



Diploma Thesis Evaluation Form

Author: Sudhanshu Kadre, B.Eng.

Title: *The (New) Security Dilemma: Impact of technological innovation on the security dilemma*

Programme/year: International Security Studies with specialisation in Security, Technology and Society / 2023

Author of Evaluation (second reader): Mgr. Michal Šenk

Criteria	Definition	Maximum	Points
Major Criteria			
	Research question, definition of objectives	10	8
	Theoretical/conceptual framework	30	30
	Methodology, analysis, argument	40	35
<i>Total</i>		80	73
Minor Criteria			
	Sources	10	7
	Style	5	3
	Formal requirements	5	5
<i>Total</i>		20	15
TOTAL		100	88



Evaluation

Major criteria:

Research question, research objectives

In his thesis, the student chooses to focus on the question of security dilemma as seen in the light of technological innovation, concretely the cyberspace. The topic itself is not new, as best evidenced by the very literature the student cites in his work (typically Ben Buchanan's 2017 *Cybersecurity Dilemma*), but is nevertheless increasingly more important and thus timely. Recognizing the limits of the format, the student aptly limits his approach and defines his research question as follows: "What is the relevance of ICT innovation to the perception of the security dilemma?". The phrasing of the question is clever: asking about „relevance“ instead of „effect“ or „impact“ safely steers the thesis away from any necessity to couch his approach in causal terms. This makes sense, as the thesis does not engage in causal analysis, even despite the fact that the student, somewhat perplexingly, claims to be „exploring causal links“ in his analytical section (more on this below).

Similarly, investigating the perception of security dilemma, not security dilemma as such, affords the student some leeway as it obviates the necessity to examine the mechanisms of the dilemma in their entirety. However, the perceptual focus raises some questions as well. It is not crystal clear if the student wants to investigate the perception of uncertainty, a key component of security dilemma, or the perception of security dilemma as such. The distinction is an important one as each option favors different research strategy. The key difference is that the former does not require an investigation of the perception of (state) actors per se, but can limit itself to analyzing whether the attributes and properties of cyberspace have the capacity or potential to make the actors feel more uncertain. It is a more circumspect approach and one more suitable for an MA level thesis. The latter, on the other hand, calls for an explicit study of state perception, as such an inquiry must make clear not only whether there exists a potential that ICT leads actors to feel more insecure but also whether the actors actually feel that they are in a condition of heightened security dilemma and/or take defensive measure that would further prove the notion. I am inclined to believe that the student proceeds along the lines of the former, but the ambiguity nevertheless exists and translates to other parts of the thesis, occasionally causing confusion as to what the student is trying to achieve.



Theoretical / conceptual framework

The student constructs a conceptual framework that is highly adequate for his approach. Building on Tang's model of security dilemma, an IR standard, the student improves upon the model by combining it with insights from other theoretical sources, such as the work of Cerny, Buchanan as well as literature dealing with the question of ICT and cyberspace at a more technical level. The tweaks the student makes work well in anticipating the directions the analysis needs to take to address the research question: the inclusion of non/sub-state actors and offensive capabilities or the discussion concerning the nature and properties of cyber threats are all largely warranted and functional. Put together, they also suggest that the student is more interested in the insecurity-increasing potential of the cyber space, rather than state perception per se. The discussion found in the work's literature review helps put these concepts in a broader context and further substantiate their necessity. By and large, the only thing significantly missing from the literature review / theoretical chapter is a broader overview of the state of the art pertaining to the thesis' research focus.

Methodology, analysis, argument

The student chooses qualitative approach, which is well-suited for the purposes of the thesis. He does not subscribe a specific „methodology“ but it becomes clear that the approach is loosely modeled on the logic of case study research. Envisioned data sources as well as the technique of their analysis are standard and appropriate. Somewhat problematic is the student's decision to frame his approach in broadly causal terms. On page 34 the thesis states an interest in the „exploration of the underlying causal relationships within the reality of the security dilemma and the broader patterns of how it is perceived through the lens of cyber warfare“. This claim effectively suggests: one, the student expects to engage in a combination of the two research directions outlined above, and two, that he is to do so through the observation of the effect of an independent variable on a dependent one. As he states it, „the thesis would explore how cybersecurity innovation (independent variable) influence the security dilemma (dependent variable)“. This is an unfortunate choice, as not only does the subsequent analysis not provide an actual causal analysis but the thesis actually *does not need one* to answer the research question (as originally stated). While not a major problem, the decision is indicative of a rather cavalier usage of the term „causal“ and, more importantly, some uncertainty regarding what the thesis is ultimately trying to demonstrate, as evident already in the research question.



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The actual analysis is sound but not without problems. The student begins with an assessment of three properties of the cyberspace (the anatomy of cyber-attacks and the problems of assessment and attribution) that he collectively posits to have the capability of creating / intensifying the perception of insecurity and thus security dilemma. This is not a causal analysis, but rather comes closer constitutive one, where the goal would be to show how the properties help explain why (the perception of) security dilemma in cyberspace may exist. If thought of as the latter, the sections nicely address the thesis' research question.

Based on this analysis, the student argues not only that security dilemma holds true in cyberspace but may actually be made more severe by the specific attributes of the domain. To back up and extend upon the argument, the student then moves to two case studies. In the first one, on Stuxnet, he documents in practical detail the working of the three attributes and their potential to foster uncertainty. He briefly mentions that Stuxnet actually worked to create a sense of urgent security dilemma in state actors, leading them, as would be expected, to significantly bolster their cybersecurity capabilities. This notion brings the thesis closer to the second research direction outlined above, but is not sufficiently detailed or backed up by data to be considered analytically relevant. In this sense, the second case study fares significantly better. Outlining a dynamic of mistrust between the US and China on matters related to cyberspace, the case study does a good job moving from the considerations of perceptions to an actual analysis of possible security dilemma. This makes the case study the highlight of the analytical section.

All in all, the analytical section addresses, from a number of angles, the thesis' research question and comes up with a sufficient answer predicated on sound argumentation. However, what detracts from the ultimate effect of the analysis is an unclear structure (and possibly strategy) as well as insufficient empirical backing, two issues dealt with in the *minor criteria* section.

Minor criteria:

Throughout its length, the thesis exhibits several formal and stylistic issues that significantly lessen its impact as well as validity. Most importantly, the work is not properly sourced. This is not to suggest that it contains plagiarism. Far from it, the work exhibits numerous original ideas and arguments that demonstrate the student's grasp of the topic. The problem is, however, that these ideas are not always sufficiently supported by relevant data. Whether in the literature review and conceptual parts or the actual analysis, time and again do we find important argumentative claims without proper empirical backing. This unfortunately decreases the robustness of the claims.



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Also important is the style. The work contains a good line of thinking but most of it is buried under an all-over-the-place writing style. To sell its case better, it would greatly benefit from the adoption of the clearer, Anglo-American approach, using topic sentences and other forms of signposting to help keep track of what the thesis is trying to demonstrate at each point, logically structuring paragraphs so that they always cover only one key idea, and keeping an eye on the logical flow of the chapters as well as their contents (an amount of overlap between the literature review and theoretical chapters being a case in point). This is not a major issue but one that unnecessarily distracts from the otherwise valuable substance of the thesis.

Assessment of plagiarism:

No signs of plagiarism were found.

Overall evaluation:

Overall, this is a fine MA thesis that demonstrates the student's grasp of the topic, including its technical dimension, as well as a high-level ability to work with and combine theoretical concepts from a number of disciplines. This translates to a solid analytical investigation. At the same time, the work suffers from a number of shortcomings that inadvertently undermine its strong sides. Most importantly, the thesis is ambiguous about its objective, which results in a somewhat confusing approach to the analysis, and does not provide enough empirical backing for its claims. These and other issues do not render the thesis dramatically weaker, but do stand in the way of reaching its full potential.

Suggested grade:

The grade suggested based on my reading is B. However, the thesis might be eligible for a higher mark provided the student clarifies his research intentions, explains how and whether his analysis addresses those, and offers concrete details about his work with data sources.

Signature: