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**Title: Adaptive Information Fusion in Asymmetric Sensemaking Environment
Topic: Modeling & Simulation**

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We present the characteristics of sensemaking as an information fusion model based on Piercean abduction logic. We extend Bayesian network of Pearl to model abduction logic primitives from a kernel of disparate information sources. We propose information fusion models for prospective and retrospective sensemaking conditions to simulate the ways commanders and the battle staffs process information. By using a constructive information network from Iraq conflict, we demonstrate our models in terms of robustness when compared to the traditional Bayesian model alone.

Specifically, the challenge for sensemaking is: *what happens when new information unexpectedly arrives to the intelligent analyst? For instance: (1) the adversaries change their attack methods; (2) new targets are exploited by the adversaries; (3) new adversary sponsors emerge (e.g., Iran, Syria, etc.); and (4) a coalition partner decides to withdraw from protecting a city.* The existing courses of action planning rarely survive the kinds of information described above. By combining the abduction process and Bayesian probability network formalisms, we propose a Bayesian Abduction Models (BAM) to support in the performance analysis of the sensemaking process such as illustrated in the sample case above.