

Ethical Analysis Assignment #1

CMSC 304

Using the Ethical Analysis Framework that we discussed, analyze the question of *whether* and *how* to regulate the vulnerability selling industry. The expected length is 2-4 pages in a standard single-spaced, 11 or 12 point font report style (approximately 1000-2000 words). If you have more to say, though, it's OK to submit a longer analysis (but not more than 8 pages, please).

1. First, listen to the NPR story (or read the transcript), "In Cyberwar, Software Flaws Are A Hot Commodity," Tom Gjelten, NPR, February 11, 2013.¹
2. Read more about the vulnerability selling industry and the economic and ethical issues it engenders in "Sell Out Hackers: The Zero-Day Exploit Market," *Decrypted Matrix*, February 14, 2013,² and "Cyberwar's Gray Market," Ryan Gallagher, *Slate*, January 16, 2013.³ (some additional resources are provided at the end of this document.)
3. Do your own research. What questions do you have that these articles haven't answered? As you think about this issue, you may find the need to do more research on specific questions and/or possible effects/consequences. Does any elements of the ethical analysis framework have more complicated aspects than others?
4. While there are many different angles to this issue you do not need to include or address all of them. Decide what you want to focus on and what aspects of this situation you want to draw out.
5. Use the ethical analysis framework to organize your thoughts and develop your analysis – again, this may require additional research on your part. Cite your sources and do not make unsupported assertions (see #9).
6. Write your own cogent essay presenting your analysis. It should include all of the key information that you organized in your ethical analysis framework, but it should *not* just be linearly presented as those ten pieces of information sequentially. (And whatever you do, do *not* start a sentence with, "The stakeholders in this case are...", "The related laws are....", etc.) Think about what conclusion you drew and use that as a thesis statement, then create a narrative essay structure that will let you support that thesis using the information from your analysis. I suggest first developing an outline to organize what you'll say before writing final essay.

¹ <http://www.npr.org/2013/02/12/171737191/in-cyberwar-software-flaws-are-a-hot-commodity>

² <http://decryptedmatrix.com/live/sell-out-hackers-the-zero-day-exploit-market/>

³

http://www.slate.com/articles/technology/future_tense/2013/01/zero_day_exploits_should_the_hacker_gray_market_be_regulated.html

7. Start this assignment soon! Feel free to come by office hours (either my own or those of the 2 wonderful TAs for our course!) to discuss the ethical framework, review your outline, or briefly review parts of an early draft with you. Write the essay early enough that you have time to set it aside, let it rest for a bit, and then come back to it with a fresh eye to edit and proofread. It's OK to ask a friend/peer to read and comment on your draft, but they **should not rewrite it for you** -- and you should indicate what kind of editing help you received, if any.
8. Be very careful about any quotations or wording you'd like to borrow from your sources, and quote and cite those sources appropriately and consistent with the course policy. You should cite your sources for any specific facts, findings, or sources of expert opinions (but you don't need to cite sources for general knowledge like what a zero-day vulnerability is.)
9. Include a bibliography that is easy to read and has full bibliographic citation information (**not** just URLs, even if you found a source online). APA style is suggested.

Additional Food-For-Thought:

The Ethics of Vulnerability Markets

The sale of security vulnerabilities raises ethical issues because the information can be used nefariously. When in the wrong hands, these exploits can be used to launch cyber attacks that threaten information security and can even cause physical damage. Although this information can be used in harmful ways, its sale is legal. Most likely, these markets will always exist. It is therefore important to ask what is the best way to handle vulnerability information.

<http://zerodayexploit.weebly.com/ethics.html>

(2013) Egelman, Herley, and van Oorschot "Markets for Zero-Day Exploits: Ethics and Implications" NSPW '13 Proceedings of the 2013 workshop on New security paradigms workshop Pages 41-46 ACM New York, NY.

<http://people.scs.carleton.ca/~paulv/papers/NSPW-2013-author-version.pdf>