

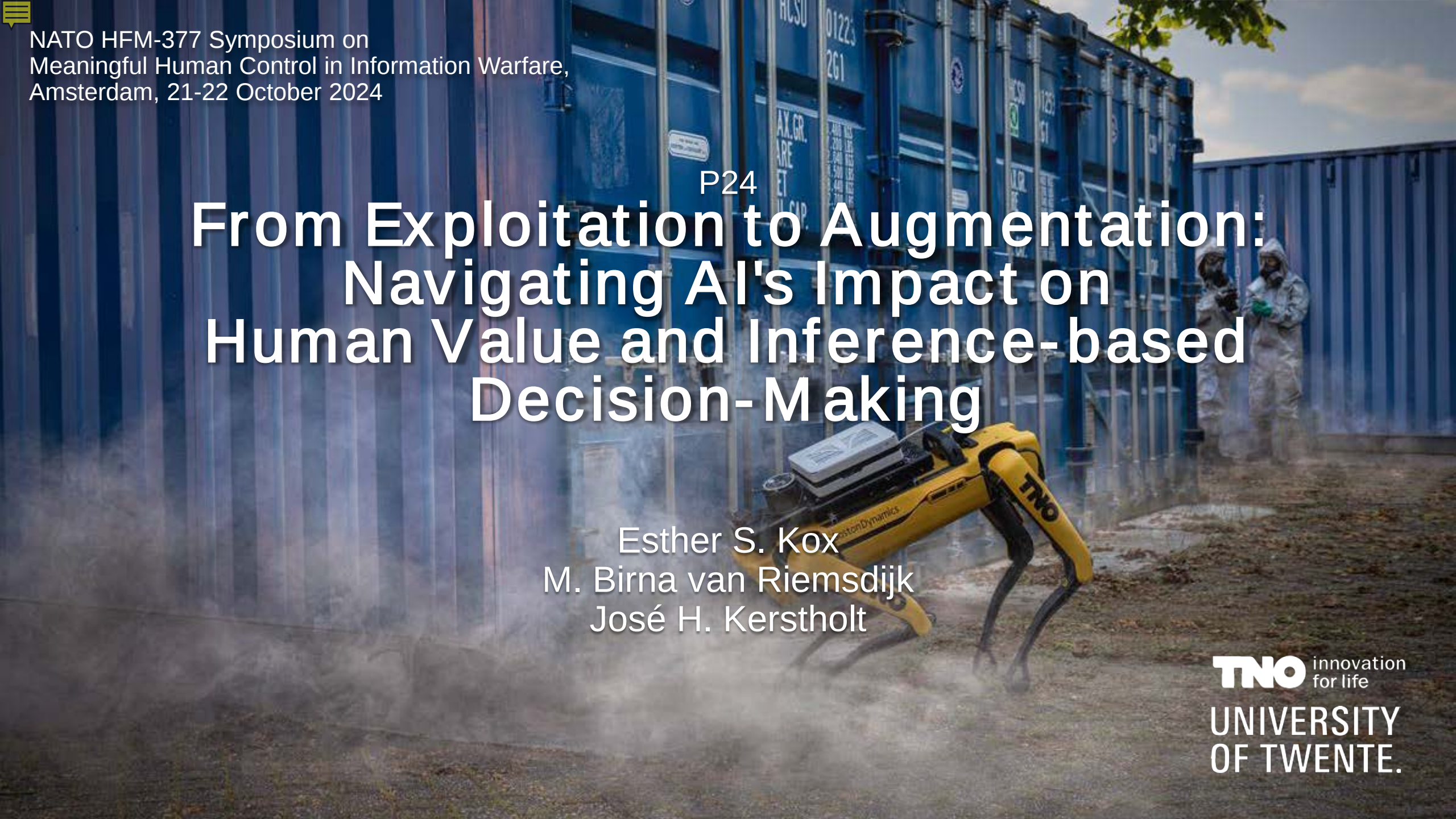


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P24

From Exploitation to Augmentation: Navigating AI's Impact on Human Value and Inference-based Decision-Making

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Introduction

- **Multi-Domain Operations (MDO)**, the integration and coordination of military activities across the five domains sea, land, air, cyber and space, become increasingly complex.
- Advancements in **Artificial Intelligence (AI)** bring both opportunities and challenges.
- How to maintain **Meaningful Human Control (MHC)**?



Objective

From **Exploitation** to **Augmentation**:
Navigating AI's Impact on
Human **Value** and **Inference**-based
Decision-Making



	Augmentation	Exploitation
Inference-based decision-making (judgement)		
Value-based decision-making (choice)		



Two types of human decision-making

Inference-based decision-making (judgement)

Combining cues to form a **judgement** about a situation, drawing **logical conclusions** from available information
(e.g., detecting a military threat,
predicting the COA of an enemy)



Augmentation

How AI is used to
support military
decision-makers

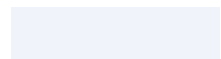


	Augmentation	Exploitation
Inference-based decision-making (judgement)		
Value-based decision-making (choice)		



	Augmentation	Exploitation
Inference-based decision-making (judgement)	Enhanced information processing and pattern recognition can improve situational awareness	
Value decision (choice)		

Maintaining MHC:
Incorporate key design principles such as **Observability**, **Predictability**, **Explainability**, and **Directability** in AI-systems to make their decisions and predictions more understandable for human operators. (Johnson et al., 2014)



	Augmentation	Exploitation
Inference-based decision-making (judgement)	Enhanced information processing and pattern recognition can improve situational awareness	Spread and creation of mis- and disinformation
Value of decision-making	Maintaining MHC: • Improve people's AI, media and digital literacy, including critical thinking, fact-checking and verification skills. • Government regulation, platform responsibility and content policies and moderation.	



		ation
Inference decision-making (judgement)	Maintaining MHC: While AI can help compare the options, value-based decisions are prone to context effects and should eventually be made by a human.	creation of information
	situational awareness	
Value-based decision-making (choice)	Decision and behaviour (change) support	



		on
Inferred decision (judgment)	situational awareness	ation of formation
Value-based decision-making (choice)	Decision and behaviour (change) support	AI-driven profile-based, micro-targeting techniques (hyper-nudging)

Maintaining MHC:

- Enhance user awareness and control
- Improve algorithmic transparency
- Strengthen **data privacy laws** and government regulation



Conclusions

- Maintaining meaningful human control and building and maintaining trustworthy AI requires a systematic, multidisciplinary approach.

“Just as it takes a village to raise a child, the governing of AI needs to be a multidisciplinary village so that we can raise AIs that are productive, valued contributors to society.”

(Winkler, 2024)

Thank you for your attention!

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