What you don't know can hurt you
Family history software under the hood

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Tools of Thought

- This talk is about software
  - Apps, websites, programs, etc.
- I'll call these "tools"
  - implement used in the practice of a **vocation**
  - the means whereby some **act** is accomplished
- Vocation: family history and/or genealogy
- Act: coming to understand (thought)

General principles about software tools

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1. Tools never compromise

- When you and your tool disagree, your tool always wins
  - It is not even aware you are frustrated
- Over time, you will adapt to your tool
- Eventually, you forget that you once disagreed

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2. Someone designed the tool

- There is reason it is as it is
- Design usually based on
  - What will we store?
    - example: list of paragraph -vs- list of letters including some "¶"s
    - changes what tool can ever hope to do
  - What tasks can we define with no ambiguity?
    - not "the right thing" nor "what I want"

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3. Two-subject experts are rare

- Skilled tool designers are rarely skilled genealogists
  - Genealogists usually have trouble describing things unambiguously enough for a computer
  - Developers usually have only a shallow understanding of genealogical research
  - Large teams have communication overhead
- Ergo: unlikely tool has "right" internal model

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4. Quality not enough to not sell

- Need good "skin" (aka "user interface")
  - "good" = what users expect
  - expecations change with fashion
- Marketing needed; easier with more users
- Scale: many users is own problem
  - 10-person groups simple; 1,000,000-person groups need government, courts, etc.
  - Equivalent overhead in software

Unfortunate trends in genealogy software

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1. Model Putative Pasts not Research

- Recall: someone designed what your tool will store as data
  - Family history is about people and their relationships, right?
  - Ergo, data = set of people with facts and relationships stored for each
- Most large tools made this decision

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- Tools are intended to help us **research**
- The fundamental question of research is:

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- Tools are intended to help us **research**
- The fundamental question of research is:
  - "is that **my** ⟨ancestor-name⟩?"
- Person-centric data has no place to store
  - a "no" answer
  - a not-yet-answered state of research
  - that the question was even asked

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2. Collaborate on conclusions

- Suppose you and your distant cousin disagree
- And that you use the same tool
- In many tools, you get to pick between
  - Pick one version to be in the tool
  - Each have your own version (usually of the entire tree) and stop collaborating
  - Fight

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3. Hide Uncertainty

- Most tools
  - Have you specify one name/date/etc.
  - Let you put reasoning and uncertainty somewhere
  - But display "the" data prominently, hide the caveats in footnotes/links/discussions/etc.
- Easy to forget to add caveats
- Easy to forget to look for caveats

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4. Reward results, not process

- It feels good to "make progress"
  - Particularly if acknowledged
- Many tools acknowledge
  - New/changed "data" as progress
  - New/changed research almost not at all
- Can manipulate our motivations…

What you can do

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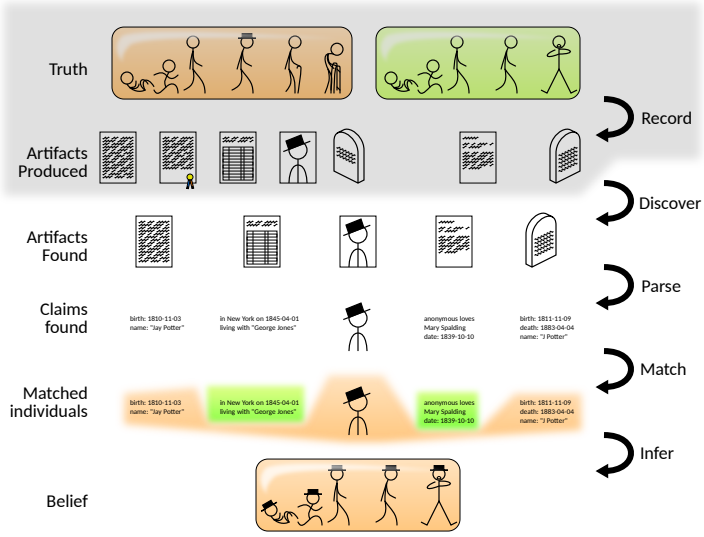
1. Understand Research



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2. Use Paper

- Unlike software, paper can adapt to you
- Record even what your tool cannot record
  - Where you looked for what when
  - How you decided what you did decide
  - Open questions to revisit later
- Record these to be read by others
  - Such as your future self…

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3. Notes are Key

- Almost all tools allow for free-text notes
  - (some allow for little else)
- Include outline of your thinking
- Read those others have written

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4. Incentivize Good Design

- Feedback
  - Ask for what is missing
  - Explain use cases the tool did not support
  - Express gratitude for the good things
- Vote with your wallet
  - Purchase tools you like
  - Try new tools so you know what you like