

## Further Notes on the THESIS of your FINAL PAPER

Recall that a thesis is a statement (not a question, nor an action, nor a list) that will be supported by material from the pieces you chose to use.

You start, of course with a topic, a focus or a direction – something that interests you. Most of you have gotten this far. Then, one way you obtain this thesis statement is coming up with a question that has to do with your topic, and then, considering whether or not you can answer that question from the pieces you chose (and of course from other sources). If you have a question that you think you can answer from the pieces you chose, then you are close to having a thesis statement, but not quite. Then you ask yourself: **Why** is [my answer] the answer to [my question]? This is what leads you to your thesis and to your paper.

For example, (and since it's an example, you can't use it).

FOCUS: I'm interested studying the "best" mathematicians in several pieces.

Then I spend some time reading through several pieces (Uncle Petros, Fermat's Room, Cryptonomicon) and re-watching some movies until I come up with the question.

QUESTION: Is it the case that the "best" mathematician is also the "best" at something else?

ANSWER: Yes, they are! Uncle Petros and Hilbert (Fermat's room) are also "the best" at chess and L. Waterhouse in *Cryptonomicon* is the best musician (piano, pipe organ, glockenspiel).

Notice, this is a question that you have to be able to answer from the pieces you chose.

WHY?..... (silence). Eureka! They're the best at something else because it's easier for the author to convince their reader of this.

So my THESIS, for the purposes of this assignment, is the last sentence of the following opening paragraph:

Often in mathematical fiction, the best mathematician (of the characters central to the plot) is also the best at something else. In *Uncle Petros and Goldbach's Conjecture* and in *Fermat's Room*, the best mathematicians are also the best at the game of chess, while in *Cryptonomicon* the best mathematician is also the best musician. **By explaining how these characters became the best at something other than math, the author is implicitly describing (for the sole benefit of the non-mathematical reader) how and why this character is actually better at math than everyone else – without having to get into any technical mathematical details.**

Of course, there's a lot more that would need to be fleshed out if this were to be made into a paper worthy of an A, but it's a start. (Just keep on asking yourself, "How?" and "Why?")