FACULTY
OF SOCIAL SCIENCES
Charles University

Diploma Thesis Evaluation Form

Author: Hruška, Adam

Title: Food Security and Machine Learning: Opportunities and Challenges

Programme/year: Master in Security Studies/2021

Author of Evaluation: Antonin Plattner

Criteria	Definition	Maximum	Points
Major Criteria			
	Research question, definition of objectives	**10**	10
	Theoretical/ conceptual framework	**30**	20
	Methodology, analysis, argument	**40**	31
Total		***80***	61

Minor Criteria			
	Sources	**10**	10
	Style	**5**	4
	Formal requirements	**5**	5
Total		***20***	19
TOTAL		***100***	80

Evaluation

Major criteria: The thesis posits that the synergy between climate change and the global demographic growth represents a prospective source of food insecurity. In order to tackle this forthcoming issue, the author undertakes to assess the upside potential for food production, and the sustainability of autonomous machine learning driven precision farming. In order to do so, the thesis starts by convincingly establishing the individual, and its health, as the referent object of the study. Supported by a solid argumentation, the thesis adopts thereby the theoretical assumptions of the Human Security approach. The basic components and mechanisms of the discussed issue

are identified thanks to a scenario building methodology, which relevance and overview are among the most persuasive point of this work. Indeed, the audacious methodological choice is perfectly in line with the selected concepts.

However, the theoretical underpinning of the thesis could have benefited from more critical inputs. As such, the working hypothesis relies on an archetypal instance of the classical concept of *Malthusian catastrophe.* This position isn't reflected in the literature review, which misses thereby its essential role to situate the work in the broader (and century old) debate surrounding Malthusian and Boserupian theories. This initial theoretical loophole can explain why the author deflected from the human focus of the selected Human Security approach. Indeed, by privileging the conceptualisation of *agricultural* sustainability to *population* sustainability*,* the author fails to identify the multidimensionality required for the necessary ecological approach of such a complex interplay (economical-social-environemental-political realm, and local-global levels of relationships). As a consequence, important questions raised throughout the thesis remain unanswered.

Minor criteria: The dissertation displays a complex yet clear, structured and complete organisation. This is a remarkable performance given the challenging nature of the topic. Moreover, the thesis' overall coherence and relevance is kept intact thanks to the linguistic precision and consistency of the author. Although some lengthy and charged sentences may have been parted, the stylistic performance reveals a commendable use of academic language.

Overall evaluation: This thesis testifies of a genuine interest and efforts to engage with an overlooked and complex security related interplay. Raising important issues, the author fulfils the core aims of the discipline by taking a clear stance in each the four fundamental inquiries of Security Studies: "what is security, whose security is it all about, what counts as a security issue, what can be its solution?". However, some crucial assumptions, such as the unique capacity of machine learning to increase crop productivity, are barely supported. This way, the overall lack of criticality impedes any clear and novel contribution to emerge.

From that perspective, and despite a brilliant work, the author seems to share in his conclusion the reader's scepticism regarding the answers to propose to the two ambitious research questions.

Suggested grade: B-C

Signature: A. Plattner