**Research Question**

Are increasingly advanced and accessible improvised weapons systems a key causal factor behind modern sub-state armed groups (SSAGs) operating in an increasingly conventional way?

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**Background**

**Attrition vs. Maneuver Warfare**
- Attrition: damage maximization
- Maneuver: optimization of damage inflicted/damage taken
- Contemporary Understanding of SSAGs: highly asymmetric & rely on Attrition Warfare due to vast capability gap

**Up-Armored Suicide Vehicle-Borne IED (SVBIED)**
- Conversion to a frontline weapon in Iraq & Syria
- High survivability, large payload, major psychological impact
- Employed like a heavy Precision Guided Munition (PGM)

**Up-Armored Unmanned Aerial System (UAS)**
- Fully craft-made or modified commercial UAS
- ISR or Strike roles
- Most threatening emerging technology for SSAGs

**Improvised Rocket Assisted Munition (IRAM)**
- Craft-made rocket artillery
- Payload & quality can vary significantly
- Low-intensity conflict standoff weapon

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**Research Design**

- Comparative case-study of 4 SSAGs in Syria & Iraq
- Analysis of all visual media releases from each group from their entrance into Syria to April 2021
- Independent Variable: Improvised Weapons capability
- Proxy: production capacity & design quality over time
- Dependent Variable: Primarily Maneuver or Attrition
- Proxy: Attack profile; territory capture; organization
- 4 Cases: Hay’at Tahrir al-Sham, Islamic State, Anṣār al-Tawḥīd, Anṣār al-Islām

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**Hypothesis**

Improvised Weapons usage is as important a causal factor as territory capture in an SSAG’s transition from an asymmetric force engaging in Attrition Warfare, to a more conventional force engaging in Maneuver Warfare.

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**Findings**

**HAY’AT TAḤRĪR AL-SHĀM**

**ISLAMIC STATE**

**ANṢĀR AL-TAWḤĪD**

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**Analysis**

**Types of Territorial Control**
- **Basic**: Freedom of operation, staging area, established front lines
- **Advanced**: Basic control, but with dominance over territory and the ability to exploit resources

**Limiting Factors on Improvised Weapons Usage**
- **Material Requirements**
- **Technical Requirements (knowledge)**
- **Necessity**

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**Conclusion**

- Basic Territorial Control is a critical causal factor
- Improvised Systems only required in the absence of sufficient captured conventional systems
- Improvised Systems only required under conditions of Basic Territorial Control
- Future research should focus on smaller SSAGs

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**Improvised Rocket Assisted Munition (IRAM)**

**Improvised Unmanned Aerial System (UAS)**

**Attrition vs. Maneuver Warfare**

**Analysis**

**Types of Territorial Control**

**Limiting Factors on Improvised Weapons Usage**

**Conclusion**

**Improvised Weapons in Syria and Iraq**

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**Anṣār al-Islām**

- Weakest SSAG in sample
- Not as close with HTS as Anṣār al-Tawḥīd
- Hobbyist UAS increase artillery precision enough for use under a broader Maneuver Warfare approach