

CMSC 304: Thesis Statements and Topic Sentences

After reading the papers for the Ethical Analysis #1 assignment, I realized that many students don't seem to understand the ideas of a thesis statement (clear statement of the main point of the paper) and topic sentences (clear statement of the main point of each paragraph).

In general, the first paragraph or two of any paper needs to clearly state what the paper is about, preferably without a lot of "filler" material that isn't really pertinent. Many students had an entire paragraph of general rhetoric about how fast the Internet is growing before even mentioning vulnerabilities or the vulnerability market. Almost every paper could be improved by making the first paragraph clearer and more decisive, and by including a clear thesis statement near the beginning of the paper.

The other major problem is that many students' paragraphs tend to ramble and wander, and there often isn't a clear topic. As a rule, the first sentence of *every* paragraph should be a topic sentence that states the main point of the paragraph. Every sentence in the rest of the paragraph should (a) be related to the main point and (b) follow naturally from the previous sentence. You can't just glue six marginally related sentences together and call it a paragraph – each sentence has to make sense in the context of the previous sentence. If you want to start a new idea, then you need a new paragraph. (Read this paragraph for an example of a well constructed paragraph, other than the infinite loop introduced by this parenthetical statement.)

Below are some selected examples (from student papers) of fairly good thesis statements and topic sentences (with minor grammatical corrections in some cases) and brief comments on them.

Thesis statements:

- “Nonetheless, these markets should be regulated globally, not only to restrict the market for zero-day exploits but also to ensure that companies run better penetration tests on their software.” (A clear statement that includes a high-level justification.)
- “Vulnerability selling should not be strictly regulated; instead, the government and software developers should take more responsibility for securing the systems they use and design.” (This particular thesis statement appears a bit late (after some digressions) but is a very clear statement of the main point made in the paper.)
- “The market should be regulated and one way to do it is by restricting the distribution of zero-day exploits to only the government or the exploited software's company.” (I include this thesis because it's *almost* right, but hedges and has some grammatical problems. A stronger version would be: “The market should be regulated by restricting sales and distribution of zero-day exploits to the government and to the owners of the vulnerable software.”)
- “Regulating the zero-day exploit market would be the best way to alleviate this situation because it upholds the best balance of profitability for companies and security for everyone.” (Clear statement but could be strengthened by indicating the nature of the suggested regulations.)

Topic sentences:

- “Ultimately, the best way to control the selling of vulnerabilities is to limit and control their existence.” (The rest of the paragraph discusses why and how companies should do a better job of finding and eliminating vulnerabilities, and all of it is on this topic.)
- “Zero-day exploits, the weapons of modern warfare, take advantage of vulnerabilities in software that have not been disclosed either to the developers or to the public. (This is a well written leadoff to the entire paper. This paragraph ends with the first thesis statement mentioned above.)
- “Legislators could possibly amend existing laws to create a system for keeping gray-market trading in check.” (The rest of the paragraph mentions the Computer Fraud and Abuse Act and how it could be amended to address vulnerability selling.)
- “Governments and private companies spend large amounts of money to buy zero-day exploits from the people that discover them.”
- “A third policy option for regulating the sale of zero-days is to only allow sales to the U.S. government.” (This paper is structured around four alternative policies, each of which is presented and analyzed sequentially in a separate paragraph.)
- “Attempting to regulate the vulnerability market would be impossible for multiple reasons.” (Those reasons are then clearly stated, one reason per sentence.)