## 12TH ICCRTS "Adapting C2 to the 21st Century"

## **Exploring Information Operations through its Semantic Networks**

Applicable Track(s):

4 - Cognitive and Social Issues

2 – Networks and Networking

1 – C2 Concepts, Theory and Policy

Author: Tara A. Leweling "STUDENT"

Contact: Tara A. Leweling Organization: Naval Postgraduate School Complete Address: PO Box 8185, Monterey, CA 93943

> Telephone: 831-656-1006 E-mail Address: taleweli@nps.edu

Straying from the more traditional view of semantic networks as a set of nodal words or ideas linked by some consistent relationship (e.g.,[1, 2]), Monge and Eisenberg [3] suggested conceptualizing semantic networks as patterns of shared interpretations of key artifacts of organizational culture, such as organizational goals or mission [4]. Leydesdorff and Hellsten [5] affirm this view of semantic networks, underscoring the role of information scientists in exploring the organizing principles through which individuals or collectives create and consign meaning of their surroundings. Stohl [6] suggests that national culture may serve as a important variable for accounting for differences in content-based semantic networks among cross-national peers with similar organizational roles, which suggests organizational culture may serve as an important variable for accounting for differences in content-based semantic networks among crossorganizational peers with similar organizational roles. Applying ethnographic content analysis [7] to senior leader statements and war college theses by US military officers about the mission area known as "information operations," this paper longitudinally explores the patterns of interpretation—i.e., the semantic networks—through which US military officers have espoused the purpose, characteristics, and casual explanations of information operations. Influences of organizational culture and environmental factors on these patterns of interpretation, as well as implications of these patterns of interpretation for exploring the variegated worldviews of US military officers, are discussed.

References

- [1] K. M. Carley and D. S. Kaufer, "Semantic Connectivity: An Approach for Analyzing Symbols in Semantic Networks," *Communication Theory*, vol. 3, pp. 183-213, 1993.
- [2] K. Carley and M. Palmquist, "Extracting, Representing, and Analyzing Mental Models," *Social Forces*, vol. 70, pp. 601-636, Mar. 1992.
- [3] P. R. Monge and E. M. Eisenberg, "Emergent communication networks," in *Handbook of Organizational Communication: An Interdisciplinary Perspective* F. M. Jablin, L. L. Putnam, K. H. Roberts and L. W. Porter, Eds. Newbury Park, CA: SAGE Publications, 1987, pp. 304-342.
- [4] R. Whitbred. (2005, They don't see things like we do: A simultaneous analysis of the influence of formal organisational, emergent, and individual factors on emergent patterns in perceptions or organisational mission. *PRism* 3(1),
- [5] L. Leydesdorff and I. H. Hellsten, "Measuring the meaning of words in contexts: An automated analysis of controversies about 'Monarch butterflies,' 'Frankenfoods,' and 'stem cells'," *Scientometrics*, vol. 67, pp. 231-258, May. 2006.
- [6] C. Stohl, "European Managers' Interpretations of Participation: A Semantic Network Analysis," *Human Communication Research*, vol. 20, pp. 97-117, September. 1993.
- [7] D. L. Altheide, "Ethnographic Content Analysis," *Qualitative Sociology*, vol. 10, pp. 65-77, Spring. 1987.