



**FFI** Forsvarets  
forskningsinstitutt

# **Scenarios as a tool to increase resilience against foreign influence: A Norwegian example**

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# How to increase resilience against CogWar?

- Knowledge about what to prepare for
- → Influence operation as a cognitive attack
- Develop scenarios
- How? → Morphological analysis



- Study from 2022 by the Norwegian Defence Research Establishment (FFI), in cooperation with the Scandinavian analysis agencies Analysis & Numbers and Common Consultancy, on behalf of the Norwegian Ministry of Local Government and Modernisation.
- Assignment: To develop possible scenarios for information influence in the time leading up to, and during elections in Norway, to discuss which consequences the scenarios may have, and what the election authorities may do to prevent and handle them.

# Why morphological analysis?

- Imagining exactly how a future influence operation may be designed and conducted difficult.
- The space of influence is so vast and complex (only technological possibilities and the actor's resources and imagination set the limits + influence will always be contextual).
- **Morphological analysis:** well suited to identify the extensive theoretical space for information influence (in the context of elections), and to narrow this theoretical space down to a practically feasible solution space, which can be used to develop specific scenarios.

# Morphological analysis step-by-step

## 1. The problem which needs to be solved has to be formulated as precisely as possible

→ *How can foreign and/or Norwegian actors use information influence in connection with an election to achieve their goals in the period leading up to the next parliamentary election in 2025?*

## 2. Select a set of parameters that in sum frame the problem at hand

- a) What type of actors may have an interest in conducting information influence in the context of Norwegian elections? – **Actor**
- b) Which overarching objectives can these actors be thought to have? - **Objective**
- c) What effects on the political debate can an actor seek to achieve in order to reach their objective(s)? – **Effect on the public debate**
- d) What target groups can an actor seek to influence to achieve their objective(s)? – **Target group**
- e) What type of information can an actor utilize? – **Type of information**
- f) What language can be used to disseminate/spread the information? - **Language**
- g) On which platforms can the information be spread? – **Platform**
- h) Does the actor operate openly or covertly? – **Transparency**
- i) What time horizon can the actor be assumed to operate from? – **Time horizon**

## 3. Each parameter is assigned x number of parameter values (states that each parameter can have).

**4. Construction of the morphological space, which contains all potential solutions to the problem. The model is represented as a matrix with the parameters in the top row and the corresponding parameter values in columns under each parameter.**

*Table 1. The morphological space contains all possible combinations of the various parameter and values.*

Actor	Objective	Effect on the public debate	Target group	Language	Type of information	Platform	Transparency	Time horizon
Foreign state	Political upheaval	Agenda setting	Majority of the population	Foreign	Political information	Traditional media	Overt	Long
Non-state (Norwegian)	Political change	Framing	Specific part of the population	Norwegian	Disinformation	Social media	Covert	Short
Non-state (foreign)	Undermine trust in society				Malinformation	Websites and blogs		

**5. The complexity of the model is reduced by carrying out a cross-consistency assessment by comparing all of the parameter values with each other in a cross-consistency matrix. This is followed by the development of scenario classes.**

- Before consistency analysis: 3456
- After: 240

*Table 2. The consistency matrix is a two-dimensional matrix where the values defined in the morphological space are placed along both axes. Crosses are placed where the combinations is considered inconsistent based on the question "are value A and value B mutually compatible?".*

	Foreign state	Non-state (Norwegian)	Non-state (foreign)	Political upheaval	Political change	Undermine trust in society	Agenda setting	Framing	Majority of the population	Specific part of the population	Foreign	Norwegian	Political information	Disinformation	Malinformation	Traditional media	Social media	Websites and blogs	Overt	Covert	Long	Short	
Foreign state																							
Non-state (Norwegian)																							
Non-state (foreign)																							
Political upheaval																							
Political change																							
Undermine trust in society																							
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Foreign																							
Norwegian																							
Political information																							
Disinformation																							
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Covert																							
Long																							
Short																							

# Scenario classes

Table 3. Preconditions for the scenario class "political upheaval" (highlighted in blue).

Actor	Objective	Effect on the public debate	Target group	Language	Type of information	Platform	Transparency	Time horizon
Foreign state	Political upheaval	Agenda setting	Majority of the population	Foreign	Political information	Traditional media	Overt	Long
Non-state (Norwegian)	Political change	Framing	Specific part of the population	Norwegian	Disinformation	Social media	Covert	Short
Non-state (foreign)	Undermine trust in society				Malinformation	Websites and blogs		

Table 4. Preconditions for the scenario class "political change" (highlighted in blue).

Actor	Objective	Effect on the public debate	Target group	Language	Type of information	Platform	Transparency	Time horizon
Foreign state	Political upheaval	Agenda setting	Majority of the population	Foreign	Political information	Traditional media	Overt	Long
Non-state (Norwegian)	Political change	Framing	Specific part of the population	Norwegian	Disinformation	Social media	Covert	Short
Non-state (foreign)	Undermine trust in society				Malinformation	Websites and blogs		



# Scenario classes

*Table 5. Preconditions for the scenario class "undermine trust in society" (highlighted in blue).*

Actor	Objective	Effect on the public debate	Target group	Language	Type of information	Platform	Transparency	Time horizon
Foreign state	Political upheaval	Agenda setting	Majority of the population	Foreign	Political information	Traditional media	Overt	Long
Non-state (Norwegian)	Political change	Framing	Specific part of the population	Norwegian	Disinformation	Social media	Covert	Short
Non-state (foreign)	Undermine trust in society				Malinformation	Websites and blogs		

# Concluding thoughts

- Morphological analysis useful when solving problems of high complexity
- Systematic and transparent
- Scenarios for practical use (preparedness planning, training and exercises)
- Limitations: To a certain degree subjective assessments and choices – validity

**Thank you for your attention.**