

Undergraduate Thesis Prospectus

A Revolution in Warfare: How the U.S Military Responded to the Use of IEDs in Iraq

(sociotechnical research project)

by

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On my honor as a University student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments.

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General Research Problem

How did the Iraq War of 2003-2011 change the way that wars are fought today?

The Iraq War began on March 20, 2003, and lasted until December 15, 2011. The stated goals of the U.S were, “to disarm Iraq, to free its people and to defend the world from grave danger” (Bush, 2003). The U.S planned to do this by locating weapons of mass destruction and forcing Iraqi president Saddam Heussein out of power.

Throughout the conflict, Improvised Explosive Devices (IEDs) were the single greatest threat to U.S. ground forces. According to the Congressional Research Service, IEDs caused over 60% of all American combat casualties in Iraq (Wilson, 2007). The effectiveness of IEDs against U.S ground forces made them a significant point of research for the U.S and its adversaries, and changed the strategies used in modern warfare.

The Revolution of Warfare: How the U.S Military Responded to the Use of IEDs in Iraq

In the Iraq War of 2003-11, how did U.S. ground forces adapt to insurgents’ use of IEDs?

The U.S. spent millions of dollars developing technology to mitigate the effectiveness of IEDs. These programs were largely unsuccessful due to the influence of foreign powers, the innovation of Iraqi insurgents, and the nature of the conflict in the region.

The participants involved in the conflict can be split into foreign powers supporting Iraqi insurgents, Iraqi insurgents, and the U.S. and its allies.

Lt. Gen. Raymond T.Odierno, who served as Commanding General of U.S. military forces in Iraq said, “it’s clear to us that there are networks that are smuggling weapons, both explosive-formed projectiles, IEDs, as well as mortar and other capabilities from Iran into Iraq” (Washington Times, 2007). While Iran denies involvement, numerous sources document Iranian forces training militant groups in Iraq how to employ IED’s, Iranian designed and produced IEDs

and EFPs (explosively formed penetrator) being transported into Iraq, and Iranian efforts to destabilize the country (Wilson, 2007). According to U.S. Navy Cmdr Sean Robertson, the DoD assessed that at least 603 U.S. personnel deaths in Iraq were the result of Iran-backed militants (Schogol, 2019). This backing came in the form of supplying proxy groups with equipment ranging from IEDs and EFPs to small arms and improvised rocket assisted munitions (IRAM) (Schogol, 2019). Collectively, this amounted to approximately seventeen percent of all U.S. casualties in Iraq between 2003 and 2011 (Schogol, 2019).

EFPs of Iranian design killed at least 196 U.S. troops and wounded nearly 900 between 2005 and 2011 (Horton, 2020).

Brian Castner, a former U.S. Air Force explosive ordnance disposal (EOD) officer spoke in length to the Washington Times and in his memoir *The Long Walk* about the effectiveness and design of EFPs. Castner describes them as a coffee can shaped charge, packed with plastic explosives, that would melt a contained copper plate into shards that could penetrate armor (figure 1). These copper shards were capable of reaching Mach 6 speeds and killing or mutilating soldiers inside of an armored vehicle (Horton, 2020). These devices were often hidden in foam blocks to disguise them as rocks and were feared by U.S. forces due to their effectiveness (figure 2).



Figure 1: EFPs seized by U.S. Army soldiers near Baghdad in 2008 (Horton, From U.S. Army, 2020)



Figure 2: Brian Castner, a former Air Force explosive ordnance disposal officer, holds an EFP weapon in Kirkuk, Iraq, in June 2006. (Horton, From Brian Castner, 2020)

The Quds force, a branch of Iran’s Islamic Revolutionary Guard Corps, provided the logistics support and training to Iraqi bomb makers necessary to introduce EFPs to Iraq (Horton, 2020).

Terrorist groups such as Al Qaeda and Ansarr al Sunna hired highly skilled Iraqi cells in the country to conduct strikes for them.

Iran’s motivations for enabling Iraqi insurgents is not entirely clear, as they continue to deny that they had any role in the conflict. Iran’s motivations may include preventing the rise of Ba`athists in the Iraqi government (Saddam Huessein’s political party), to destabilize Iraq for security purposes, and to influence future Iraqi governments (Knights, 2010).

Iraqi Insurgents and U.S. Forces

Iraqi insurgents, including both Sunni and Shia Iraqi militant groups, employed IEDs against U.S ground forces. Remnants of Saddam's fedayeen forces also employed IEDs against U.S forces.

The strategies of Iraqi insurgents were extremely effective. Iraqi insurgents used a combination of high tech and low tech solutions to make coalition efforts to fight IEDs ineffective (Atkinson, 2007). For every high tech U.S. innovation, Iraqi insurgents were able to develop a low cost solution.

Iraqi insurgents fought for a number of reasons. Years of economic sanctions and war had crippled the country. After the initial invasion, coalition forces struggled to establish a widely supported and stable government. This resulted in widespread looting and crime throughout the country.

Parties that had previously been banned from the country by Saddam Huessein used the opportunity to return to the country. Iraqis fought other Iraqis for resources and to influence the government that would take power after coalition forces left. Iraqis fought coalition forces to weaken the government put in place by coalition forces and because foreign actors paid them to kill coalition soldiers (Atkinson, 2007).

The last participant groups are related to the American military and direct supporters of the American military. Soldiers and marines on the ground reported IEDs, captured bomb makers, and requested equipment to protect them from IEDs (Congressional Record 153, 2007). Military leadership presented these needs to congress, which approved of significant funding for research to combat IEDs and to produce vehicles and equipment that could better protect soldiers (Congressional Record 153, 2007).

Gen. John P. Abizaid, CENTCOM Commander for U.S. forces in the early years of the Iraq war, adopted a “51 percent solution” strategy for detecting and mitigating the danger from IEDs (Atkinson, 2007). This strategy involved devoting funding and research to any technology that had a higher chance of success than failure in defeating the IED problem. This came out of desperation to find a solution and many of these programs proved ineffective.

American soldiers advocated for more advanced protection from IEDs out of survival. Countless accounts describe the constant state of stress American soldiers experienced during the conflict due to the prevalence of IEDs and the nature of the war. The American government and military leadership invested heavily in trying to protect American soldiers from IEDs as they were the greatest threat to American troops.

The rest of this paper will include a deeper look into the agendas and motivations of the participant groups, the development and effectiveness of technologies on both sides of the conflict, and the evolution of strategies used by U.S forces and Iraqi insurgents. Additional firsthand accounts from coalition soldiers will bolster conclusions.

The paper will conclude with a summary of how each factor affected the outcome of the conflict, the lessons the world learned from the conflict, and how these lessons have changed modern warfare.

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