

Title: Conceptual models of psychological and behavioral reactions to the use of non-lethal weapons

Author: Michael D. Silver, Ph.D., Anacapa Sciences, Inc. (msilver@anacapasciences.com)

Abstract:

Most research on the effects of non-lethal weapons (NLWs) investigates the technical aspects of use (e.g., accuracy, dispersion, force transferred at impact) and physical and safety issues (unintended injury potential, decontamination requirements). Little research exists on the psychological (emotional, cognitive, motivational) and behavioral effects of NLWs. This paper describes two new and related conceptual models of how people react to the use of NLWs: one for an individual directly affected by the weapon (the “recipient”) and a related model for an individual who witnesses the recipient being affected (an “observer”, e.g., a fellow crowd member). Although the importance of predicting the reactions of recipients may be obvious, it is at least as important to try to predict the reactions of observers who are near the recipient. Observers, unhindered by physical effects of the NLW, may pose a greater threat to each other (through panic) or to the control force (through retaliation) than would recipients. These models are based on existing theory and research on the most-important variables that predict behavior in general and on some of the variables that have been shown to be important in military and civilian law enforcement operations. These models were developed for modeling reactions to anti-personnel NLWs in crowd situations and against individuals in law enforcement situations (such as hostage situations). However, the models can be generalized to other situations, including the use of NLWs against armed combatants. The models are presented as detailed path models (indicating the direct, mediating, and moderating relationships among variables). These models generate specific testable hypotheses and are immediately useful in guiding new research and analyses of behavioral data on NLW effects. The models can also be used to develop assessment tools and computer models of the potential psychological and behavioral effects of NLWs.

Keywords: effects psychology modeling behavior crowd control