Review Protocol: Investigating Cyberwarfare and Compliance with International Humanitarian Law

Version: 1.0

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Summary

Provide an abstract of your review topic. This should include what the policy problem is, the research gap, and a summary of the aims of the literature review (250 words)

Research Question

Is International Humanitarian Law (IHL) sufficient for cyberwarfare?

Sub-questions

- Can cyberweapons be adequately assessed by Article 36 weapons reviews?
- Does offensive cyber action comply with Just War Theory?
- What are the negative externalities of cyberwarfare?

Academic Databases

List all the databases you will be searching and a short description of what the scope and disciplinary focus of each database is.

- ACM Digital Library
- IEEE Xplore
- Lecture Notes in Computer Science
- ProQuest Central

- ScienceDirect
- SCOPUS
- Web of Science
- JSTOR
- OECD iLibrary
- EBSCO
- EconPapers

Disciplines

- Social Sciences
- Computer Science
- Engineering
- Economics, Econometrics and Finance
- Decision Sciences

Inclusion and Exclusion

The review will include:

- All types of study design and methodologies (quantitative, qualitative, mixed-method, other literature reviews, case studies, case reports, perspectives and position papers)
- All studies must discuss online misinformation or disinformation (not other types of misinformation or disinformation)
- Etc...

The review will exclude:

- All articles that have not been published in peer-reviewed academic publications.
- Grey literature.

Search Strategy

The review will use the following terms to search academic databases (e.g.):

- (misinformation OR disinformation OR infodemic) AND (health* OR medical) AND (strateg* OR mitigate OR policy)
- Etc...
- Etc...

Searches will be limited to articles published between year-to-year. Provide one-two sentence justification for why you have chosen this period.

Literature Management

As I am writing in the LaTeX typesetting format, I am keeping a corresponding BibTex database, using KBibTeX as my reference manager and Git for version control. LaTeX source and .bib database can be found here: https://github.com/20180626/systematic-review-protocol.

Selection of Studies

Provide a summary of your screening, inclusion and categorisation approach for the records retrieved from your search (i.e. articles, papers).

Strategy for Data Synthesis

Provide a summary of the strategy for analysing selected records, for instance how you will summarise and analyse studies that respond to the research question and sub-questions, studies that use different methods, etc.

Included Studies and Preliminary Results (700-900 words)

There were approximately 10,000 unique results returned from systematic searches across the chosen academic databases. A total of 3,010 results were prioritised for screening at title and abstract using machine learning, of which 306 met the inclusion criteria for full text screening. 80 of these articles met the criteria for inclusion in the review. Approximately 2,500 results were screened from website review and expert submission. 106 full texts were screened at full-text, of which 34 met the criteria for inclusion in the review.

114 documents screened at full text met the criteria for inclusion in the REA. Due to the need for an efficient REA process, and reflecting the protocol, two reviewers manually

prioritised 51 of the total of 114 documents meeting the criteria for inclusion, to determine which would be carried forward for data extraction and synthesis. Appendix 8 lists the remaining documents that met our inclusion criteria but were not synthesised and Appendix 6 lists evidence included for synthesis.

Tables of characteristics summarising the interventions, methodologies and outcomes from studies included for synthesis are provided in Appendix 7.

Description of the included studies

Due to the rapid nature of this review, we prioritised 51 of 114 includable studies for synthesis. The analysis of the results presented below and the subsequent findings apply only to the 51 studies included for synthesis.

Figure 1.2 indicates that the majority of studies included for synthesis evaluated infrastructure and road sign interventions (n=23), though it is important to note that this category is the broadest in terms of the number of different intervention types it includes. There were also substantive bodies of evidence for studies evaluating interventions covering law and rules of the road (n=15) and vehicle and equipment interventions (n=12). Fewer studies evaluated training and testing interventions (n=5) and road user education (n= 4).5.

In the 51 studies prioritised for synthesis we included 24 evidence reviews and 27 quantitative primary studies. Of the evidence reviews nine described themselves as systematic reviews, one as an REA and 14 as literature reviews. Of the quantitative primary studies, four are randomised controlled trials (RCTs), three employed differencein-differences, two are controlled before-after studies and seven are interrupted time series. Others include single group pre-test post-test (n=6), cross-sectional comparison studies (n=2) and a range of others including regression models (n=2), and multilevel models (n=1).

Typically the evidence reviews include evidence from multiple country settings (though two focussed on evidence from a single country). We also identified a limited number of European primary studies (n=12), of which three evaluated interventions in the UK. These were complemented by relevant primary studies from North America (n=14) and Australasia (n=1) identified through our search.

Regarding outcomes reported by synthesised studies, only five included studies explore both risk or perceived risk and participation. Thus, the evidence base is not well-suited to exploring whether participation in cycling and walking is affected by interventions designed to reduce risk or perceived risk.

References