

Goal versus target orientation in military reconnaissance operations: developing guidelines for effectively gathering information

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Abstract

Close reconnaissance platoon commanders assign their platoons tasks to observe objects, people and events in their environment that may be relevant for their mission' goals and objectives. Which 'elements of information' are noticed is influenced by the content of the orders given using the principles of priming and inattention blindness. A distinction is made between orders that broadly outline the commander's intent ('goal orientation') or that narrowly point to one or two categories of information elements ('target orientation'). In 2014 and 2015, two experiments were conducted. The first was in a virtual military environment and the second in a military field exercise. Results show that goal-oriented orders lead to more and more diverse information elements being reported, albeit at a lower level of detail than a target-oriented order. Platoon commanders are to make conscious choices on the content of their orders, based on the information goals they are to achieve with their mission. They will be assisted by practical guidelines that are developed with subject matter experts and tested during a reconnaissance squadron exercise in Belgium in 2016.

Priming: receiving information that draws the visual attention to notice primarily objects/situations that concur with the received information.

Inattention blindness: because an observer is focusing on specific activities, unexpected important activities go unnoticed even when they are in the observer's visual field.

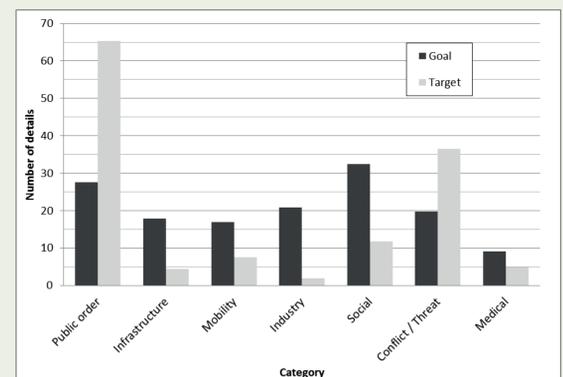


Screenshot of the virtual patrol

2014: Virtual battlefield experiment

Close recce soldiers conducted an individual virtual patrol in a village to determine a pattern of life and give an assessment on the security situation in the village. The experiment had two conditions. In the first condition soldiers received goal oriented orders (GO). In the second condition soldiers received task oriented orders (TO).

Results: GO orders led to more elements of information reported than TO orders but with fewer details per reported element¹.



The categories linked to 'security situation in the village' score significantly higher on number of details reported in TO orders than GO orders with a significant overall effect ($F(7,10) = 7.92, p = .002$).

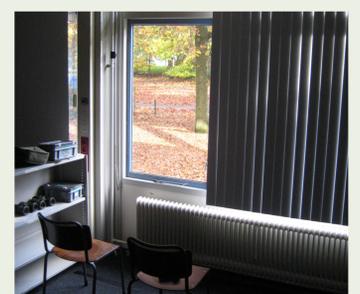
2015: Military field exercise experiment

Close recce soldiers conducted a static team observation of an object to assess the level of High Impact Crime in a Named Area of Interest. Again, there were two conditions with GO orders and TO orders.

Results: there were no significant differences between the conditions. Both conditions observed and reported equal amounts of information elements and details within the elements.

Possible causes of differences with results of 2014:

- Different close recce missions (general assessment security situation in unknown village vs specific assessment on occurrence of High Impact Crime in a known Named Area of Interest)
- Different environments (busy foreign village vs calm military base)
- Patrol reports were more extensive and contained more information in 2014 than in 2015
- Less controlled scenario
- More specific GO order in 2015 than in 2014



Field experiment setup

2016: Developing guidelines for close recce platoon commanders

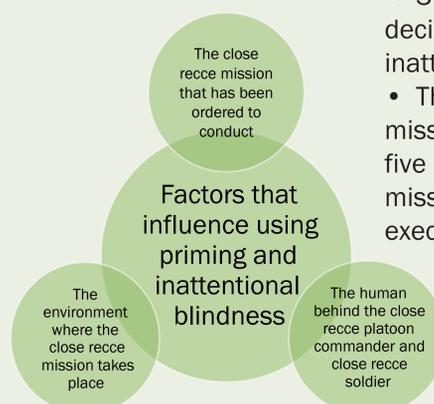
2016 research focusses on developing practical guidelines for close recce platoon commanders. We intend to create step by step decision process assistance to guide the close recce PC from his given orders to what completing the intel mission making conscious use of the principles of priming and inattention blindness.

Method for developing guidelines:

1. A draft version of the guidelines based on experiments results is developed.
2. In the summer we conduct subject matter expert interviews with experienced close recce squadron commanders.
3. To observe close recce platoon commanders and discuss the guidelines, we join a squadron level exercise in Belgium in September. We will discuss the guidelines through the whole process of receiving orders, executing the mission and reporting results.

Provisional results:

- 3 main factors are of influence when deciding to work with priming and inattention blindness
- The decision process for close recce missions on the platoon level consists of five phases: receive orders, planning mission, commander's backbrief, executing mission and reporting results



References

¹ Streefkerk, J.W., Huijsman, W.P., van Trijp, S.M.A. & Thönissen, F.H. (2015). Effects of Goal versus Target Orientation on Information Quality and Quantity in Military Reconnaissance Operations, Proceedings International Annual Meeting of Human Factors and Ergonomics Society HFES 2015, 29th October 2015.