Results

Filtering Reduces Overload. Analyst use of filtering does support the expected finding that filtering is an effective mechanism to eliminate overload's negative effect on learning. On the other hand, filtering unexpectedly had what appeared to be an unintended side effect of reducing perspective taking's improvement to learning. Thus, the effort to use filtering to offset overload's reduction in learning comes at a cost: it helps reduce overload but it also reduces the analyst's ability to pay attention to the cues of the decision maker.

Networking Reduces Overload. Networking has a similar effect as filtering. Networking helps eliminate overload's reduction in learning. This result is consistent with Meier's (1963) classic study of university students in library situations where the increasing demand to check out books based on course assignments caused the students to seek out their friends in the same class who might already have the book rather than go to the card catalog, library shelf, or reference desk. Similarly, networking had the net effect of reducing perspective taking's improvement on learning, though perspective taking continued to improve learning to a lesser degree. The use of networking to offset the negative effect of overload has some unintended consequences; it reduces the analyst's ability to pay attention to the cues from the decision maker.

Dialogue with Decision Maker Improves Learning. Dialogue is the most interesting and complex non-tradecraft behavior tested. Dialogue has the effect of both improving and reducing learning, depending on which input dialogue affects, and whether dialogue has a mediating or suppressive effect. Expectations are dialogue improves learning when the analyst is able to take advantage of perspective taking. The

study demonstrates this expectation. By understanding the decision maker's preferences, the analyst can use that information to make the dialogue more productive.

An unexpected result of feedback delineated above was dialogue is able to bring to the surface the positive aspects of feedback on learning. When testing the first model, the negative effect of overload virtually eliminates feedback's improvement to learning. When dialogue is employed, however, the dominating negative effect of overload is suppressed, and some of the positive benefit of feedback resurfaces and improves learning. The interpretation of this result is when the analyst engages in dialogue with a decision maker, the act of engagement, the interaction between the two, affords the analyst the opportunity to monitor feedback either verbally or nonverbally communicated to the analyst. If dialogue is not employed, feedback from the decision maker would not be accessible by the analyst, and therefore not have an effect on learning.

Dialogue with Decision Maker Reduces Learning. On the other hand, dialogue reduces the negative effect of overload, but is not able to eliminate it; the net effect of dialogue when overload is present is a reduction in learning. This finding indicates if overload is weighing down on the analyst, engaging in dialogue may be effective in isolating the topics or preferences of interest by the decision maker, thereby reducing the amount of information to which the analyst must pay attention to answer the decision maker's questions and interest areas. The net result may be the negative effect of overload on learning is reduced, but not completely eliminated.

Ambiguity is different. Similar to feedback, dialogue somehow brought to the surface what had otherwise been no effect by ambiguity on learning. The process of dialogue involves the constant task of articulating and refining meaning. Dialogue under

conditions of ambiguity makes it difficult for the analyst to compare similarities and differences in the decision maker's meaning with the analysts. Thus it is difficult to relate the decision maker's meaning to the analyst's mental model, creating confusion in the analyst, causing a reduction in learning. When an analyst is confused, talking to a decision maker spreads confusion to the decision maker who, in return, does not provide helpful information to the analyst, nor can the analyst interpret the decision maker effectively.

This finding may at first appear to contradict prior research (Daft & Lengel, 1986; Daft, Lengel et al., 1987) that concluded dialogue was helpful in clarifying ambiguity. However, it actually presents a different context for ambiguity. Daft and colleagues studied ambiguity from a manager's perspective communicating tasks to subordinates and found under the most ambiguous tasks, the meaning of the communication to subordinates is best clarified through dialogue (as opposed to sending a memo, for example). However, in the context of this article, the relationship is more of the reverse, analysts are typically subordinate to law enforcement managers, and these findings indicate analyst-initiated dialogue containing ambiguity reduces learning.