

TRIZ And Chaos: First Principles for Emergency First Responders

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Abstract. ‘Someone somewhere already solved your problem’ is a commonly used TRIZ heuristic. It is often complemented with a recognition that the ‘someone’ will be the person or industry that has had a more extreme version of your problem. Thus, when it comes to dealing with chaotic situations, it is to people that are forced to deal with chaos as an everyday part of their work that we might best turn to in order to establish what works and what doesn’t. This search is particularly problematic in that, during a chaotic event, oftentimes there is little or no connection between causes and effects and hence traditional situation awareness tools and strategies – like root-cause analysis – are potentially counter-productive. Successful chaos-incorporating occupations include emergency first responders, fighter pilots and, in a whole different dimension of danger, stock traders. Most visible of these, at least in terms of published success strategies is the OODA-loop work of USAF fighter pilot, John Boyd. Using the Observe-Orient-Decide-Act cycle as a start-point, the paper examines some of the benefits of incorporating TRIZ thinking into the cycle.

Keywords: Complexity, OODA, Asymmetric Threats, Law of Unintended Consequences, Dissonance, Contradiction, Situational Awareness.