

# Non-Lethal Weapons, 'Excessive Force,' and the al-Aqsa Intifada

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## Brief Analysis

Since the beginning of the Al-Aqsa Intifada, accusations that Israel has used "excessive force" in dealing with Palestinians have led to calls for Israel to employ "non-lethal" weapons as a way to reduce Palestinian casualties and stem the cycle of violence between the two sides. In fact, however, Israel is already using the rather limited range of traditional "less lethal" (LL) and "non-lethal" (NL) weapons that are used by most modern armies. More exotic, nontraditional concepts that have been under development in the past few years are either not yet ready for fielding (as in the case of so-called "acoustic weapons"), or have potential drawbacks which vitiate their potential operational utility (as with "sticky foam").

**Current Israeli LL/NL Capabilities** In dealing with the current intifada, the Israel Defense Forces (IDF) has been using traditional LL/NL weapons such as tear gas, stun grenades, and rubber and plastic bullets. Israeli rules of engagement (ROE) require the incremental use of such means before live ammunition can be used, except in cases where an immediate threat to life exists. While the aforementioned items are certainly less lethal than live ammunition, all can cause severe injury or death under certain circumstances (e.g., if used in confined areas or at close range). In some cases, their use under such circumstances might be unavoidable (e.g., when security personnel are ambushed by rock-throwers at close range in an alleyway, or when rioters approach a barricade manned by Israeli troops); in other cases, such consequences may occur as a result of poor troop discipline or the intentional violation of ROE.

There are a few LL/NL weapons that the IDF does not use because they do not suit the IDF's tactics, which emphasize whenever possible maintaining maximum stand-off from protestors (100-150 meters) in order not to exacerbate violence by closing with the adversary, and to minimize the risk posed by Palestinian firearms. For instance, the IDF does not use "bean-bag" rounds (small sacks of rubber balls fired from a shot-gun or grenade launcher that expand in flight and which cause large bruises and welts) because these are very short-range weapons (about 15 meters at most). For the same reason, the IDF does not use water cannons, which are also very short-range weapons (several tens of meters). Their effective use would require IDF forces to approach Palestinian crowds, and would therefore be seen as unnecessarily provocative. Finally, during the first intifada (1987-1993) Israel developed a vehicle-mounted device that spewed gravel at protestors, but it was likewise found to be ineffective. It lacked adequate range, and the

images created by a vehicle-mounted device throwing gravel back at stone throwers were considered harmful to Israel's cause.

**Alternative Nontraditional LL/NL Technologies** With the rapid growth in the number of humanitarian and peacekeeping missions mounted by the U.S. military following the end of the Cold War, the United States initiated a major effort in the early 1990s to develop nontraditional LL/NL weapons to support such missions (though these were never seen as a substitute for lethal arms). As a result, the U.S. is the world leader in research in this area. While many of these programs are classified, a review of the literature on the subject offers a sense of the broad range of innovative and imaginative LL/NL concepts and technologies being evaluated and/or developed by the United States. A small, unrepresentative sampling of these technologies includes:

- **Slippery foam.** Creates a slick that makes it difficult for rioters to keep their footing. Said to work best on paved surfaces, and therefore may not have much utility in large parts of the West Bank and Gaza. Might be countered by simple means (i.e., spreading sand on slicks), thereby requiring repetitive application.
- **Sticky foam.** A liquid foam that rapidly hardens, immobilizing the target. The foam can be used only at very close ranges, and if inadvertently applied to the face, can cause suffocation. For this reason, enthusiasm for sticky foam has waned.
- **Acoustics.** Intense, high-power sound energy (in the ultra, audible, or infrasound ranges) that can cause disorientation, nausea, and extreme discomfort. May be potentially lethal. Not yet a mature technology.
- **Antipersonnel microwaves.** Temporarily raises the body temperature of the target to 105-107 Fahrenheit, leading to extreme discomfort. Potentially lethal at close ranges. Not yet a mature technology.
- **Malodorants.** Liquid chemicals sprayed on protestors that produce extremely unpleasant, non-toxic odors that can cling to clothing or hair for days. Of unproven utility. However, experience with tear gas that has failed to deter protestors raises questions about the potential efficacy of malodorants. Unlike tear gas, malodorants are not proscribed for use on the battlefield by the Chemical Weapons Convention.

**Assessment** While some nontraditional LL/NL weapons now under development could be useful in dealing with intifada-like violence—acoustic or microwave weapons might be used at various flashpoints to protect enclaves (such as Rachel's tomb, and Netzarim and Ayosh junctions) from large crowds—these weapons are still unproven and remain years away from deployment. In addition, the effects of such weapons could be difficult to localize, and non-participants in nearby streets or buildings could be adversely affected. Moreover, in the context of a protracted struggle, LL/NLs are likely to lead Palestinian protestors to alter their tactics (i.e., by organizing demonstrations in locations where such weapons are not present) and to develop countermeasures. For instance, the Palestinians might use snipers to try to disable these weapons. Each measure will beget countermeasures. Finally, if Palestinian leaders are intent on generating civilian casualties for propaganda purposes, they will find ways to do so—for instance, by resorting to live fire in order to provoke a lethal response by the IDF (as well as to demoralize Israelis and sap their resolve). The use of LL/NL weapons is thus not likely to prove a panacea.

There are other potential drawbacks. One cannot be certain that acoustic or microwave weapons, for instance, will not have insidious long-term health effects on protestors. (The long-term dangers of the defoliant Agent Orange were not known when it was used in Vietnam.) And even if adverse health effects can be confidently discounted, adversaries could disingenuously argue otherwise (e.g., that such weapons are actually intended to cause sterility or cancer in their victims) in order to score sympathy points and stoke Arab outrage. Such claims would find fertile soil in a part of the world where all kinds of unfounded allegations get a hearing in the mainstream press (e.g., that Israel uses poison gas against Palestinians, is responsible for AIDS, and exports chewing gum laced with chemicals that cause impotence among Arab men).

Conclusion Nontraditional LL/NL weapons that lack potential propaganda liabilities might be of some use in certain circumstances, though none that fit this description are ready at this time. Moreover, the use of nontraditional LL/NLs would not augur an end to fatalities, and would almost certainly encourage the development of countermeasures and new tactics that would vitiate their impact. However, even if these weapons prove ineffective, the evaluation of LL/NLs by the IDF will win Israel points in the court of world opinion, the main arena in which the Israeli-Palestinian conflict is now being waged. Thus, the potential contribution of nontraditional LL/NL weapons merits further examination, even if the near-term benefits are limited mainly to the field of image-making. It should be kept in mind, however, that even the most effective LL/NL weapons are of limited use against an enemy intent on taking casualties for propaganda purposes, and who will resort to gunfire to provoke a lethal response in order to achieve this end.

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