judge whether this guy was not some kind of nut? After all, what he was saying was very different from prevailing notions among scientists. He was challenging the conventional scientific wisdom. And many of his ideas were not accepted until decades later. Well, you might answer, I am not a physicist in 1905, so I trust what the people who are physicists tell me, and they say he was not a crank. Such an appeal to authority might get you off the hook in technical matters, but what about your duties as a citizen? It will not work in a democratic society where each individual is asked to decide among various political views and justifications. Nor will it work if you are called to serve on a jury and asked to hear "expert" testimony. The Supreme Court has ruled that the judge cannot be the arbiter concerning which testimony is "expert" or not. The jury has to hear whatever is claimed by each side to be "expert."³ What will you do in such a case where the "experts" contradict one another? What are the criteria you will

¹ Cited in Nancy Wilson Ross, *Three Ways of Asian Wisdom: Hinduism, Buddhism, Zen, and Their Significance for the West* (New York: Simon and Schuster, 1966), 80.

² Jeremy Bernstein, "How Can We Be Sure That Albert Einstein Was Not a Crank?" in *Cranks, Quarks, and the Cosmos: Writings on Science* (New York: Basic Books, 1993), 15–27.

³ David H. Freedman, "Who's to Judge?" *Discover*, January 1994: 78–79.

use to determine which testimony is better? We can certainly agree with someone else if we have reached the point of agreement independently, but we are also free to disagree with anyone, no matter how many degrees they have or books they have written. And, as a juror, you may have to disagree with at least one of the experts. On what basis will you do so?

Resorting to determining which testimony is more objective does not always work. It is very difficult to identify when such a thing as “objectivity” exists. Everything that is written or spoken is biased in one way or another. And we the readers are biased too. There is simply no way around it. What we can ask of ourselves and others is fairness and honesty, and the willingness to change our interpretations according to evidence and argument. None of us has special access to, or knowledge of, the historical past and we should always be ready to acknowledge that limitation. Ssu-Ma Ch’ien, the second century B.C. biographer of Confucius, wrote that Confucius “was free from four things: he had ‘no foregone conclusions, no arbitrary predeterminations, no obstinacy, and no egoism.’”⁴ I think we can agree that we as readers and writers should try to remain free from these four hindrances if we are seriously interested in learning. We often encounter people who impose their arbitrary predeterminations on the source testimony and transform it into evidence to support their own views. The political scientist Robert Jervis referred to this phenomenon as “premature cognitive closure” and described the situation as existing when “the initial organization of stimuli strongly structures later perceptions.”⁵ Instead, we should use evidence and argument to determine our interpretation, not our interpretation to determine the argument or the evidence. In other words, our interpretation of the evidence is always open to question and modification. But how do we go about gathering evidence?

Levels of Reading

When we read something, we can read it on several different levels. For example, if we read a novel, like Ignazio Silone’s *Bread and Wine* or Kate Chopin’s *The Awakening*, we can read it on a surface level of what it says to us personally. We may identify with one or another of the characters. We could also read it on the level of aesthetic appreciation—the writing style of the author, the emplotment, the tightly wrought symbolism, etc. This is the level on which literary criticism operates. A third level would be in terms of what the novel tells us about the time in which it was written and the attitudes of its author. On this level the novel would be used as a historical source. When we read something for the first time, our level of reading is usually on the first level—the level of value judgment—that is, our personal likes and dislikes. History manuals say we should avoid value judgments, but I disagree. Value judgments are unavoidable and can be useful. Instead of castigating ourselves for having them, we should learn to use them.

⁴ Ssu-Ma Ch’ien, *The Historical Records*.

⁵ Robert Jervis, *Perception and Misperception in International Affairs* (Princeton: Princeton University Press, 1976), 187.

Value judgments are intuitive, and intuition is like our own built-in computer operating in background mode. It throws messages out to our conscious mind, although we do not always understand how our intuition came to send any particular message in the first place. We should be alert to these messages and try to analyze them. Sometimes these messages can lead to perceptive insights that we would not be aware of otherwise. Other times, of course, the messages are just plain wacko. If we read something and it does not make sense to us, the problem could be with us or the problem could be with the text. We have to analyze both the evidence and our perception of it to see where the problem lies.

Since our insights rarely emerge complete and fullblown, they have to be developed. Potential insights often begin with a feeling of mild irritation with what one is reading or even noticing that one's mind is beginning to wander. Sometimes that can be an indication that the author's argument is disjointed and does not follow logically. Other times, it can mean we merely have something else on our minds.

In what follows, I will explain some of the techniques you can use to determine which it is with any text you are reading. But first, I need to make some preliminary distinctions.

Will the "Real" Past Please Stand Up?

From the individual's point of view, we can distinguish between the personal past and the historical past. The personal past is the past that each of us remembers because we experienced it directly. It is part of our respective memories. Your personal past is different from my personal past because I have not experienced what you have experienced. The historical past, in contrast, is not part of either of our memories because it occurred before we were born or existed outside our sense perceptions. By definition we cannot study the historical past, because it no longer exists—it is gone, past. And, if we cannot study it, the thing itself, then we can know nothing about it. As the philosopher Ludwig Wittgenstein stated: "That about which we know nothing, we cannot speak."⁶ Instead, we study the physical sources available to us in the present. We proceed by assuming that there is an underlying reality (historical past) that gave us those sources, but we should also realize that we can never know what that underlying reality is. We

⁶ Ludwig Wittgenstein, *Tractatus Logico-philosophicus* § 7. The German is: "Wovon man nicht sprechen kann, darüber muss man schweigen," which literally says "Whereof one cannot speak, one must remain silent." Yet, that in itself is no more than a tautology: "One cannot speak about what one cannot speak" or "One must remain silent about what one must remain silent." As a tautology it is meaningless. Hartnack tries to understand Wittgenstein's 7th proposition in the context of the rest of the *Tractatus*. According to this view, Wittgenstein believed the limits of language and the limits of the knowable world coincide (in Wittgenstein's understanding of "fact" in a scientific sense). Cf. Justus Hartnack, *Wittgenstein and Modern Philosophy*, trans. Maurice Cranston (Garden City, NY: Anchor, 1965), 13–42. Others dispute Hartnack's imposing an artificial limit on Wittgenstein's understanding of what can be thought. My understanding of Wittgenstein's statement is that he was speaking from a purely philosophical point of view—specifically, his understanding of what philosophy can and cannot do. There were entire realms and a multitude of questions that he thought are "off limits" to philosophy.

can speculate about it and make guesses. But what we think might have happened in that past always remains conjectural because the historical past remains a thing-unto-itself, forever closed off to us. Our conjectures and speculations about the historical past we can call the virtual past.⁷ Statements about the physical sources available to us, however, are not conjectural. Although we cannot go back to the historical past to check our conjectures about it, we and others can go back to the physical sources existing in the present to see if what we say about them is accurate. In trying to explain the existence of those sources and what they say (testimony), we formulate hypotheses.

Criteria for Formulating and Testing Hypotheses

Settling on a topic helps our research by allowing us to divide everything that comes across our path into two groups: things that relate to our topic and things that do not. Likewise, hypotheses help us in a similar binary way. The source testimony that relates to our hypothesis can be used as evidence in favor of it, opposed to it, or neutral (neither in favor nor opposed). What then are the criteria for formulating and testing hypotheses?

We can use three criteria: correspondence, coherence, and conceptual elegance.⁸ By “correspondence,” I mean correspondence to the available, relevant source testimony. If we are attempting to explain the existence of sources in the present rather than “what really happened” in the historical past, then our explanations should try to explain all the source testimony that relates to a topic. We should not suppress any relevant source testimony or dismiss source testimony as irrelevant only because it does not fit our hypothesis. To do otherwise, to formulate explanations that do not correspond to the source testimony would be absurd from the point of view of historical study (although some people have tried to justify skewing the testimony for ideological or personal reasons). It ultimately defeats our purpose to explain the world as it exists.

By “coherence,” I mean a logical, well-focused internally consistent argument. As with the previous criterion, it would be absurd to try to do the opposite, to formulate illogical, self-contradictory arguments. For example, the following statement is self-contradictory:

“This sentence is false.”

If the meaning of the sentence is true then it is false. If its meaning is false, then it is true. Thus, it contradicts itself. The same holds for these two statements:

“The following sentence is true.”

“The preceding sentence is false.”

They cancel each other out and together are contradictory.

⁷ For a fuller explanation, see my “The Historian and the Virtual Past,” *The Historian*, 51 (1989): 201–220.

⁸ After I had formulated this set of criteria for testing hypotheses, Norton Q. Sloan pointed out to me a similar set of criteria previously mentioned by Ken Wilbur. Cf. “Editor’s Footnote” in *Quantum Questions: Mystical Writings of the World’s Great Physicists*, ed. Ken Wilber (Boulder: New Science Library, 1984), 145–146.

Only people who are perfect have never contradicted themselves. The rest of us do contradict ourselves from time to time, not necessarily out of any attempt to deceive, but because things look different to us from different angles and at different times. Search for contradictions in your own writing as well as in what you read. But, remember, be fair.⁹ Always give the author of what you read the benefit of the doubt as you would like to be given it by those who read what you write. When you think you have found a contradiction in what you are reading, be sure to look for extenuating circumstances, qualifications, and other possible explanations.

Another form of incoherence is illogicality—either the chain of reasoning is faulty or the author is playing “language games.” For example, here is a bad riddle: If you are in the desert and dying of thirst, which would you rather have: a drink of water or a ham sandwich? The answer is a ham sandwich because, if you were in the desert dying of thirst, *nothing* would be better than a drink of water. And a ham sandwich is better than nothing. The play is on the word “nothing” used in two different senses. Wittgenstein criticized much of philosophy for engaging in such language games or in what is called the fallacy of equivocation, that is, putting two different things in the same category for the wrong reasons.

The third criterion for testing hypotheses, conceptual elegance, means the absolute minimum of abstract constructs and unstated assumptions within the hypothesis to explain the available source testimony.¹⁰ If we were to look for the most complicated explanations, then there would be no end to the complications we could imagine. And someone could always “top” us by coming up with a more complicated explanation. For example, if we were to read that Julius Caesar was in Gaul at the end of 50 B.C. and in Rome at the beginning of 49 B.C., we would not state that he must have gone by way of Spain. Someone else could then “top” that by saying he must have gone by way of Spain and Africa. The simplest explanation is that he went directly from Gaul to Rome. Although it is possible, he could have gone by way of Spain (and Africa), we would not say so unless we have other evidence to think his trip was not direct.

To a certain extent, these criteria are arbitrary, but they are defensible against the alternatives. Studies that are based on contradictory and illogical arguments, the suppression and concocting of evidence, and a multiplicity of unnecessary abstractions lead nowhere except to incoherent arguments that do not correspond to the evidence with a lot of made-up stuff. If that is our goal, then there is no reason to study history. It would make a mockery of our attempts to understand the world, and, while it might benefit any particular individual or group in the short run, it

⁹ Alec Fisher refers to this as the “Principle of Charity.” Alec Fisher, *The Logic of Real Arguments* (Cambridge: Cambridge University Press, 1988), 17–18.

¹⁰ Note that I am using the term “elegance” here in the sense that is applied to computer programs, that is, the fewest number of steps to accomplish a task. See *Random House Webster’s College Dictionary* (New York: Random House, 1991), 432: “‘elegant’... 5. (of theories, solutions, computer programs, etc.) gracefully concise and simple; admirably succinct.” I am not using it in the sense that is often applied to stylistic or artistic matters, although a case could be made that at the deep structural level all elegance implies no more than what is necessary to produce a desired effect.

would be detrimental to society and to the welfare of all beings in the long run.

The three criteria of correspondence, coherence, and conceptual elegance thus refer to the three levels of historical investigation and explanation: (1) evidence; (2) argument; and (3) interpretation. Evidence means all the source testimony that relates to a particular topic. Arguments should be logical and based on the evidence. Interpretation should be as simple as possible but as complex as necessary in order to explain the evidence and should be based on that evidence and on logical argument.

Which Comes First? The Facts or the Interpretation?

The historian Walter T. K. Nugent has remarked:

Most people believe that history really consists of a large number of solid facts, which certain more-or-less biased people have accumulated and arranged in some kind of order, usually chronological. They think that to learn history means to memorize the “important” facts and to avoid as far as possible the biases of the arrangers. First come the facts, and then, as a kind of necessary evil, the interpretation.¹¹

After rejecting that view as well as the view of those historians who say interpretation comes first and the facts come later to support it, Nugent resorts to what he calls a “commonsense” approach, that is, the facts and interpretation develop together, each dependent on the other. Thus, facts and interpretation do not exist independently of one another. The so-called basic facts only become facts as the result of being part of an interpretation. For example, the statement “The Pilgrims landed at Plymouth Rock in 1620” has no significance until it is put within a historical context. We may already have that historical context in mind when we read that statement, so it may be difficult to see what the problem is. But for someone who does not have that historical context in mind, the statement has no significance. Compare, for example, a statement such as “Nil Sorskii attended the Moscow Church Council of 1503.” What is the significance of that statement? Is it a fact?

We begin developing an interpretation by formulating a hypothesis about the evidence. A hypothesis implies but does not necessarily indicate sufficient evidence to provide a tentative explanation. Often a hypothesis is merely a guess based on insufficient evidence. It is an arbitrary structuring of random evidence (although some people prefer to think of it as finding in the evidence a pattern that is really there). This structuring or finding a pattern can then be used as a means of gathering more evidence and relating it to the evidence we already have. In discussing the teaching of art, Steven Shipps has pointed out that, even if the evidence (the signs) are ran-

¹¹ Walter T. K. Nugent, *Creative History: An Introduction to Historical Study* (Philadelphia: Lippincott, 1967), 70.

dom, we can structure (combine) them in only a limited number of ways.¹² One might think of such a structuring of evidence as similar to playing with tinker toys. The round pieces with holes are the signs (evidence), while the sticks represent the logical connections (argument) we make. Because of the placement of the holes in the little round things, we can connect them with each other via the sticks in only certain ways. The way we choose to connect them is our hypothesis (interpretation). The idea is to connect as many of the little round pieces as we can.

Popper's Theory of Refutation

The philosopher of science Karl Popper argues that one should try to refute hypotheses rather than confirm them.¹³ The reason for this is that we often tend to become enamored of our hypotheses and try to “prove” them correct. We find evidence to support a hypothesis, but often at the expense of ignoring any evidence that refutes it. In the words of Thomas Jefferson, “The moment a person forms a theory his [or her] imagination sees in every object only the traits which favor that theory.”¹⁴ For example, I can “prove” to you that the sun goes around the earth. All you have to do is get up early one morning before sunrise, face east, and, if the sky is not overcast with clouds, you will see the sun rise. You will not feel the earth move, but you can see the sun come up over the horizon. Therefore, the sun rises and the earth stands still. Such an example is a blatant use of selective evidence to support a hypothesis. There is overwhelming evidence to the contrary, but I choose to ignore it because I want to “prove” that my hypothesis is correct. Likewise, any hypothesis must be considered tentative because our inclination is to look only for evidence that supports our hypothesis and to modify evidence to fit it. A better way of proceeding is to modify our hypotheses to fit the evidence.

After you have looked for all the evidence that supports your hypothesis and especially hard for any evidence that refutes or detracts from it, then you must analyze both types of evidence to see which is stronger. I will give you an example to show what I mean. Let us say you are seated in a classroom with your back to the door. You have a memory of where the door is because you walked in that door to get to your seat. Where you think the door is located constitutes a hypothesis in your mind. If you were to get up to leave the room, you would automatically start moving in the direction of the hypothetical door without even looking where the real door is. Let's say you close your eyes and try to find the door. You may be successful on the first attempt and find the door immediately, or you may walk into the wall. If you did walk into the wall, then you would say, “My original hypothesis must be wrong,” and you would change your hypothesis about where the door is. You would not say: “Well, I took five steps in the

¹² Steven Shipps, “Deconstruction Deconstructed: On Teaching about Thinking about Art,” unpublished paper presented at NAEA Convention, Chicago IL, March 1, 1993.

¹³ Karl Popper, *The Logic of Scientific Discovery*, 2nd ed. (New York: Harper and Row, 1968), 78–92.

¹⁴ Thomas Jefferson to Charles Thomson, 20 September 1787, *The Works of Thomas Jefferson*, ed. Paul Leicester Ford, 12 vols. (New York: Knickerbocker Press, 1904), 5: 342.

direction of the door, and I did not run into anything. Therefore, those five steps are evidence that outweighs the counter evidence of my walking into the wall. So, this can't be the wall; it must be the door." You also would not try to walk through the wall as though it was the door. You would not try to do so because it would be foolish. Yet, people involved in research will often attempt the equivalent. They will attempt to modify the evidence (the wall) to fit their hypothesis (where they think the door is) and they will find all sorts of justification for doing so, such as referring to the unhindered steps they took before walking into the wall. Don't be one of those people. When the evidence you have does not correspond to your hypothesis, avoid the temptation to modify the evidence to make it correspond. Modify your hypothesis instead.

You can use the same technique when you write your paper. Begin by putting down what you want to say. Don't worry about grammar or style or whether it makes sense. Just write it down. The idea is for you to get it "out there" on paper. The next step is to try to refute what you just wrote down. Examine it as a critical reader would, looking for contradictions, overlooked evidence, unnecessary constructs, etc. Then revise, revise, and revise again. Go back and forth between you as writer wanting to make statements and you as reader analyzing those statements for accuracy. Always consider your work to be work in progress and be prepared to modify it accordingly.

Testimony and Its Use as Evidence

Testimony is the statement of the source or the artefact itself. It is specifically what someone says or the thing they created, not how it is being used. Evidence, in contrast, is testimony that is being used for or against a hypothesis or argument. In other words, testimony with an interpretive spin put on it is what we call evidence. Individual bits of testimony can have different interpretive spins and thus can be used as evidence to support or refute different interpretations. Here is an example of this difference. In the middle of Harvard Yard, right in front of University Hall, is a statue of a man seated on a chair with an open book in his lap. On the base of the statue are inscribed these words:

JOHN HARVARD
FOUNDER
1638

It is well known (all the tour guides repeat it) that these three lines of testimony represent three lies: the statue is not a likeness of John Harvard because no one knows what John Harvard looked like; John Harvard was not the founder of Harvard College (it was founded by the Massachusetts General Court; John Harvard merely donated his books and half of his estate to the newly founded college); and the college was not founded in 1638 but in 1636. Thus, these three lines of testimony should not be used as evidence for the founding of Harvard College. So far so good. The model for the statue was supposed to be an alumnus of Harvard, Sherman Hoar, Class of 1882, but the sculptor, Daniel Chester French, says that it is an idealized image. Some people have suggested that it looks like John Milton. Yet, if no one knows what John Harvard really

looked like, how can we say with certainty that this statue is *not* what he looked like? Perhaps by a fluke, French managed to create an image of the real John Harvard. Who is to say he did not? The answer, in this case, is probability. It is highly unlikely, although minutely possible, that the sculptor by chance managed to recreate the facial and body image of a particular person who lived 250 years earlier.

How then do we know that John Harvard did not found the college in 1638? Not only do we have the testimony on the pedestal of the statue to this effect, but also we have the apparently corroborative testimony of an anonymous pamphlet written in 1643:

it pleased God to stir up the heart of one Mr. *Harvard* (a Godly Gentleman and a lover of Learning, there living amongst us) to give the one halfe of his Estate (it being in all about 1700*l.*) toward the erecting of a Colledge, and all his Library: after him another gave 300*l.* others after them cast in more, and the publique hand of the State added the rest: the Colledge was, by common consent, appointed to be at *Cambridge*, (a place very pleasant and accomodate) and is called (according to the name of the first founder) *Harvard Colledge*.¹⁵

Yet, there are also official documents in existence, records of the General Court of the Massachusetts Bay describing a legislative act of October 28, 1636, that led directly to its founding. Which do we trust—early seventeenth-century documents or a seventeenth-century anonymous pamphlet and a late nineteenth-century statue? Maybe the documents are forgeries, concocted by some students from Yale in an elaborate hoax to discredit the statue of John Harvard. After all, Yalies have been known to pour blue paint on the statue before Harvard-Yale football games. Or maybe the General Court wanted to take all the credit for founding the college, so they later dated their documents to an earlier year. In order to use documents as sources, we have to investigate those documents for authenticity. It is not enough to assume they are authentic merely because no one has questioned them or challenged them. If we are researching the question of the founding of Harvard College, and if we want to do a thorough job of it, we begin with the presupposition that all the testimony might be forged or wrong or irrelevant. Then we see if we can establish authenticity, reliability, and relevance.

As Peter Abelard wrote in his *Sic et non*: “By doubting we come to inquiry, and by inquiry we perceive truth.”¹⁶ Suppose for the sake of argument that the only information we have about the founding of Harvard College is the testimony on the base of the statue of John Harvard in Harvard Yard in front of University Hall and the anonymous seventeenth-century pamphlet. Suppose all other sources, documents, and mentions of the founding of Harvard College in secondary and tertiary works were not in existence. Would we then be justified in accepting our

¹⁵ Quoted in Samuel Eliot Morison, *Builders of the Bay Colony* (Boston: Northeastern University Press, 1981), 188.

¹⁶ Peter Abelard [Abailard], *Sic et non: A Critical Edition*, eds. Blanche B. Boyer and Richard McKeon (Chicago: University of Chicago Press, 1976–77), 103.

only sources at face value? Would we say that John Harvard founded Harvard College in 1638 because the statue and anonymous pamphlet say so? And if the anonymous pamphlet did not exist, would we use the testimony on the base of the statue as our only evidence for the founding of Harvard College? Possibly we would, but, given our assessment of the presently existing sources, we would be wrong to do so. How many faulty conclusions historians have reached because of faulty use of testimony is impossible to tell. Not everything historians have said can be right because historians often disagree with each other. Someone has to be wrong, and it is possible that someone is right about the historical past, but it is also possible that no one is right. The only realistic approach to our source testimony then is one of distrust unless we have some specific reason for trusting it. That is, we should not automatically assume a source to be authentic or reliable. Instead we should distrust all sources at the beginning. How then can we come to trust any sources?

Principle of Independent Confirmation

In their book *All the President's Men*, Bob Woodward and Carl Bernstein describe how they established an “unwritten rule” that, before they could publish any piece of information about criminal activity connected with the Watergate investigation, they had to have two independent sources testifying to it.¹⁷ This “unwritten rule” led to some frustrating moments when they felt they had a scoop but could not publish it for lack of corroboration. For any particular event in the historical past, we would be lucky to have two independent sources that say the same thing. For the Battle of Waterloo, for example, none of the eyewitness accounts completely agrees with any of the other eyewitness accounts on specifics of the battle. For most of what we call “history,” we have no eyewitness accounts at all. Sometimes we have only one account, not by an eyewitness, but by someone who lived hundreds of years after the event or person they are describing. Because an account may be our only source about an event or person, historians will often take a leap of faith that this account is accurate, because, if it isn't and if we have no other accounts, then there is nothing we can say about the event or person. It is somewhat like taking the statue of John Harvard and arguing that the sculptor had access to evidence that we no longer have. Somehow he knew 250 years after John Harvard lived what he looked like and that he founded Harvard College in 1638. Why else would he inscribe it on the base of the statue if it weren't so?

We need not, however, consider a source to be accurate, authentic, or reliable to analyze it. We can also talk about relative accuracy and reliability. We can suspend our judgment, our final conclusion, simply because we do not have to decide once and for all “what really happened.”

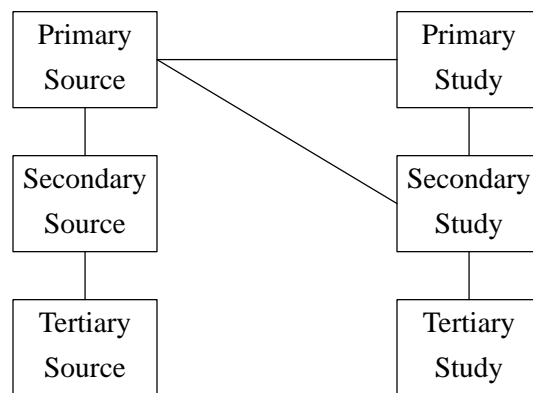
¹⁷ Bob Woodward and Carl Bernstein, *All the President's Men* (New York: Simon and Schuster, 1974), 79: “unless two sources confirmed a charge involving activity likely to be considered criminal, the specific allegation was not used in the paper.”

But we should also try to preserve what we think might be relevant historical sources for future generations who may be better at understanding these things than we are.

Sources and Studies

The terms “primary source” and “secondary source” are relative terms. Primary sources contain direct testimony about something. For example, documents are primary sources for official decisions; eyewitness accounts are primary sources for what the eyewitness saw or heard; diaries and memoirs are primary sources for the author’s perceptions and thoughts.

A secondary source may contain or quote direct testimony about something but it is not the primary source itself. For example, a biography of Mark Twain may contain quotations from his book *Life on the Mississippi*, but it is not *Life on the Mississippi*. The book *Life on the Mississippi* is the primary source; the biography, insofar as it contains quotations from *Life on the Mississippi*, is a secondary source for those quotations and is allowed to be used for information about what is in the primary source when one does not have access to the primary source. If one does have access to the primary source, then the primary source supercedes the secondary source because the author of the secondary source may have quoted the primary source incorrectly. If you quote a secondary source and if someone quotes your use of it, then your work becomes a tertiary source.



A biography or other scholarly work is a study, not a source per se, unless you use it as a source. I have pointed out how it could be used as a secondary source for Mark Twain’s words. But it can also be used as a primary source for the views of the biographer. If we were to make a historiographical survey of the scholarly interpretations about Mark Twain, then the biography would provide direct testimony about the views and opinions of the biographer. But it does not provide direct testimony about what Mark Twain thought or what he did or what happened to him. Only something Mark Twain wrote or was written about him by an eyewitness constitutes a primary source about Mark Twain. A scholarly study describes what is in the mind of the scholar, not the thing itself.

In the same way that we can have primary, secondary, and tertiary sources, so we can have primary, secondary and tertiary studies. A primary study uses only (or mostly) primary sources and does not attempt an interpretation as such. It is fontology—the study of the source itself. For example a catalog of manuscript descriptions is a primary study. A secondary study relies mostly on primary studies and make comparisons of particulars in the sources. Interpretive works are usually secondary studies, but they can also be narratives, like *The Return of Martin Guerre*. Tertiary studies, in contrast, rely mainly on secondary studies. Textbooks and popular narrative presentations of “what really happened” generally fall into this category.

What to Look For When You Are Reading

Darrell Huff in *How to Lie with Statistics* tells us there are five questions we should ask in order “to talk back to a statistic.”¹⁸ *Mutatis mutandis* we can apply these five questions to everything we read.

1. “Who says so?” That is, does the author betray a conscious or unconscious bias that affects their judgment and presentation of the evidence?
2. “How do they know?” On what basis does the author make his or her assertions? Do they back up their arguments with appropriate evidence?
3. “What’s Missing?” Is the author telling you everything you need to know to analyze the author’s arguments?
4. “Did somebody change the subject?” Does the conclusion follow logically from the argument and evidence presented?
5. “Does it make sense?” Is the argument coherent, consistent, and logical? Is there a simpler explanation that would explain the evidence equally as well or better?

Types of Explanation

As we move to more abstract levels of analysis of the evidence, we begin to think we see connections (these connections may or may not have been there in the historical past or in the evidence, but it is what we think we perceive). We can take these perceived connections and form them into a hypothetical explanatory model. The philosopher John Hospers has described a typology of explanations.¹⁹ He points out that all explanations are temporary and ultimately unsatisfactory because there is always more to be asked of them. For example, if someone were to say that their water pipe burst, we might ask: “Why? Why did it burst?” Then that person would have to offer an explanation. They might say: “It was cold last night, well below freezing.” Such an explanation might satisfy us. We would have the “Aha” experience: “Aha, that

¹⁸ Darrell Huff, *How to Lie with Statistics* (New York: Norton, 1954), 122–142.

¹⁹ John Hospers, “On Explanation,” *Journal of Philosophy*, 43 (1946): 337–356.

explains it.” But, perhaps we think about it some more and we might ask: “Why would your water pipe burst if it was below freezing last night?” They might answer: “The water froze in the pipe and that caused the pipe to burst.” “Aha!” might be our reaction, “Now I understand.” Yet after a little thought, we might pursue the explanation further: “But why does water freezing in a pipe cause a pipe to burst? Don’t liquids contract when they freeze?” Our explainer might then respond: “Yes, almost everything else contracts when it freezes, but water expands when it freezes.” Here we surely have the explanation and we have the “Aha” experience again: “I see, water expands when it freezes, and the expansion caused the pipe to burst. Now we are getting somewhere. But, hold on, why does water expand when it freezes while other liquids contract?” At this point even the most patient explainer would begin to become frustrated. They might make reference to molecular structure, but they would begin to see at this point the limits of their own knowledge, an uncomfortable feeling for anyone. They might respond with the assertion of brute fact: “That’s just the way it is.” One finds oneself having this frustrating experience with children of a certain age group.

Hospers classifies explanations according to five types:

1. Teleological: In the teleological type, explanation is in terms of purpose. For example: The Black Death was sent to punish us for our sins.
2. Classification: In a classification type, explanation is considered satisfactory when an event has been shown to be of some class of events already familiar to us. For example: The Black Death was an outbreak of bubonic plague.
3. Generalization: In a generalization type, explanation is considered satisfactory when an event is classed as an instance of some general law. We associate this type of explanation most often with science. For example: When a contagion is introduced into a community, the rate of mortality will be directly proportional to the virulence of the contagion and inversely proportional to the level of resistance of the members of that community.
4. Description: In a description type, explanation is in terms of describing the intermediate steps involved. We associate this type of explanation most often with historical study. For example: A ship from Kaffa traveled to southern Italy in December 1347 bringing bubonic plague with it.
5. Referential: In referential type, explanation is made in terms of some reference to a possible cause. For example: Rats caused the outbreak of bubonic plague.

Question Forming

In formulating our research questions, we should be aware that the form of our questions can affect the types of answers we get. Below are some samples of badly formed research questions:

1. Badly-Formed Questions

“*Why was bubonic plague able to kill so many people in Europe between 1348 and 1350?*” This is a leading question. It assumes that bubonic plague was the cause of death. Some scholars still

dispute the claim that bubonic plague is what hit Europe in the middle of the 14th century. Instead, they have suggested some form of pneumonic plague.²⁰ The form of the question disregards their claims.

“Did rats bring about the Black Death?” The form of this question implies a yes or no answer, when rats may have been a necessary but not sufficient cause. That is, rats may have been necessary to transmit the fleas that carried the bacillus, if we accept the bubonic plague theory, but not sufficient in themselves to kill so many people.

“Why were Europeans so stupid as to allow filth and garbage to act as a breeding ground for rats, and thus spread Black Death?” This question implies an anachronistic point of view. Future generations may consider us stupid for not seeing the obvious. Things are obvious when someone points them out. Otherwise, they remain hidden perhaps because they are so obvious.

“What if the Black Death had never occurred?” The form of this question is too unfocused. It is not testable by reality-based criteria available in the present.

“What was the cause of the Black Death?” This question is badly formed because it implies there was only one cause. We might improve the question somewhat by formulating it as “What were the causes of the Black Death?” But in historical study, we cannot speak of “cause” and “effect” in the same way we can speak of the freezing of water causing a pipe to burst. There is a precisely defined situation in which we can speak of cause and effect. In a laboratory situation, for example, we can repeat a controlled experiment many times and arrive at what we think are causes and effects. We can say one thing causes another when each of these criteria is filled: (1) there is a time order of sequence, such that A always occurs before B occurs; (2) there is concomitant action, such that whenever A occurs B also occurs; and (3) we have checked for third factors, so that we are fairly certain that C is not causing A to occur and B to occur independently of one another. While in historical study, we may be able to be relatively certain about a time order of sequence (for example, World War I came before World War II), we run into difficulty with repeated concomitant action and checking for third factors. First, each event in the virtual past is merely a hypothesis to explain source testimony. Second, even if we are speaking of events in our personal past, which are not hypothetical, we cannot repeat them exactly under controlled conditions, so we do not know if B will vary whenever A varies. In historical study, we do have a fourth criterion that is not available in most laboratory situations. That is, post-facto verification: B says that A caused me to do something. We know, however, from our own experience that such a statement, for various reasons, may be a skewing of external reality. In short, to speak of cause and effect in historical study is misleading in that it can easily give the impression of relative certitude, such as can be recreated in a controlled experiment.

²⁰ See Mortimer Chambers et al., *The Western Experience*, 4th ed. (New York: Alfred A. Knopf, 1987), 395.

2. Well-Formed Question

“How well do the symptoms of the victims of the Black Death as described by contemporaries coincide with the disease we know as bubonic plague?” Posing the question this way allows the possibility for a negative result, that is, they do not coincide well at all. But it also requires some further explanation in terms of comparison of evidence.

What If I Get Stuck?

Anyone who does research gets stuck from time to time. You may have a ton of material and not know what to do with it or you might not know which direction to go toward to begin analyzing it. Or you have analyzed the material and it does not seem to make any sense. One way out of the difficulty is to recognize what kind of obstacle you have encountered. The cognitive psychologist David Perkins has described four kinds of problems: (1) the “wilderness of possibilities”—you have so many possibilities (trees) it is difficult to determine which are the ones you need; (2) the “Clueless plateau”—you find yourself remaining on the same spot without any idea of which way to go; (3) the “narrow canyon of exploration”—you find yourself going around in circles constrained by limits you think are there but may not be for the answer may lie in the next canyon; and (4) the “oasis of false promise”—you cling like grim death to a partial solution when what you need to do is abandon it and start over again to find a complete solution. These problems are traps we all get into and there are different ways to get out of them. The best way out of canyons and oases is brainstorming; that is, thinking up “crazy” solutions, one of which may not be so crazy after all. If your research gets you into a wilderness, then focusing on smaller components of the issue often helps. And to get off the plateau, you need to look again at the question you are trying to answer from as many different angles as you can.²¹ Finally, when I am stuck, I find that getting another person’s viewpoint can do the trick. Just explaining the problem to someone else sometimes works wonders.

Is It Better to Be Able to Think Than to Know a Lot?

A report from Bell Labs has estimated that there is more information in one issue of the *New York Times* than a sixteenth-century person had to process in their entire lifetime. Whether or not we agree with that assessment, I think we can all agree that ours is an information society. But we cannot hope to hold or be able to recall all the information we receive. We need extended brains, such as libraries, reference books, and computers. Better than trying to hold tons of information in our brains is the knowledge of how to find information when we need it, and the ability to think critically in analyzing that information.

²¹ David N. Perkins, *The Eureka Effect: The Art and Logic of Breakthrough Thinking* (New York: Norton, 2000), 47–48.

When Should We Begin to Question?

Some teachers say that we should learn the material first before we begin to question. I think that is a wrong approach. We have to begin questioning at the very outset, and not accept anything unless it makes sense to us. If we absorb the material first without questioning, then the questions that occur to us have already been determined to a considerable extent by the manner in which that material was presented to us and by the presuppositions that material contains. We tend not to question the premises of that material. The premises must always be open to question, especially by those approaching the material for the first time. Perhaps, students' so-called "ignorance of the basic facts" of history that we read about frequently in newspapers and magazines may not be so much an indictment of the students as of the teachers and textbooks. The students' resistance to learning the history taught in our secondary schools and colleges may be an existential resistance to being propagandized. If teachers are convinced their views are correct, then all the more reason to allow students a chance at open inquiry to replicate their findings or even improve upon them. The only reason I can see for presenting just one side or only one viewpoint is if we want to hinder the learning process, something American schools have shown themselves to be very good at.

When you do come up with your own ideas, with different and original ways of looking at the source testimony, you will find people who will say you are wrong merely because the ideas are different. But don't worry, this conflict between those with new ideas and those who hold fast to the old ideas is the way all scholarly work proceeds. One cannot be "correct" in one's views and innovate at the same time because an innovation is by definition incorrect, that is, it is something that to this point has not been considered correct. When it becomes "correct," that is, the accepted view, it is no longer an innovation. As John Stuart Mill wrote in "On Liberty":

If there are any persons who contest a received opinion, . . . let us thank them for it, open our minds to Listen to them, and rejoice that there is some one to do for us what we otherwise ought, if we have any regard for either the certainty or the vitality of our convictions, to do with much greater labor for ourselves.

Sometimes the new ideas win out, and sometimes the old ideas remain in place. You should listen to criticism, analyze it, and, if you feel your ideas need changing or even abandoning, then change or abandon them. But, if you feel your ideas are good ones, that is as long as they meet the three criteria of correspondence, coherence, and conceptual elegance, then stay with them. You may be the one who has found the door while everyone else is trying to walk through the wall.

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last updated: June 25, 2012