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What Terrorist Leaders Want: A Content Analysis of Terrorist Propaganda Videos

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ABSTRACT

In recent years, a growing body of empirical research suggests that indiscriminate violence against civilian targets tends to carry substantial political risks compared to more selective violence against military targets. To better understand why terrorist groups sometimes attack politically suboptimal targets, scholars are increasingly adopting a principal-agent framework where the leaders of terrorist groups are understood as principals and lower level members as agents. According to this framework, terrorist leaders are thought to behave as essentially rational political actors, whereas lower level members are believed to harbor stronger non-political incentives for harming civilians, often in defiance of leadership preferences. We test this proposition with an original content analysis of terrorist propaganda videos. Consistent with the principal-agent framework, our analysis demonstrates statistically that terrorist leaders tend to favor significantly less indiscriminate violence than their operatives actually commit, providing unprecedented insight into the incentive structure of terrorist leaders relative to the rank-and-file.

ARTICLE HISTORY

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It is widely believed that terrorist groups are rational actors that use violence to achieve their political demands.¹ An emerging empirical finding over the past decade, however, is that certain types of attacks may be more politically beneficial than others. Numerous empirical studies find that selective violence against military targets is typically more effective than indiscriminate violence against civilian targets.² Civilian attacks carry substantial downside risks by strengthening the resolve of target countries,³ eroding their confidence in negotiations,⁴ lowering the odds of government concessions,⁵ eroding popular support for the group,⁶ and expediting its demise.⁷ Why, then, do terrorist groups so often strike civilian targets given the potential political costs?⁸

Non-strategic explanations for civilian targeting are currently en vogue. The most common explanation hinges on the ideological orientation of the perpetrators. In the 1990s, researchers identified a "new" type of terrorism characterized by increased civilian targeting in the name of religion. The belief quickly spread that religiously motivated terrorists—especially ones driven by radical interpretations of Islam—are responsible for

the uptick in indiscriminate violence. A growing body of empirical research indicates that Islamist terrorist groups are indeed more prone than other types of terrorist groups to engage in indiscriminate violence against civilians. 10 But the religious explanation cannot fully explain variation in civilian targeting, as some secular terrorist groups are also known to prey on civilian targets and some Islamist groups are quite restrained against civilians. 11

Increasingly, scholars are turning to an organizational explanation that emphasizes how terrorist groups are internally heterogeneous social units rather than unitary actors. An emerging theory is that perhaps terrorist leaders are essentially rational political actors, but their foot-soldiers are more inclined to gravitate to civilian targets for other reasons in defiance of leadership preferences, posing a principal-agent problem. ¹² To date, though, only a few empirical studies have tried to assess whether civilian attacks tend to be perpetrated by wayward operatives against the leadership's targeting preferences. These studies test whether leadership deficits in militant groups are associated with more indiscriminate violence against civilians. Consistent with the principal-agent thesis, Abrahms and Potter find that decentralized terrorist groups are indeed more likely than centralized groups to strike civilian targets, as are subordinates who travel further away from the leadership to launch attacks. 13 Similarly, Abrahms and Mierau find that terrorist groups tend to redirect their violence from military to civilian targets in the immediate aftermath of a successful decapitation strike against the leadership, when lower-level members are calling the shots.¹⁴ These findings offer some preliminary evidence for the proposition that agency problems within terrorist groups may be responsible for politically suboptimal attacks against civilians at least some of the time.

But are suboptimal civilian attacks genuinely due to principal-agent problems or are we merely misunderstanding the utility functions of terrorist group members? To better understand the potentially divergent interests within these groups requires additional insight into the targeting preferences of terrorist leaders relative to the behavior of their subordinates. Propaganda videos offer insight into the targeting preferences of terrorist leaders because they exercise greater control over the content of the videos. Whereas leaders are often compelled to delegate tactical decision making to unreliable subordinates on the ground, the propaganda of the group offers a more direct expression of leadership preferences given its discretion over which attacks to highlight.

This study compares the targeting choices featured in the propaganda videos of the most active terrorist groups around the world to their actual attack patterns. The analysis provides the strongest evidence to date that terrorist groups suffer from agency problems in which the leaders tend to be more opposed than their operatives to attacking civilians due to the potential political costs. Specifically, we find that terrorist propaganda videos do not highlight attacks that are representative of their group's actual targeting behavior. On the contrary, propaganda videos are significantly more likely to showcase attacks that steer clear of civilians compared to the actual targeting choices of operatives. We also exploit variation in the propaganda videos themselves to further assess whether terrorist leaders are generally more inclined than their subordinates to favor attacks that avoid civilians. Consistent with our expectations, the evidence suggests that propaganda videos are particularly unlikely to feature civilian attacks when the leaders have greater influence over the video content and when the videos emphasize strategic goals over purely emotional appeals. Finally, we demonstrate that terrorist leaders are significantly more likely to assume organizational responsibility for attacks that avoid civilian targets, especially when the credit claim is issued through mediums in which the leaders exert greater organizational control.¹⁵ Together, these results point to a hierarchy of targeting selectivity based on leadership influence in accordance with our principal–agent argument.

Our argument proceeds in five main sections. The first section presents a growing body of empirical evidence that terrorist attacks against civilians carry substantial downside political risks for the perpetrators. These studies suggest that indiscriminate violence tends to be ineffective, even counterproductive for inducing government concessions. The second section develops the notion that civilian targeting is often the result of agency problems within terrorist groups at odds with leadership preferences. The third section proposes a series of hypotheses to test this proposition that operatives are prone to defying the preferences of their leaders by committing suboptimal attacks against civilians. The fourth section explains the research design and interprets the empirical results. The conclusion suggests fruitful avenues for future research to better understand what terrorist leaders want.

The Political Effects of Terrorist Attacks Against Civilians

Although terrorist attacks against civilians can be effective at provoking government overreaction, ¹⁶ coercing local allegiance through intimidation, ¹⁷ scuttling peace processes, ¹⁸ harming the tourism industry, 19 and outbidding rival organizations for support, 20 such indiscriminate violence is generally ineffective, even counterproductive at pressuring government concessions. Terrorism specialists have long questioned whether terrorist attacks against civilians actually help the perpetrators to achieve their political demands. In the 1970s, Laqueur published "The Futility of Terrorism" in which he claimed that such attacks rarely help to redress political grievances.²¹ In the 1980s, Cordes et al. remarked, "Terrorists have been unable to translate the consequences of terrorism into concrete political gains.... In that sense terrorism has failed. It is a fundamental failure."²² Crenshaw also observed, "Few organizations actually attain the long-term ideological objectives they claim to seek, and therefore one must conclude that terrorism is objectively a failure."23 Schelling noted in the 1990s, "Terrorism almost never appears to accomplish anything politically significant." ²⁴ Detailed case studies highlight how terrorist attacks against civilians can steel governments from making political concessions. ²⁵ Large-*n* empirical studies confirm that only a tiny portion of terrorist groups in modern history have managed to accomplish their political platforms by attacking civilians.²⁶ The vast majority of terrorist groups in their samples toiled for years, even decades without any perceptible political progress. If anything, these studies overstate the political efficacy of terrorism because terrorist victories are more salient than terrorist failures and many terrorist groups last less than a year,²⁷ so are excluded from the datasets.

Terrorist attacks against civilians do not appear to be epiphenomenal to political failure. The latest wave of scholarship concludes that attacking civilians has an independent, negative impact on the odds of government concessions. Abrahms analyzes the political outcomes of 125 violent nonstate campaigns. Groups are significantly more likely to pressure government compliance when their violence is directed against military targets instead of civilian ones even after controlling for the capability of the perpetrators, the nature of their demands, and other tactical confounds.²⁸ All else equal, Fortna also finds that in civil war

rebel groups reduce the likelihood of bargaining success by attacking the population.²⁹ Getmansky and Sinmazdemir demonstrate that the Israeli government in particular is significantly less inclined to surrender land to Palestinians after they attack the population.³⁰ Abrahms and Gottfried show that in hostage situations terrorist groups lower the chances of government ransoms by harming civilians.³¹ Relatedly, Chenoweth and Stephan find that major protest groups elicit fewer political concessions when they commit violence against the population.³²

Terrorist attacks against civilians almost never intimidate citizens into supporting more dovish politicians. Studies on public opinion find that terrorism generally boosts popular support for right-wing leaders opposed to appeasing the perpetrators. Berrebi and Klor demonstrate that Palestinian terrorism increases Israeli support for the Likud and other rightwing parties.³³ Gould and Klor show that the most lethal Palestinian attacks are the most likely to induce this rightward electoral shift.³⁴ Chowanietz analyzes public opinion within France, Germany, Spain, the United Kingdom, and the United States from 1990 to 2006. In each country, attacking civilians has shifted the electorate to the political right proportionate to the lethality.³⁵ Similar observations have been noted in at least nine other countries after Al Qaeda and its affiliates harmed their citizens.³⁶ Controlled experiments provide addition evidence that civilian targeting reduces support for negotiating with the perpetrators, further ruling out the possibility of a selection effect.³⁷ In a summary of this literature, Berrebi concludes: "Terrorism fatalities, with few exceptions, increase support for the bloc of parties associated with a more-intransigent position toward terrorism and territorial concessions. In other words, terrorism supposedly undermines the terrorist faction's goals. Some scholars may interpret this as further evidence that terrorist attacks against civilians do not help terrorist organizations achieve their stated goals."38 In sum, a growing body of empirical research finds that terrorist attacks against civilians are ineffective if not actually counterproductive for groups to achieve their political demands.

Civilian Targeting as a Principal-Agent Problem

Principal–agent theory may help to resolve the puzzle of why terrorist groups strike civilians given the political risks. Within the organizational literature, demographic research finds important differences among members. A standard distinction is between leaders and subordinates, who often possess inferior commitment to the official aims of the organization and abilities to achieve them.³⁹ The principal–agent framework predicts a recurrent disconnect between the preferences of leaders and the behavior of subordinates.⁴⁰ Agency problems happen because prospective members have an incentive to misrepresent their qualifications and pursue private agendas upon joining.⁴¹ When applied to terrorist groups, the principal–agent framework suggests that operatives will sometimes act in defiance of leadership preferences, including in their targeting choices.

Clearly, not all terrorist group leaders oppose civilian targeting. Driven by his extreme ideology, the leader of Islamic State, Abu Bakr al-Baghdadi, appears to favor attacks against the majority of the world's population. ⁴² But Islamic State is hardly a typical terrorist group. ⁴³ Within most terrorist groups, there are many reasons to suspect that a member's position in the organizational hierarchy is often inversely related to his incentives for striking civilians. ⁴⁴ The leaders are usually the oldest members, with the most exposure to asymmetric campaigns. Foot-soldiers, by contrast, are typically the newest recruits with the least



Table 1. Short-term and long	a town costs and hand	Sta far military and	civilian attacks
Table 1. Short-term and long	u-term costs and bene	ils for military and	CIVIIIAN ALLACKS.

	Short-term	Long-term
Civilian attack	р-с _с	p-c _d
Military attack	p-c _{ms}	p-c _{ml}
Civilian attack	2 - 1	2 - 1
Military attack	2 - 3	2 - 0
Civilian attack	1	1
Military attack	-1	2

Note: p = payoffs; c = costs; $c_{cs} = \text{short-term civilian costs}$; $c_{ms} = \text{short-term military costs}$; $c_{cl} = \text{long-term civilian costs}$; $c_{ml} = \text{long-term military costs}$.

combat experience.⁴⁵ Leaders are hence more likely to appreciate the political risks of harming civilians and to therefore oppose such targeting practices. Formally, we might consider this preference divergence as a difference in time horizons. Newer and older members may have the exact same utility functions, and may differ only in how heavily they discount the future. Both may be aware of the same short-term benefits from quick, easy civilian attacks, as well as the short- and long-term costs, but the younger members may discount the future costs of an attack more than the older, more experienced members.

Consider Table 1, which shows the payoffs (p) and costs (c) in the short and long term for civilian and military attacks (top). To better illustrate the effects of time discounting, assume the payoffs of both attacks in the short- and long-term are the same, but the costs differ. The civilian attack is attractive because the costs c_{cs} are less than those for attacking a military target, c_{ms} ; however, a civilian target's long-term costs c_{cl} are greater in terms of their damage to the group's reputation or in angering their opponent than for a military target, c_{ml} . For concreteness, consider arbitrary utils that follow this ordinal relationship (middle). Without time discounting, the total benefit over the short and long term is 2 for a civilian attack and 1 for a military attack (bottom). Thus, we would expect all groups to target civilians. But with (hyperbolic) time discounting of the long term, the utility for a civilian attack would be 1+1/t, and for a military attack it would be -1+2/t, where 1/t is the weight given to the future. For 1/t < 2, one prefers the civilian attack, but for 1/t > 2, one prefers the military attack. Even with shared utility estimates for both costs and benefits, more experienced leaders may therefore learn to prefer military over civilian attacks simply by learning to look farther into the future and appreciate better the long-term costs relative to the short-term benefits of a civilian attack.

In addition to differing time horizons, the lowest members of terrorist groups also suffer the most severe resource constraints, incentivizing them to strike softer targets, whereas leaders are freer to access organizational resources to launch comparatively sophisticated attacks against hardened targets. The lowest-level members also may stand to gain the most personally from civilian targeting. Prior research suggests that the rank-and-file sometimes harms civilians to gain status among their peers, whereas leaders already command respect owing to their superior stature in the hierarchy. Moreover, fighters are more likely to be emotionally driven than their leaders and to lash out against the population for nonstrategic reasons. This is because the former has often lost close friends on the frontline whereas the latter is more likely to be based far away from the battlefield. Finally, some research indicates that terrorist leaders are simply "smarter" than operatives when it comes to mapping the relationship between tactical choice and political outcome.

Theory aside, there are numerous documented cases throughout history where terrorist leaders have instructed their foot-soldiers to refrain from civilian attacks due to the political risks. The leaders of the Kenyan Land and Freedom Army prohibited fighters from attacking noncombatants because indiscriminate bloodshed was seen as an impediment to ending colonial rule. Sinn Fein was also known to assail Provisional Irish Republican Army operatives when they attacked civilians because of the political fallout. Fuerzas Armadas Revolucionarias de Colombia (Revolutionary Armed Forces of Colombia—FARC) leaders have likewise repudiated and condemned fighters for their lack of foresight in harming bystanders. Murat Karayilan, leader of the Kurdistan Workers Party (PKK), directed his forces to hit military targets but to not harm civilians. Historically, many terrorist group leaders have issued apologies when their operatives contravened their instructions by killing civilians, such as the leaders of the Afghan Taliban, Colombian National Liberation Army, Lebanese Hezbollah and Abdullah Azzam Brigades, the Nepalese Communist Party, and the Irish Republican Army (IRA).

Only a naïve observer would accept every utterance of terrorist leaders at face value; of course, terrorist leaders have been found to dissemble.⁵⁴ Nonetheless, there is substantial evidence that the pronouncements against civilian targeting are often in earnest in the sense that they accurately reflect the leadership's preferences, which are based not on kindness, but on their strategic understanding of the political risks as the most senior member of the organization. First, historical cases abound in which the leaders even of extreme Islamist terrorist groups have been found to make identical targeting appeals in private correspondences with other members. As Bergen notes, "We know from the documents recovered at the bin Laden compound in Abbottabad by U.S. Navy SEALS in May 2011 [that] al Qaeda's leaders were often writing to each other privately and also to groups they are associated with about the need to minimize civilian (Muslim) casualties and often wrote about the damage to the al Qaeda brand that killing civilians had achieved by al Qaeda operations in Iraq." Specifically, internal records reveal that bin Laden urged the mujahidin "to prevent explosions and using methods that kill generally indiscriminately in Muslim mosques or similar, general gathering places, such as markets, streets, playgrounds..." because such civilian attacks have backfired politically in the past. 55 Similarly, documents seized from the Communist Party of India-Maoist (CPI-Maoist) leadership in 2015 expressed disappointment for an attack that killed the Indian leader Mahendra Karma because it also resulted in "unintentional killings of the innocent." 56

Second, terrorist leaders often demonstrate the sincerely of their opposition to civilian targeting by engaging in "costly signaling." Terrorist leaders frequently punish subordinates when they disobey their targeting instruction by attacking civilians. The Northern Command disbanded in 1989 the Fermanagh unit of the IRA for flouting its instructions by engaging in sectarian violence against the Protestant population.⁵⁷ PKK leaders handed out a 24-year prison sentence in 2010 to a small cell of fighters for ignoring their targeting commands by attacking civilians in Turkey's Batman province.⁵⁸ Leaders of the New People's Army in the Philippines dealt a variety of "disciplinary actions" to wayward rebels in 2012 and 2014 for incidents against civilians.⁵⁹ Al-Nusra Front leaders in 2015 brought several members to trial before an Islamic court for defying their attack guidelines by killing 20 Druze villagers in Idlib, Syria.⁶⁰ The punishment is often more moderate, such as when Ayman al-Zawahiri merely wrote a harsh rebuke to Abu Musab al-Zarqawi for his indiscriminate violence in Iraq or when other leaders of his Al Qaeda affiliate scolded a Ramadi

cell for perpetrating a similar offense against the population in defiance of Al Qaeda Central's instructions. ⁶¹ These are not isolated cases; Shapiro finds in a sample of 108 terrorist biographies that 44 percent feature examples of leaders punishing subordinates, most for committing tactical mistakes. ⁶²

Third, recent research reveals that militant groups almost never attack civilians when the leadership publicly opposes civilian targeting and is strong enough to impose its targeting preferences on subordinates.⁶³ If the targeting instructions of terrorist leaders were generally meaningless or insincere, we would not see such a high correlation between strong leaders who publicly oppose civilian attacks and terrorist organizations that adhere to this strategy.

In sum, there are both theoretical and empirical reasons to suspect that terrorist organizations are prone to agency problems in which leaders are often displeased with their operatives for attacking civilians due to the anticipated political fallout. Our argument is neither that all terrorist leaders oppose civilian targeting nor that all low-level members favor it; previous research has found substantial variation not only within groups but also between them in their targeting preferences. Nonetheless, a growing body of evidence indicates that across terrorist groups the leadership tends to be more opposed to civilian attacks than the rank-and-file. The next section develops a set of hypotheses to more directly test this proposition.

Testing Leadership Preferences

Propaganda videos offer a window into the preferences of terrorist leaders because they have considerable discretion over which attacks to feature. Whereas the actual targeting choices of terrorist groups are often delegated to unreliable agents, the propaganda of terrorist groups is strongly influenced by the principal. The relative influence of the leader over his group's propaganda videos supplies a more faithful reflection of his targeting preferences, leading to our main hypothesis:

H1: Terrorist propaganda videos are less likely to feature attacks against civilians than the actual attack patterns of the terrorist groups.

In general, propaganda videos tend to supply more reliable insight into the targeting preferences of the leadership than the targets its operatives actually attack. Yet certain videos are presumably better at capturing the leader's preferences than others depending on his control over the content. We would therefore expect official videos to more faithfully reflect the leadership's preferences than videos lacking anyone official in the group, which informs our next hypothesis:

H2: Official terrorist videos are less likely than unofficial videos to feature attacks against civilians.

Terrorist propaganda videos also vary in the extent to which they emphasize strategic goals versus emotional appeals. Terrorist leaders often invoke prior examples of asymmetric campaigns that they deem as strategic successes for their fighters to emulate. Osama bin Laden, for instance, frequently highlighted the strategic successes of when the *mujahideen* coerced the Red Army into leaving Afghanistan, when Hezbollah forced the Israel Defense Forces into withdrawing from Lebanon, and when U.S. marines fled Somalia after the notorious "Black Hawk down" helicopter attack. Other terrorist propaganda, by contrast, only seems to reflect the emotions of members rather than higher-level strategic goals, such as when "Jihadi John" notoriously beheaded foreign journalists in Syria without mentioning



any broader strategic aims. Such emotional appeals are not necessarily irrational because they can provoke governments into overreacting, thereby depleting their resources and attracting new members.⁶⁶ These insights suggest another pair of hypotheses:

H3: Videos with references to other asymmetric campaigns are less likely to feature attacks against civilians.

H4: Emotional videos are more likely to feature attacks against civilians.

Terrorist leaders often have considerable leeway over not just which attacks to showcase in propaganda videos, but also which attacks to claim credit for in any medium. Terrorist leaders take public organizational responsibility for only a portion of attacks carried out by their operatives, leaving many attacks unclaimed or "anonymous." Although credit claims may theoretically be fabricated, Hoffman notes that in practice "it is difficult for groups to credibly claim responsibility for attacks by others."67 Credit-claiming may take place through many different media from letters and e-mails to more sophisticated media such as videos. Our principal-agent theory anticipates that credit claims are less likely to be issued when operatives attack civilians, especially sophisticated credit claims over which the leadership exercises greater control. This reasoning leads to our final two hypotheses:

H5: Terrorist groups are less likely to claim credit for attacks against civilians.

H6: Credit-claiming of civilian attacks is even less likely in videos than through less sophisticated media in which leaders exercise inferior organizational control.

Research Design and Results

To gain insight into the targeting preferences of terrorist leaders, we analyzed IntelCenter's database of terrorist propaganda videos. IntelCenter is a private contractor based in Alexandria, Virginia that provides access to thousands of propaganda videos from hundreds of terrorist groups around the world. This resource has been used primarily by counterterrorism practitioners, but also other academics.⁶⁸

To facilitate our investigation, we restricted our sample to the ten most active terrorist groups in the decade following the 11 September 2001 attacks that had video representation in the IntelCenter database, thereby allowing us to focus on terrorist groups that both commit many attacks and produce large quantities of propaganda for analysis. This selection criteria narrowed our sample to the following terrorist groups: The Taliban, Fuerzas Armadas Revolucionarias de Colombia (Revolutionary Armed Forces of Colombia-FARC), Tehrik-i-Taliban Pakistan (TTP), Boko Haram, al-Shabaab, Al Qaeda in the Arabian Peninsula (AQAP), Chechen rebels, Salafist Group for Preaching and Combat (GSPC), Al Qaeda in the Lands of the Islamic Maghreb (AQLIM), and Al Qaeda in Iraq (AQI).⁶⁹ This selection criteria initially yielded 900 IntelCenter video entries. Not all of them were usable, however, as some contained non-trivial visual or audio flaws. Graduate students fluent in both Arabic and English coded the videos in these two languages, excluding from the analysis videos in other languages such as Pashto, Somali, and Swahili. In total, 473 videos are included from five main groups: AQAP, AQLIM, al-Shabaab, AQI, and the Taliban. 70 Although data limitations restrict the number of terrorist groups in our sample, they have been responsible for a large portion of terrorist attacks and propaganda output around the world. These groups are not only intrinsically important because of their activity levels, but also present a "hard test" for our theory or

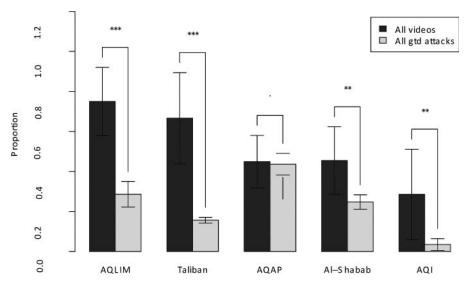


Figure 1. Proportions of videos and all attacks that are selective. ***p < .001; **p < .05; not significant.

what Eckstein referred to as "least-likely" cases, which are ones in which the theory might be expected to fail.⁷¹ The leaders of these groups do not have reputations for selectivity in their targeting preferences. They are all understood as quite extreme.

For replication purposes, basic tracking information was coded for each video such as the title, group, posting date, and video identification number. Substantively, video properties were coded to facilitate our hypothesis tests. Specifically, researchers coded each video in terms of whether it featured indiscriminate violence against civilian targets or selective violence against military targets, as well as whether the videos appeared to have an official spokesman, made reference to an asymmetric strategic success (e.g., the *mujahideen* coercing

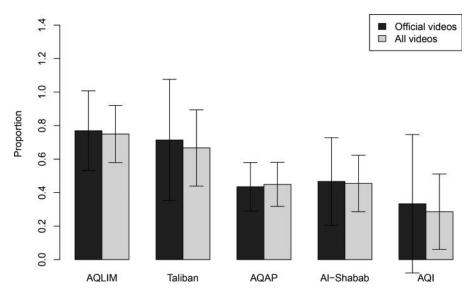


Figure 2. Proportions of official and all videos that are selective.

Table 2. Logistic regression of video selectivity on other video characteristics.

	Dependent variable Selectivity
Subtitles	0.568
	(0.514)
Production quality	0.037
	(0.248)
Number of speakers	0.142
	(0.145)
Music	0.168
	(0.539)
Asymmetric attacks	1.097*
	(0.482)
Hostages	-0.511 (0.500)
Function	(0.580)
Emotion	-1.572** (0.534)
Spokesman	(0.524) 0.307
эрокезпап	(0.520)
Official	—0.591
Official	(0.592)
Constant	-0.458
20.034.10	(1.228)
Observations	116
Akaike Inf. Crit.	158.652

^{*}p < .05; **p < .01

the Red Army to leave Afghanistan) and the apparent motives or intentions of the video (viz., emotional versus instrumental appeals). Also coded were descriptive attributes of the videos, such as whether they featured music, subtitles, hostages, the number of speakers, as well the overall production quality.

Whereas the IntelCenter database provided information on the videos of the groups, the Global Terrorism Database (GTD) was used for information on their behavior. The GTD is the largest publicly accessible terrorism-events dataset in the world, with over a hundred thousand observations starting in 1970. Conveniently, GTD codes each attack in terms of its target selection, whether the group responsible for it claimed credit, as well the medium through which the credit claim was issued. Together, this information enabled us to systematically test the aforementioned hypotheses for insight into the targeting preferences of terrorist leaders relative to the behavior of their subordinates.

Figure 1 supplies strong empirical support for our main hypothesis. In all five groups, the violence featured in their propaganda videos is more likely to be selective than their actual targeting behavior. The results are statistically significant in four out of five groups, as well as when all of them are pooled together. Whoever is responsible for these videos chooses to downplay civilian attacks by instead emphasizing military attacks even though they are unrepresentative.

We also hypothesized that official videos will generally be more selective than videos that do not appear to be officially sanctioned. Figure 2 provides tentative support: in four out of five groups, the official videos were more likely than unofficial videos to feature selective violence against military targets, although the results are not statistically significant at conventional levels. Notably, though, the odds of this relationship arising from chance are under twenty percent.

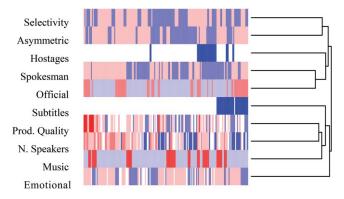


Figure 3. Hierarchical clustering of the measured video characteristics.

We further hypothesized that videos highlighting historical examples of asymmetric strategic successes will be more selective, whereas emotionally charged videos will be less selective by featuring a greater proportion of civilian attacks. Table 2 presents results of a logistic regression of selectivity on the various video characteristics, offering strong empirical support for both hypotheses. Note that other video qualities are unassociated with video selectivity, such as production qualities or hostages. Interestingly, having an official spokesman is positively related to selectivity, while appearing official is negatively related; these cross-cutting effects may contribute to the statistically ambiguous results with respect to the relationship between official videos and selective ones.

Although less directly related to our core hypotheses, it is also illuminating to examine the interrelationships between the video qualities. Figure 3 shows a hierarchical clustering of the

Table 3. Logistic regression of credit claiming on military selectivity of an attack.

	Dependent variable Credit claimed		
	(1)	(2)	(3)
Military target	0.302** (0.085)	0.290** (0.087)	0.484** (0.101)
Number killed	(0.013** (0.004)	0.013** (0.005)
Multi-party		13.735 (263.015)	14.460 (415.075)
AQLIM			15.369 (882.745)
Al-Shabaab			2.708* (1.248)
AQI			29.840 (1,248.38)
Taliban			1.741** (0.166)
Constant	-0.428** (0.038)	-0.471** (0.041)	-3.982** (0.507)
Year	_	_	Υ
Country	_	_	Υ
Observations Akaike Inf. Crit.	3,548 4,792	3,482 4,692	3,482 4,437

^{*}p < .05; **p < .01

Table 4. Logistic regression of credit claiming via social media or video on military selectivity of an attack.

	Dependent variable Claim via social media
Military target	0.671**
	(0.217)
AQLIM	1.920**
	(0.399)
Al-Shabaab	0.196
	(0.426)
AQI	1.873**
	(0.442)
Taliban	-0.098
	(0.375)
Constant	-3.913**
	(0.362)
Observations	3,620
Akaike Inf. Crit.	973

^{*}p < .05; **p < .01

video characteristics, along with a heatmap of their values. Each horizontal stripe beside a variable name is the column of observations for that variable, whereas each thin vertical line within the horizontal stripe is shaded according to the value of that observation. Similar variables are grouped together. At right, we can see the cluster dendrogram, where similar variables are joined together in order of similarity in a tree-like structure, using average cluster distance agglomeration. Note the major clusters: (1) A cluster of high-production-quality measures (e.g., speakers, music, subtitles), which tend to correlate within videos; (2) a cluster of videos with spokesmen or ones that appear official, which seem to co-occur with hostages; (3) a cluster of videos with asymmetric references that are selective; (4) emotional videos, which are anti-correlated with the aforementioned cluster and consistent with the results presented in Table 2. The hierarchical clustering approach gives us a better overall sense of the interrelationships between video qualities, reinforcing the point that selectivity appears mainly related to strategic, less emotional videos.

We also hypothesized that terrorist groups, insofar as they are constrained or governed by strategic leaders, will be less likely to take public credit for civilian attacks. In accordance with our theory, Table 3 confirms that groups are significantly more likely to assume credit for selective attacks against military targets that steer clear of civilians, as coded in the GTD. This relationship is quite robust; it holds even when controlling for the number of people killed and the inclusion of dummies for the group, target country, and year of attack.

Similarly, we also hypothesized that there is variation in whether groups claim credit for civilian attacks depending on the sophistication of the medium. Specifically, we anticipated that resource-intensive modes of credit-claiming that are more likely to be controlled by the leadership would correlate with selective, military targeting. Table 3 confirms that credit is significantly more likely to be claimed for selective attacks via videos and website posts than through more basic, traditional channels such as letters, where subordinates have greater independence for claiming civilian attacks. The evidence thus suggests that the terrorist leader is indeed better able to restrict credit-claiming to strategic military targets when he has added control over the medium.

Together, these results naturally suggest a hierarchy depending on the amount of leadership control. If the leadership is interested in reaping the strategic benefits of selective attacks

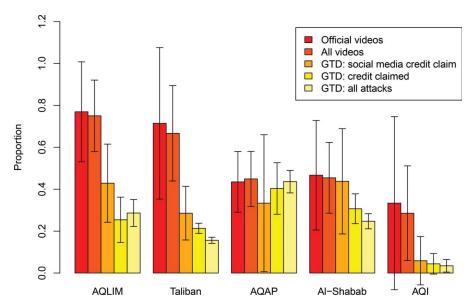


Figure 4. Proportion of each mode of credit-claiming that is selective.

against military targets, we would expect more sophisticated modes of credit-claiming to be less indiscriminate (see Table 4). Figure 4 illustrates this pattern most broadly. For each group, we present the proportion of official videos in our dataset that are selective; the proportion of all videos in our dataset that are selective; the proportion of all attacks where credit was claimed via videos; the proportion of all attacks in which credit was claimed in any medium; and all attacks by that group according to the GTD. What we observe is a steadily decreasing proportion of selectivity from left to right, suggesting that the more sophisticated the mode of credit-claiming, the more likely the attack is to be selectively targeting military. This figure provides the best overall support for our argument that leaders tend to act strategically by highlighting, when possible, violence with the greatest anticipated political benefit for their groups.

Future Research

This study helps to resolve the puzzle of why terrorist groups attack civilians given the political risks. An emerging theory is that such attacks reflect a principal–agent problem driven by wayward operatives at odds with leadership preferences. Empirical testing of this theory has been limited largely to assessments of whether groups led by weaker leaders are more disposed to indiscriminate violence. Our study offers superior analytic leverage for unearthing the complex incentive structure of terrorist members by comparing the propaganda of the group to its actual targeting behavior. Across tests, we find evidence that terrorist leaders tend to behave as rational political actors who generally prefer limiting even the appearance of organizational involvement in politically risky civilian attacks. Still, future research would help to clarify the incentive structure of terrorist members.

Additional research should better establish why fighters often exhibit less civilian restraint than their leaders. The principal-agent framework suggests that the rank-and-file may possess weaker abilities and commitment. Not only are lower-level members less carefully vetted, but they may have greater personal incentives for engaging in civilian targeting owing to their lowly position within the organizational hierarchy. This logic, while intuitively compelling, should be rigorously tested.

Scholars should also continue to elucidate variation in the incentive structure of members not only within terrorist groups, but also between them. The scope of our study focuses on the former, but not the latter. We do not mean to imply, however, that all fighters are equally in favor of civilian targeting. Indeed, previous research demonstrates that certain fighters are more disposed than others.⁷² Nor do we mean to imply that all terrorist leaders are categorically opposed to civilian targeting, which is obviously not the case. Our sample was unable to include Islamic State because the temporal window stopped in 2012 due to data limitations during the collection process, but the leader Abu Bakr al-Baghdadi has shown few signs of earnestly opposing the targeting of civilians. Not only do some terrorist leaders admittedly favor such indiscriminate violence, but there may be certain conditions in which it pays strategically as suggested in the conflict literature. 73 Additional research should seek to identify precisely when terrorist leaders perceive civilian targeting as strategic.

As part of this analysis, researchers should probe whether terrorist leaders exhibit signs of learning by favoring more selective violence over time or at least pretending to do so in line with the rational actor model. If so, we would expect Islamic State and its affiliates to eventually curtail at least some of their attacks against civilians and to limit propaganda featuring indiscriminate violence. Indeed, the Islamic State leadership recently pressured its Nigerian affiliate, Boko Haram, to reduce its violence against civilians due to the political backlash in that country.⁷⁴ There is even preliminary evidence that Islamic State leaders are adjusting their propaganda to depict their attacks as more selective. A recent study of 1,754 Islamic State execution videos in Iraq finds "a distinct pattern" in line with our predictions. The execution videos do not accurately reflect Islamic State's actual targets. As we would anticipate: "The data shows that ISIS is selective about which executions are publicized on social media and which are kept private. The group publicizes the executions of captured enemy fighters and collaborators on social media, but not those of innocent civilians." Specifically, the report states that only 2 percent of the execution videos were against civilians compared to the 98 percent against captured combatants.⁷⁵ Outside of Iraq, Islamic State propaganda is also now contending that the lion's share of its attacks are against enemy regimes, especially in Syria.⁷⁶ According to Rukmini Callimachi of the New York Times, the purpose of Islamic State "underestimating civilians killed" in its propaganda is for the group to appear more sympathetic, which is what even the most extreme leaders apparently try to do given their sensitivity to political risks.⁷⁷

Notes

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