

## PROBLEM SOLVING WITH HYPOTHESES

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A woman approached me after a lecture. “May I ask you a question?” I nodded. “I have no document that shows a particular relationship, but I think I know the answer.” I began my standard spiel about how she should write an “article” presenting the evidence for her conclusion. She stopped me. “No, you don’t understand. I’m not sure myself if this is right. How do I tell? How do I know that my logic holds up? You’re experienced in judging things like this, but I don’t have that background.”

I’m afraid I did not give her a useful answer, but several days later I thought of the perfect reply. In 1984 I wrote an article for the *Maine Genealogist* called “Problem-Solving by Hypothesis: Two McAllister Examples.” The process described therein is an excellent technique when you aren’t sure if you’ve covered everything.

The technique of using hypotheses (which you may think of as scenarios, cases, or possibilities) can provide a fresh perspective.

Begin by stating all hypotheses, given these criteria:

- Together, the hypotheses must be exhaustive. They must cover all possible solutions, therefore one must be true.
- The hypotheses must be mutually exclusive, therefore only one can be true.
- The individual hypotheses may range from very specific to very general.

The concept is best illustrated by example.

### TOMBSTONES ALL IN A ROW

In the first McAllister puzzle, I considered the problem of three tombstones in the cemetery in North Lovell, Maine. They are identical in size, shape, material, and inscription style. There are no other stones in the cemetery like these three.

On the left is the stone for Lydia, wife of John McAllister, who died 23 July 1871, aged 72 years 8 months 21 days, hence born 2 November 1798.

In the middle is Jane, wife of Peter Coffin, who died 6 December 1854, age 86, hence born probably in 1768.

On the right is John McAllister, died 30 December 1880, age 89 years 1 months 4 days, hence born 26 November 1791.

I examined the question of “Who was Jane, wife of Peter Coffin?” using hypotheses to focus my research and analysis. Her birth date clearly indicates that she is a generation earlier than John and Lydia, so I formed the following hypotheses:

1. Jane was unrelated to either John or Lydia.
2. Jane was related to John or Lydia, but not as closely as a mother.
3. Jane was the mother of John and married Peter Coffin as a widow.
4. Jane was the mother of Lydia, and Peter Coffin is Lydia’s father.

5. Jane was the mother of Lydia and married Peter Coffin as a widow.

These hypotheses meet the criteria given above. Hypothesis #1 is extremely broad, hypothesis #2 is more specific, and hypotheses #3, #4, and #5 are very specific, but together they encompass all possibilities. One and only one can be true. I analyzed them in detail.

1. Jane is unrelated to either John or Lydia. The appearance of the stones, positioning of the graves, and absence of similar stones indicate that these were ordered from the same carver, apparently at the same time. Hypothesis #1 is extremely unlikely.

2. Jane is related to John or Lydia, but not as closely as a mother. Hypothesis #2 appears unlikely for the same reasons as hypothesis #1, but it cannot be rejected as a possibility. If hypotheses #3, #4, and #5 prove to be false, then this will be the correct solution.

3. Jane is the mother of John and married Peter Coffin as a widow. I researched this possibility. John McAllister was the son of Daniel McAllister and *Sarah* Russell. Therefore, hypothesis #3 is false.

4. Jane is the mother of Lydia, and Peter Coffin is Lydia’s father. I researched this possibility. John McAllister and Lydia *Evans* married in 1817. Lydia was eighteen years old at the time, which in turn suggests that this was almost surely her first marriage, hence she was born an *Evans*. Therefore, hypothesis #4 is probably false.

5. Jane is the mother of Lydia and married Peter Coffin as a widow. In 1850, John and Lydia were enumerated on one of those rare censuses that includes specific places of birth. Lydia’s birthplace was given as Conway, New Hampshire. Family researchers believe her to be the daughter of John *Evans* and Jane *Nutter* of New Hampshire, although proof for this identification has not been found in original sources. Nor has a marriage record for Jane (*Nutter*) *Evans* to Peter Coffin been found, but given the unlikelihood of hypothesis #2 and the reasonableness of this hypothesis, we can state that hypothesis #5 is probably true.

Examining the problem using hypotheses helped us examine the possibilities in a thorough, structured way. It let us determine that the most likely solution was that Jane was Jane (?*Nutter*) *Evans* Coffin, the mother of Lydia (*Evans*) McAllister.

The astute observer will notice that this is one instance in which a mother-in-law has managed to come between her son-in-law and daughter for eternity!

### A FATHER FOR ANANIAS MCALLISTER

Family researchers seeking the parents of Ananias McAllister quickly encounter an enigma—a John McAllister with a son who seems to fit the description of Ananias—but who has the wrong name!

The 1864 *History of New Boston, New Hampshire*, by Cogswell and the derivative 1880 *History of Antrim, New*

*Hampshire*, by Cochran give to John McAllister children named Archibald, Agnus [a variant of Angus], Daniel, and Mary. They say the family settled in New Boston in the neighborhood of Joe English Hill and that Agnus moved to Fryeburg, Maine.

Ananias lived in New Boston near Joe English Hill and then moved to Fryeburg, but he is not named in either town history.

I formed the following hypotheses. Note that they are both exhaustive and mutually exclusive.

1. Ananias and Agnus were two different men.
2. Ananias and Agnus were names used by the same man.
3. Agnus did not exist. He was an error or invention of Cogswell and Cochran.

I analyzed each hypothesis in detail:

1. Ananias and Agnus were two different men. An extensive search for any references to an Agnus in the areas in which the McAllisters lived came up empty. The geographical area in question is rich in records, the search was extensive, and the histories describe a man likely to create records. The only references to Agnus are those of Cogswell and Cochran. On the other hand, references to Ananias McAllister are numerous. Hypothesis #1 is unlikely.

2. Ananias and Agnus are the same man. There are reasons based on name studies to accept this as a reasonable possibility, but in this case, hypothesis #2 fails for the same reason that the first hypothesis failed—there are no records for the name Agnus.

3. Agnus does not exist. He was an error or invention of Cogswell and Cochran. Hypothesis #3 is likely true.

Analyzing the hypotheses only allowed us to dispose of Agnus. It was still necessary to look at the records to determine if Ananias was the son of John McAllister. There were numerous records for Ananias, whose life fit perfectly with the descriptions by Cogswell and Cochran of Agnus. Most convincing is that the land Ananias owned adjoined or was near that of John, Archibald, and Daniel McAllister.

In summary, no explicit statement has been found stating that Ananias McAllister was the son of John, but there is no support for the existence of an Agnus, and all records are consistent with Ananias being the son of the John McAllister described in the town histories.

In this instance, we used hypotheses to dispose effectively of an erroneous bit of information so that we could focus our efforts on correctly assembling the family.

Interested McAllister descendants will find the article, with full documentation, in the *Maine Genealogist* 16(August 1994):62–66 at major genealogical libraries.