



Clean Bombs and Dirty Wars: Air Power in Kosovo and Libya by Robert H. Gregory Jr.

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Clean Bombs and Dirty Wars analyzes “contemporary thinking on air power among politicians, military leaders, and the general public” (3) through an examination of operations Allied Force (OAF) in Kosovo (1999) and Unified Protector (OUP) in Libya (2011), and the relationship of the US Army’s Future Combat System to contemporary warfare. Author Robert Gregory Jr., a career US Army armor officer,¹ argues that the value of good targeting intelligence to effective firepower, whether precision-guided munitions from aircraft or ground artillery, has not changed over the past century. He adduces relevant examples beginning with World War I. In all cases, intelligence from ground personnel is indispensable.

Gregory’s findings have implications for national leaders who have come to assume that air-only warfare can yield decisive results and achieve policy goals without employing ground forces. He maintains that presidents Bill Clinton and Barack Obama have avoided deploying ground forces for fear of endangering their domestic political agendas, particularly should those forces sustain casualties. Gregory cites, for example, a 2005 RAND study showing that American popular support for military action in Bosnia in 1995 would have fallen off precipitously had US ground forces suffered even a handful of losses. Hence the preference of the civilian population and its political and military leaders for air-only military operations. Gregory notes that a military commander’s branch of service is not determinative in this regard. Indeed, US *Air Force* Chief of Staff, Gen. Michael Ryan, doubted that air power alone could force Slobodan Milošević to end his ethnic cleansing program in Kosovo—ground forces would be needed as well.

The author wisely skirts the controversial question: “can air power win wars alone?” He focuses not on institutions but on operational tasks, political and military needs, and the effects of military actions. This approach avoids the risk of reductionism and addresses issues of joint warfare, firepower, and intelligence at all levels of warfare. Gregory points out, for instance, that artillery counterbattery radars during OAF were better suited than visual searches from the air for locating enemy artillery pieces. Decoy pieces, he explains, cannot fire artillery shells no matter how real they look from fifteen thousand feet. Gregory concludes that “The integration of firepower with ground maneuver—an aspect of combined arms warfare that dates back to World War I—had to be rediscovered in Kosovo and Libya all over again because political leaders assumed that air power could succeed by itself” (211). One can apply these lessons to drone warfare, as well.²

NATO did not insert enough ground forces into Libya during OUP to deploy the precision targeting intelligence aircraft and artillery needed to rapidly degrade Gaddafi’s army: “Without a land component, there was no interactive mechanism to provide accurate and up-to-date information on fluid

1. Major Gregory is a graduate of the US Military Academy and the Naval Postgraduate School.

2. See, e.g., Brian Glyn Williams, *Predators: The CIA’s Drone War on al Qaeda* (Washington: Potomac Books, 2013). Williams makes it clear that drone pilots need targeting intelligence beyond what they can see on their video screens.

enemy and friendly dispositions. Instead, targeting depended primarily on the use of aerial sensors and signals intelligence. Unmanned aerial systems corroborated intelligence regarding dispositions, but this was a time and resource-intensive process” (184).

Libyan rebels, including some defectors from the Libyan Air Force, offered a novel solution to the problem of target discrimination by providing the aim points NATO aircraft needed to accurately bomb Gaddafi’s forces, while sparing civilians. The rebels accomplished this by using smart phones, Google Earth, Twitter, and Skype. This sort of intelligence-and-targeting network soon became transnational: a Dairy Queen manager in Tucson, AZ, for instance, monitored Google Earth and Twitter for maritime information he passed on to assist NATO’s enforcement of an arms embargo. A jerry-built social media network outperformed the Army’s (canceled) Future Combat System, with its too cumbersome software (five times more code than the F-35’s).

Gregory finds that, in its conduct of OAF, the US Army faced challenges similar to those presented during OUP and by the Future Combat System: standoff targeting and firing, target acquisition, responsiveness, small footprint, and appeal to policymakers who wished to take action. Like the nation’s political leaders, the Army drew the wrong conclusions from events in Kosovo, which “distanced [it] ... from land power’s traditional role of closing with the enemy by embracing a ground version of what air power seemingly accomplished by itself in Kosovo with the delivery of precision munitions at standoff ranges” (126).

The author stresses that the innovations he discusses were responses to the same exigencies of targeting and firepower that prevailed in the First World War. The rebel fighter with his smartphone functioned very like an artillery spotter at the end of a telephone line. Gregory could, however, have strengthened this point for nonspecialist readers by explaining more fully the character of warfare in 1918. He also neglects to note that no one was jamming cellphone networks, cutting cables, and so on in Libya in 2011. In short, there remains a place for American boots on the ground, even when local forces are present and capable. Furthermore, the targeting preferences of indigenous forces may clash with the political goals of external actors like the United States.

There are a few weaknesses in the book.³ Its author too often infers rather than explicitly reveals the assumptions of statesmen concerning the use of air power alone to win wars. These have reflected the conviction that undetectable or low-observable aircraft often eliminate the tactical need for ground forces and thus pose fewer political risks than joint air-ground operations. Kosovo reinforced this thinking and shaped “strategic-level perceptions regarding the employment of air power” (116). Because an apparently air-only strategy worked against Milošević, presidents and prime ministers have tended to favor it in subsequent conflicts.

Clean Bombs and Dirty Wars will encourage further studies of national leaders’ perceptions of the efficacy of various kinds of military force projection. It should also fuel a discussion of whether the military use of smartphones, Twitter, GPS, and Google Earth represents a continuation of, or a break from, the revolution in military affairs that began in 1991. Robert Gregory Jr. has produced a salutary, carefully researched study reminding us that war is not only a process, but a momentous and unpredictable effort to accomplish specific policy goals.

3. I noticed only a few minor slips in proofreading: for “ordinance,” read “ordnance” (48, 92, 230), and for “diffuse,” read “defuse” (186).