

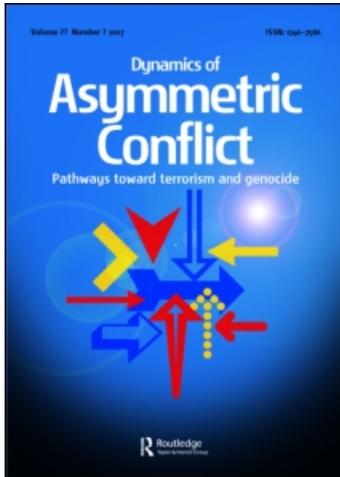
This article was downloaded by: [Smith, Allison G.]

On: 20 December 2008

Access details: Access Details: [subscription number 907052816]

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Dynamics of Asymmetric Conflict

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t778749996>

The language of violence: distinguishing terrorist from nonterrorist groups by thematic content analysis

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Online Publication Date: 01 July 2008

To cite this Article Smith, Allison G., Suedfeld, Peter, Conway III, Lucian G. and Winter, David G. (2008) 'The language of violence: distinguishing terrorist from nonterrorist groups by thematic content analysis', *Dynamics of Asymmetric Conflict*, 11:2, 142 — 163

To link to this Article: DOI: 10.1080/17467580802590449

URL: <http://dx.doi.org/10.1080/17467580802590449>

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The language of violence: distinguishing terrorist from nonterrorist groups by thematic content analysis

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(Received 28 September 2008; final version received 30 October 2008)

This study examined whether quantitative content analysis of the value references, motive imagery, and integrative complexity expressed in the documents of two terrorist groups and two nonterrorist comparison groups could distinguish the violent groups from their nonviolent counterparts. The two terrorist groups were Central al Qa'ida and al Qa'ida in the Arabian Peninsula. For each, a comparison group that operated in the same context and had a similar ideology *but* did not engage in terrorist violence was chosen. Statistical analyses revealed that, compared with their nonterrorist counterparts, both terrorist groups described themselves by using more positive morality, religion, and aggression value references, and described their enemies by using more *negative* religion value references (e.g., references to being infidels). Relative to their nonviolent comparison groups, terrorist groups also used more power, ingroup affiliation, and achievement motive imagery, and expressed lower levels of integrative complexity.

Keywords: content analysis; political violence; terrorism; value references; motive imagery; integrative complexity; comparative case study

When people communicate, they often convey more than the explicit content of their words. Indeed, psychological research using content analytic techniques to examine value references (Eckhart, 1965; Smith, 2004), motive imagery (e.g., Winter, 1980; 1993; 1996; 2007) and structural complexity (e.g., Suedfeld, 2003; Suedfeld & Leighton, 2002) has demonstrated the importance of attending not only to what people say but *how* they say it. The purpose of this paper is to analyze the communications of two terrorist groups and two comparison groups along these lines. In doing so, it builds upon and expands previous research examining the relationship between group rhetoric and terrorist violence (Smith, 2004; 2008).

During the past several decades, research on political violence has demonstrated that several quantitative content analysis coding systems provide scientifically rigorous and valid means of exploring the complex relationship between violent words and violent actions. Psychological variables related to individuals' and groups' values, motives, and quality of information processing have been coded in documents and found to be

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associated with aggression. For example, Eckhardt (1965) found that actors tend to emphasize their own positive morality and strength values in war propaganda, Winter (2007) found that documents written by political leaders in crises that escalated to war contained higher levels of power motive imagery than those written by political actors in crises that were peacefully resolved, and Suedfeld and Bluck (1988) found that the leaders of countries that engaged in surprise attacks on other countries showed a decline in integrative complexity prior to these attacks.

More recently, Smith (2004; 2008) conducted a quantitative content analysis of the documents issued by 13 terrorist groups and by matched control groups that shared a similar ideology and historical context—but did *not* engage in terrorist violence. This study found systematic differences between the levels of value references and motive imagery expressed by terrorist and nonterrorist radical groups.

The current project takes a more in-depth approach to the examination of two terrorist groups (al Qa`ida and one of its affiliates) and two comparison groups. In doing so, we aim to accomplish two primary goals:

- (1) to demonstrate that the findings of Smith (2004; 2008) are robust and apply across different contexts and groups;
- (2) to demonstrate that an additional content analytic technique, integrative complexity, might also help us distinguish between terrorist and nonterrorist groups.

These two goals were accomplished by looking for overall differences in the levels of values references, motive imagery, and integrative complexity in the documents issued by terrorist and nonterrorist radical comparison groups. It is to a discussion of these groups we turn next.

Groups included in study

For a study of this nature to be successful, it is important to choose both the appropriate terrorist groups to examine and appropriate comparison groups for these terrorist groups. The key criteria used when choosing groups for this study are outlined below.

Firstly, an effort was made to choose terrorist groups that are currently prominent on the world stage. Secondly, to be included in the study, terrorists groups had to have issued numerous statements during periods encompassing violent attacks by their group, with English-language translations of these statements available in open sources. Conducting a valid content analysis requires appropriate documents to analyze. The third and final criterion for choosing to include a terrorist group in the study was the availability of an appropriate comparison group. To be considered an appropriate comparison group, a group had to operate in the same geographical and social context as the terrorist group, have a similar ideology and goals, but not engage in terrorist violence. Groups were considered to have similar ideologies if they viewed the same groups or individuals as opponents and had comparable political, religious, and/or social goals *vis-à-vis* these opponents. Appropriate documents issued by the comparison group also had to be available. Based on the above criteria, the following groups were included in this study: Central al Qa`ida¹ with comparison group Hizb ut-Tahrir, and al Qa`ida in the Arabian Peninsula with comparison group the Movement for Islamic Reform in Arabia (MIRA).

Central Al Qa'ida

Al Qa'ida ('the Base') was established by Saudi-raised Usama Bin Ladin in the late 1980s. Although the original members and supporters of al Qa'ida came from various countries and developed their ideologies while engaging in different political struggles, the core of the group came together during the war against the Soviets in Afghanistan. With the defeat of the Soviets, Bin Ladin and his followers turned their attention to a broader group of enemies, encouraging Muslims to fight perceived attacks on Muslims around the world and to overthrow "un-Islamic" regimes in order to establish the supremacy and rule of Islam.

Al Qa'ida's battle with the United States officially began in August 1996, when Bin Ladin issued a declaration of war against the Americans, whom he viewed as occupying Saudi Arabia. Al Qa'ida and several affiliated groups then broadened their focus in February 1998 by issuing a fatwa calling on all Muslims to attack US military and civilian targets around the world. Since then, al Qa'ida and groups and individuals associated with it have been implicated in numerous terrorist attacks, including the 11 September 2001 attacks on the Pentagon and World Trade Center.

From the time of its origin, Al Qa'ida has operated as a networked organization comprising an alliance of like-minded Islamist groups, rather than a traditional hierarchical organization (Arquilla et al., 1999; Sageman, 2004). The attack by the United States and its allies on al Qa'ida's central base of operations in Afghanistan, beginning in 2001, and the global war on terrorism have resulted in the further decentralization of al Qa'ida, which many argue has now evolved into more of an international movement than a structured organization (e.g., CRS, 2005; Hoffman, 2004). In his 2008 Annual Threat Assessment prepared for the House Permanent Select Committee on Intelligence, Director of National Intelligence J. Michael McConnell emphasized the continued relevance of al Qa'ida's central leadership:

Al-Qai'da's top leaders Usama Bin Ladin and Ayman al-Zawahiri continue to be able to maintain al-Qa'ida's unity and its focus on their strategic vision of confronting our allies and us with mass casualty attacks around the globe. Although security concerns preclude them from the day-to-day running of the organization, Bin Ladin and Zawahiri regularly pass inspirational messages and specific operational guidance to their followers through public statements. (Director of National Intelligence, 2008, pp. 5-6)

Control group 1: Hizb ut-Tahrir

Hizb ut-Tahrir al-Islami ('Party of Islamic Liberation') was established in northern Palestine in 1953 by Taqi al-Din al-Nabahani as a political party with Islam as its ideology. Since its founding, the group has maintained a consistent goal: re-establishing an Islamic caliphate that will incorporate all Muslim lands and implement sharia rule. It views current Islamic states, such as Saudi Arabia and Iran, as insufficiently Islamic and advocates the eventual overthrow of these regimes as necessary to the establishment of a true caliphate in which Islam will be supreme (ICG, 2003). In this sense, Hizb ut-Tahrir and Central al Qa'ida share the same overall ideology and goals. Like al Qa'ida, the group also views the West as a natural enemy, as is evident in the titles of several of its publications, e.g., *The American Campaign to Suppress Islam* (1996) and *Dangerous Concepts to Attack Islam and Consolidate the Western Culture* (1997).

Hizb ut-Tahrir outlines a clear three-stage strategy for establishing the envisioned Islamic state: (1) finding individuals who support and advocate the organization's ideals,

(2) interacting with the larger Muslim world (the Ummah) to encourage it to embrace Islam, and (3) establishing the caliphate. The group does not advocate violence and argues that only the caliph can lead jihad. At the same time, it also seems to accept that the overthrow of current regimes might involve violence on the part of local forces that support Hizb ut-Tahrir (Karagiannis & McCauley, 2006). Further, the group has been accused of involvement in coup attempts in Jordan and Egypt (ICG, 2003) and has been banned in several countries, including Syria, Egypt, Tunisia, and Germany. Still, in spite of its radical rhetoric, there is currently no evidence that Hizb ut-Tahrir actually has engaged in violence or terrorism (Karagiannis & McCauley, 2006; Mayer, 2004; Taji-Farouki, 2000).

Al Qa'ida in the Arabian Peninsula

As was made clear in Bin Ladin's 1996 declaration of war, al Qa'ida has long considered Saudi Arabia, or "the Land of the Two Holy Places" (Mecca and Medina), to be led by an un-Islamic regime beholden to the United States and Israel. As such, for Central al Qa'ida, the Saudi Kingdom constitutes one of the many fronts in its battle to establish the supremacy of "true" Islam.

Although, in the aftermath of the 11 September 2001 attacks, the central front in this battle clearly shifted to Afghanistan, after the fall of the Taliban, many Saudi militants returned to Saudi Arabia with the intention of carrying out operations in their homeland. There is some evidence that the leaders of this group, which calls itself al Qa'ida in the Arabian Peninsula, were in close contact with the Central al Qa'ida leadership, as they built the organization. Its first leader, Yusef al-Ayeri, may have reported directly to Bin Ladin (Cordesman & Obaid, 2005). The extent of the current contact between al Qa'ida in the Arabian Peninsula and the central organization is not clear.

Possibly as early as 2002, al Qa'ida in the Arabian Peninsula began building an infrastructure to support future attacks in the region (ICG, 2004). Like Central al Qa'ida itself, the group is organized into cells that have limited contact with each other but are united by an overarching ideology and mission. The group actively uses the Internet to maintain links between cells and operatives, releasing frequent statements on its activities, goals, and mission, and even publishing online journals such as *Sawt al-Jihad* ('The Voice of Jihad').

Al Qa'ida in the Arabian Peninsula launched its first terrorist operation in May 2003, when 12 suicide bombers conducted three nearly simultaneous attacks on residential compounds in Riyadh, Saudi Arabia, killing 30 people. The group has continued to engage in terrorist activity over the subsequent years in spite of the arrests and/or deaths of many of its leaders.

Control group 2: The Movement for Islamic Reform in Arabia

The Movement for Islamic Reform in Arabia (MIRA) was founded by Sa'd al-Faqih in 1996, after a split in its parent organization, the Committee for the Defense of Legitimate Rights (CDLR). The CDLR was originally established in 1993 as a reform group calling for a stricter observance of sharia and a stronger role for religious institutions in Saudi Arabia. Many of its members were arrested in government crackdowns shortly after the group's founding. In 1994, several members, including al-Faqih, fled to London, where they recreated the organization in exile under the leadership of Muhammed al-Mas'ari. The 1996 split in the group largely resulted from al-Mas'ari's membership in Hizb

ut-Tahrir and his interest in a wide range of international struggles. After al-Faqih founded MIRA in 1996, he returned the focus of his organization to the situation in Saudi Arabia (Teitelbaum, 2000).

MIRA directs all its efforts toward promoting the radical reform of Saudi Arabia, a goal it views as impossible under the current regime, which it describes as corrupt, absolutist, and un-Islamic. The group's main activities center on a media strategy aimed at provoking mass resistance within the Saudi populace. It implements this strategy both through its website and the satellite television programs it broadcasts into Saudi Arabia (first on the Al-Islah channel and, starting in 2005, on the Hiwar channel). Although MIRA does not currently advocate violence in the name of its cause and argues that reform can be secured through peaceful and legitimate means, it views the violent activity of other Saudi fundamentalists as a natural consequence of the current Saudi regime's intolerance of dissent (Cordesman, 2001).

In 2005, the UN Security Council 1267 Committee added MIRA to its list of individuals and entities belonging to or associated with the Taliban and al Qa'ida organization, and the US Treasury designated MIRA as providing material support to al Qa'ida. The case against MIRA involves al Qa'ida-produced material it has published on its website, funding that MIRA received from Abdulrahman Alamoudi, who is also known to have raised money for al Qa'ida in the United States, and al-Faqih's association with individual members of al Qa'ida. Currently, however, there is no evidence that al-Faqih or MIRA has engaged in actual terrorist violence. Thus, for the purposes of this study, MIRA was considered a nonterrorist comparison group.

Psychological variables coded and hypotheses

Based on both psychological theory and the results of previous research, we included three general classes of psychological variables in this study: values references, motive imagery, and integrative complexity.

Value references

Values are goals or standards that individuals or groups view as desirable. According to Rokeach (1970), a value acts as a "criterion for guiding action, for developing and maintaining attitudes toward relevant objects or situations, for justifying one's own and others' actions and attitudes, for morally judging self and others, and for comparing self with others" (p. 160). From this definition, it would be expected that values play an important internal role in justifying and supporting the behavior of terrorist groups, in particular the use of violence.

Individuals and groups are generally highly aware of their own values, and the focus in this study was on what individuals or groups explicitly said they (or others) valued. Obviously, saying that one's group values (or does not value) a standard or goal does not necessarily mean that the group actually does so, nor that its definition of the value is the same as that used by others, nor that it acts in a manner consistent with this value. Similarly, saying that one's enemy values (or does not value) a standard or goal may or may not be consistent with this enemy's own understanding of its values or its behavior. What is important in the type of value analysis conducted in this study is gaining an understanding of the larger perspective being advanced by a particular group.

Theoretical and empirical work evolving out of different psychological traditions—e.g., social identity theory (Tajfel & Turner, 1986) and Freudian psychoanalytic theory

(Freud, 1921/1959)—has emphasized the tendency of groups to privilege members of their own groups and derogate members of outside groups. Further, previous research examining the values expressed by political leaders has demonstrated that this tendency may be particularly strong in groups that engage in violent activities (Eckhardt, 1965; White, 1949).

At the same time, it is interesting to note that there were mixed findings in the one study (Smith, 2004) that examined terrorist groups' use of value references. As expected, terrorist groups (compared to their nonterrorist counterparts) used more positive morality and culture value references to describe themselves and more dominance value references to describe their enemies. However, terrorist groups also described themselves by using *more* dominance value references and were similar to their nonterrorist counterparts in terms of the (negative) morality and culture value references they ascribed to their enemies. The current study provided an opportunity to see whether these findings extended to additional groups.

Motive imagery

Motives involve individual or group tendencies or strivings toward or away from certain types of goals. Unlike values, which can be readily identified by those who possess them, motives may be viewed as involving goals that are not always fully conscious (Winter & Barenbaum, 1999). Further, measures of motives and explicit goal-related variables (such as values) are not highly correlated, meaning, for example, that a group or individual's explicit statement that it wants a motive-related goal is not necessarily related to the amount of motive imagery it uses.

Studying the relationship between implicit motives and aggressive behavior has a long history in personality psychology. In particular, there is a large body of empirical work relating political leaders' use of power and affiliation motive imagery to various conflict outcomes (Winter, 1996). Nearly three decades of research has demonstrated the association between high levels of power motive imagery and aggression (Winter, 1980; 1993; 1996; 2007). For example, documents written by political actors in crises that escalated to war contained higher levels of power motive imagery than those written by political actors in crises that were peacefully resolved (Winter, 2007), and high levels of power motive imagery measured in presidential inaugural addresses were related to the likelihood of that president engaging the country in war (Winter, 1996). In terms of affiliation motive imagery, it has been shown that leaders who express high levels of this motive tend to prefer cooperative outcomes: higher levels of affiliation motive imagery have been related to pursuing more interdependent foreign policies (Hermann, 1980) and making concessions in conflict situations (Langner & Winter, 2001).

Finally, in a previous study, terrorist groups were shown to be higher in power motive imagery than their nonterrorist counterparts (Smith, 2008). At the same time, that study highlighted the importance, when examining terrorist groups, of distinguishing between affiliation motive imagery aimed at the members of one's own group (ingroup affiliation motive imagery) and that aimed at members of outside groups (outgroup affiliation motive imagery). Specifically, compared to nonterrorist counterparts, terrorist groups tend to express more ingroup affiliation motive imagery and less outgroup affiliation motive imagery. The current study examined whether similar results would emerge in a more in-depth study of two terrorist groups and their comparison groups.

Integrative complexity

Integrative complexity refers to the level at which information is processed by an actor in a particular situation. Specifically, the level of integrative complexity in a statement depends on the degree to which the source's communications give evidence of differentiation (the perception of different legitimate perspectives on, or dimensions of, an issue) and integration (the recognition of connections between different dimensions).

Although no previous research has compared the complexity levels of terrorist and ideologically similar nonterrorist groups, we expected that terrorist groups would demonstrate lower integrative complexity than radical groups that do not engage in terrorist activity. This hypothesis is based on two converging lines of evidence. Firstly, some evidence suggests that terrorist groups are fairly low in complexity (Suedfeld & Leighton, 2002) and that extremists in general are less integratively complex than moderates (e.g., Tetlock et al., 1994; but see Conway et al., in press; Van Heil & Mervielde, 2003). Indeed, in the only published research on the integrative complexity of terrorists to date, members of Al Qa'ida and the Taliban both consistently showed lower levels of integrative complexity than Western and UN leaders (Bush, Blair, Schroeder, Robertson, Chirac, and Annan) through the period from the 9/11 crisis to the invasion of Afghanistan (Suedfeld, 2003). Although suggestive, this work does not include an appropriate control group with which to compare the complexity of the terrorist leaders and groups. Consequently, it is impossible to isolate the impact of terrorism from other factors. For example, it may be that the lower complexity results not from terrorism but from a difference in ideology, from a difference in defensive posture, or from a linguistic "dumbing down" of complexity from translating Arabic language into English (although a number of studies have shown essentially identical levels of complexity between official translations and statements in the original language). The present study, in comparing ideologically similar groups from the same area (but who differ on terrorism), is a step toward solving this problem.

The second line of argument is that there is a considerable amount of consistent evidence that inter-nation violence in particular is prefaced by decreasing complexity (e.g., Suedfeld & Bluck, 1988; Suedfeld et al., 1976; Tetlock, 1985), that confrontations resolved peacefully are characterized by stable or increasing complexity (Raphael, 1982; Suedfeld & Jhangiani, in press; Suedfeld et al., 1976), and that persons and groups who are more likely to engage in aggressive political decisions may be chronically lower in complexity (e.g., Liht et al., 2005; Tetlock & Tyler, 1996; see Conway et al., 2001; Suedfeld et al., 2005, for reviews). It may be that violence requires a single-minded, focused decisive action; thus, this psychological "battening down of the hatches" may tend to lead violent groups to have lower complexity, even lower complexity than equally ideologically radical but nonviolent groups.

Methods***Documents included in study***

For each group included in the study, an exhaustive search was conducted to find all of the materials issued by the group available in English translation. The goal was to include as many documents as possible for each group, and documents were only excluded from the study for a limited number of reasons. For example, if there was not a full-text translation of the document but rather it was excerpted, it would not be included in the study, as the "reporter" might choose to highlight or omit certain aspects of the statement, thus potentially biasing the results. Documents were also excluded if the source was

unconfirmed and/or the document was not intended to represent the group but was focused on discussing the views of another (nonenemy) group.

Three main types of documents were included in the study: speeches, interviews, and written statements.² The sources and general types of documents included in the study are described briefly below. A list of all of the documents included in the project is available from the first author upon request.

Central Al Qa'ida

The documents that represented Central al Qa'ida were the statements issued by two of its original and current leaders, Usama Bin Ladin and Ayman al-Zawahiri. English translations of these statements were available through the Open Source Center (OSC), and all of Bin Ladin's and al-Zawahiri's speeches, interviews, and written statements that were available in full-text translation were included in the study. These 53 documents covered the period from the 1980s (exact date indeterminate) through the end of 2006.³

Control group 1: Hizb ut-Tahrir

The documents that represented Hizb ut-Tahrir in this study were the materials produced by the central office of the organization in Jordan. All of these materials were in the form of written statements and came from the organization's central websites. Only documents that originated in the central office were selected because they were the closest counterparts of the documents used to represent Central al Qa'ida. These materials had been translated into English by the organization itself, and the 46 documents covered the period from August 1997 through September 2006.

While an ideal sample of documents for this organization would have included OSC translations of the original Arabic documents issued by Hizb ut-Tahrir, such translations do not exist. To address the potential problems involved in using documents translated by the group itself, an Arabic language instructor and translator with more than 20 years of experience located the Arabic originals for 24 of the translated Hizb ut-Tahrir documents and conducted side-by-side comparisons between the Arabic and English versions. In each case, he found that the English documents were literal, complete, and high-quality translations of the Arabic documents.

Al Qa'ida in the Arabian Peninsula

The documents that represented al Qa'ida in the Arabian Peninsula in this study included materials the group posted on websites as well as articles from their online journal *Sawt al-Jihad*. Only those materials signed by al Qa'ida in the Arabian Peninsula or issued by a known group member were included in the study. English translations of these speeches, interviews, and written statements were available through the OSC, and 49 documents that covered the period from October 2003 through July 2006 were included in the study.

Control group 2: The Movement for Islamic Reform in Arabia

The documents that represented MIRA in this study included materials the group posted to its Arabic-language website or broadcast on its Arabic-language satellite channel. Although the London-based group maintains an active English-language website, materials from this site—and interviews conducted in English—were not included in the

study, as they were not targeted at a Saudi audience and thus were not comparable with the documents issued by their comparison group, al Qa'ida in the Arabian Peninsula. Further, only Arabic language documents that were directly attributed to MIRA were analyzed, as, indeed, the group has posted statements from other groups, including al Qa'ida in the Arabian Peninsula, on its website. English translations of written statements and interviews were available through the OSC, and 56 documents that covered the period from July 1999 through October 2006 were included in the study.

Coding documents

In line with standard procedures used when conducting quantitative content analyses of psychological variables, all identifying information (e.g., references to specific groups, specific attacks, or other well-known events) was removed from the documents. Documents were then placed in random order and coded by trained and reliable scorers who were blind to the purposes and hypotheses of the study.

Value references

The values groups expressed in their documents were coded using a modified version of value analysis (White, 1951). Because of the complexity of the value analysis system, reliability was assessed throughout the study, and variables on which the coders did not achieve an interrater reliability (category agreement) of .80 or above were dropped from the analyses. In all cases, the unit of analysis was the paragraph.

The following values were included in the final analyses (Table 1).

Dominance values

Dominance value references were coded when subjects were described as having or wanting to have power over others. Examples include references to a group occupying another country, striving for victory or conquest, and/or oppressing others.

Table 1. Outline of value reference scoring system.

Value	Definition (examples)
Dominance	Valuing having power over others (Dominance: "We will establish our supremacy") (Negative dominance: "We will let others live by their own principles")
Aggression	Valuing physical violence (Aggression: "We will not stop fighting until our enemy dies") (Negative aggression: "We will resolve this issue peacefully")
Autonomy	Valuing freedom or liberty (Autonomy: "We will liberate ourselves from tyranny") (Negative autonomy: "We will do whatever they tell us to")
Morality	Valuing being just or honest (Morality: "We will always be on the side of good") (Negative morality: "If necessary, we will lie, cheat, and steal")
Religion	Valuing God or one's own religious faith (Religion: "God will inspire all of our actions") (Negative religion: "We will follow the rules of man, not God")

Adapted from White (1951). This outline is not adequate for scoring purposes.

Aggression values

Aggression value references were coded when subjects were described as behaving or wanting to behave in a physically violent manner. Examples include references to a group attacking another, engaging in a military raid, and/or killing others.

Autonomy values

Autonomy value references were coded when subjects were described as having or wanting to have freedom or liberty. Examples include references to a group seeking liberation, trying to establish its rights, resisting an occupation, and/or engaging in an uprising.

Morality values

Morality value references were coded when subjects were described as being or wanting to be just or honest. Examples include references to a group being good or noble in a moral sense, not concealing the truth, and/or keeping promises.

Religion values

Religion value references were coded when subjects were described as acting or wanting to act in accordance with their religious faith. Examples include references to a Muslim group supporting Islam, engaging in jihad, and/or working to strengthen the Ummah or to establish the Muslim caliphate.

If a subject was described as actively not possessing or wanting to possess one of the values described above, a negative value reference was coded. So, for example, if the United States was described as “lying,” a negative morality value reference would be coded and attributed to the United States. In this study, the focus was on the value references that these groups used to describe themselves and their enemies (coded when Israel and/or Jews, Western powers and/or Christians, and the current leaders of Muslim countries were mentioned). Value references that referred to actors outside any of the above categories, e.g., the Japanese, were not coded.

After the full document was coded, the number of each type of value reference attributed to the group and their enemies was calculated. Negative value references were subtracted from positive ones to yield an overall score for each on each type of value reference. Raw scores were then converted into references per 1,000 words. More detailed information on the value reference scoring system can be found in Smith (2003).

Motive imagery

To assess motive imagery, documents were coded using Winter’s (1994) running text scoring system for power, affiliation and achievement motive imagery by a professional scorer who has coded documents for numerous studies and has consistently demonstrated a category agreement of .85 or above with calibration materials prescored by experts. In all cases, the unit of analysis was the sentence.

The following general types of motive imagery were scored (Table 2).

Power motive imagery

The power motive was scored when an action expressed a concern with having an impact on others. Examples include references to engaging in strong, forceful actions that affect others, control or regulation, and/or attempts to influence or persuade others.⁴

Affiliation motive imagery

The affiliation motive was scored when an action was described in a way that expressed a concern with maintaining or restoring friendly relations with others. Examples include references to positive feelings for others, negative feelings about separation or the disruption of a friendly relationship, and/or companionate activities. In addition, all affiliation images coded in the documents were classified as ingroup affiliation motive images (if the group issuing the document were expressing affiliation to others they viewed as actual or potential sharers of their cause, e.g., fellow Muslims), outgroup affiliation motive images (if the group issuing the document were expressing affiliation to others who did not share the same cause, e.g., the Russian government), or neither (e.g., if the group described their opponents as expressing affiliation).

Table 2. Outline of motive imagery scoring system.

Imagery type	Definition (example)
Power	<p>A concern with having impact on others or the world through:</p> <ul style="list-style-type: none"> ● Strong, forceful actions that have an impact (“They invaded our country”) ● Control or regulation (“They monitor our every action”) ● Attempts to influence or persuade (“They persuaded us to support them”) ● Giving help not explicitly solicited (“We will fight for the oppressed”) ● Concern with prestige or impressing the world (“We demand respect”) ● A strong emotional reaction to another’s action (“Their views enrage us”)
Affiliation	<p>A concern with establishing, maintaining, or restoring friendly relations through:</p> <ul style="list-style-type: none"> ● The expression of positive, friendly, or intimate feelings towards others (“We are closely bonded with all members of our religion”) ● The expression of negative feelings about separation or the disruption of a friendly relationship (“We are tormented by our separation”) ● Affiliative, companionate activities (“We spent hours sharing our views”) ● Friendly, nurturant acts (“We must take care of our people”)
Achievement	<p>A concern with a standard of excellence expressed through:</p> <ul style="list-style-type: none"> ● Use of adjectives such as “good,” “better,” and “best” (“Our army is the world’s best”) ● Positively evaluated performances (“We skillfully achieved our goals”) ● Mention of winning or competing with others (“Our ideology will triumph”) ● Negative feelings concerning failure or lack of excellence (“We will not accept the defeat of our goals”) ● Mention of unique accomplishment. (“We were the first to stand up to them.”)

Adapted from Winter (1994). This outline is not adequate for scoring purposes.

Achievement motive imagery

The achievement motive was scored when an individual or group expressed a concern with meeting a standard of excellence. Examples include references to goals or performances that are described in ways that suggest positive evaluation, mention of winning or competing with others, and/or negative feelings concerning failure or lack of excellence.

After all coding was completed, raw scores were converted into images per 1,000 words. More detailed information on the types of images scored for power, affiliation, and achievement motive imagery can be found in Winter (1994).

Integrative complexity

To assess integrative complexity in the documents, five randomly selected paragraphs⁵ from each document were coded using the standard scoring manual (Baker-Brown et al., 1992). Each paragraph was scored by five scorers, and the overall interrater reliability was .82 (Cohen's kappa). In all cases, the unit of analysis was the paragraph, with the average score of the paragraphs from each document constituting the overall document score (Table 3).

Statements that are *low in integrative complexity* do not distinguish between different aspects of a situation or acknowledge the possibility of more than one legitimate attitude about it (i.e., they are low in differentiation). Statements that are *high in integrative complexity* distinguish between different aspects of or perspectives on a situation and also integrate them into an overarching conceptual structure or viewpoint. Between these two extremes are statements that distinguish between different aspects of or perspectives on a situation but do not integrate them or show only a low level of integration. More detailed information on the integrative complexity scoring system can be found in Baker-Brown et al. (1992).

Table 3. Outline of integrative complexity scoring system.

Paragraph score	Scoring criteria
1	No recognition of the different aspects of a situation or acknowledgement of the possibility of more than one legitimate attitude about it (i.e., no differentiation)
3	Recognition of the different aspects of a situation and/or acknowledgement of the possibility of more than one legitimate attitude about it (i.e., differentiation)
5	Recognition of the different aspects of a situation and/or acknowledgement of the possibility of more than one legitimate attitude about it <i>and</i> an understanding of the relationship between these aspects or attitudes (i.e., differentiation and low-level integration)
7	Recognition of the different aspects of a situation and/or acknowledgement of the possibility of more than one legitimate attitude about it <i>and</i> integration of these aspects into an overarching mental structure or viewpoint (i.e., differentiation and high-level integration)
2, 4, 6	Some evidence of the next higher score but not enough to code it.

Adapted from Baker-Brown et al. (1992). This outline is not adequate for scoring purposes.

Results

In order to determine whether specific variables distinguished terrorist groups from their nonterrorist radical counterparts, we conducted *t*-tests to determine whether there were differences in the means of terrorist and nonterrorist groups within each context (transnational or Saudi Arabian)⁶ on the variables coded in the study. The means and standard deviations for each group can be found in Table 4.

As predicted, there were many significant differences between the statements of terrorist and comparison groups in the mean levels of value references, motive imagery, and integrative complexity. Further, most of the differences were found in both comparisons: between Central al Qa`ida and Hizb ut-Tahrir (in the transnational context) and between al Qa`ida in the Arabian Peninsula and the MIRA (in the Saudi Arabian context). We now discuss these results in more detail for each class of variables separately.

Value references

Both Central al Qa`ida and al Qa`ida in the Arabian Peninsula described themselves using more morality and religion value references than did their respective comparison groups. In the following quotation from a statement issued by the late Abd-al-Aziz al-Muqrin, a former leader of al Qa`ida in the Arabian Peninsula, there are examples of the use of both types of references to describe the “mujahidin” who were killed in an attack on a Saudi oil facility in Yanbu. The phrases that contain value references are in italics with the type of value reference indicated in brackets:

We praise God for blessing our nation with a *remnant of goodness* [morality] and with men that *stood firm on the truth* [morality] and fought for it despite their small numbers and the great numbers of their enemy and despite their betrayal by many. The Muslim is demonstrating the highest degree of *fitrah* [religion] and the ultimate form of reason when he carries out his *duty towards his God, holds on to the belief in the oneness of God* [religion] and the disbelief in tyranny, declares his renunciation of the apostates and *practices jihad for the sake of God* [religion]. (Al-Muqrin Calls on Youth to Follow Example of “Martyrs of Yanbu,” 2004)

Both terrorist groups also used more aggression value references when describing themselves, and al Qa`ida in the Arabian Peninsula used more dominance value references. However, it is important to note that the documents of the comparison groups did contain aggression value references; in other words, the mere presence of aggression value references did not indicate that a group would commit terrorism. Consider the following quotation from Hizb ut-Tahrir, Central al Qa`ida’s comparison group, in which the aggression value references are indicated in italics:

Indeed, the problem of al-Aqsa, al-Quds, Palestine, and the Jewish state which has been reared as a dagger and cancerous gland in the heart of the Islamic Ummah, cannot be solved with those partial and patchwork solutions. The solution is to *tear out the Jewish entity from its very roots* from every hand span of the land of Palestine, and not just one hand span here and there. *The problem with the Jewish State is one of existence* and not one of borders. (Conferences and Conspiracies of the Rulers, 2000)

Clearly, it is possible to value aggression, or to refer to oneself as valuing aggression, without engaging in violence. Groups do, after all, make characterizations and issue threats upon which they do not act.

Table 4. Differences between terrorist and comparison groups on all variables.

Variable	Transnational context			Saudi Arabian context		
	Central al Qa'ida (n = 53)	Hizb ut-Tahrir (n = 46)	Difference	Local al Qa'ida (n = 49)	MIRA (n = 56)	Difference
Group dominance values ^a	.76 (.97)	.59 (1.01)	.17	1.62 (1.75)	.27 (.76)	1.35***
Group aggression values	3.80 (2.79)	.37 (1.21)	3.43***	4.66 (3.28)	-.40 (1.11)	5.06***
Group autonomy values	.85 (.80)	.63 (.80)	.22	.69 (1.35)	.48 (1.04)	.21
Group morality values	1.48 (1.49)	.60 (1.05)	.88***	1.45 (1.89)	.77 (1.37)	.68*
Group religion values	8.42 (3.66)	4.91 (3.99)	3.51***	11.94 (6.14)	3.03 (3.18)	8.91***
Enemy dominance values	4.27 (2.94)	4.78 (3.35)	-.51	2.91 (2.46)	4.91 (3.25)	-2.00***
Enemy aggression values	3.55 (2.71)	2.78 (2.55)	.77	1.56 (1.85)	1.69 (2.28)	-.13
Enemy autonomy values	-.75 (.86)	-1.07 (1.37)	.32	-.81 (1.29)	-.32 (.66)	-.49*
Enemy morality values	-4.26 (2.96)	-3.35 (2.63)	-.91	-1.94 (1.94)	-3.02 (2.04)	1.08**
Enemy religion values	-3.92 (3.57)	-1.60 (1.70)	-2.32***	-4.18 (4.60)	-.43 (.70)	-3.75***
Power motive	16.84 (3.60)	15.45 (2.72)	1.39*	16.70 (5.48)	14.78 (4.46)	1.92*
Ingroup affiliation motive	.99 (1.09)	.60 (.85)	.39*	1.32 (2.07)	.14 (.42)	1.18***
Outgroup affiliation motive	.07 (.25)	.02 (.08)	.05	.07 (.33)	.04 (.15)	.03
Achievement motive	5.78 (2.48)	3.77 (2.30)	2.01***	7.88 (3.67)	4.69 (2.18)	3.19***
Integrative complexity ^b	1.90 (.37)	2.16 (.34)	-.26***	1.79 (.34)	2.12 (.38)	-.33***

A positive difference score means the terrorist group is higher on the variable; a negative difference score means the terrorist group is lower.

* $p < .05$. ** $p < .01$. *** $p < .001$.

^aAll value and motive variables are measured based on presence per 1000 words.

^bIntegrative complexity is measured on a 7-point scale, 1 indicating a low level of integrative complexity and 7 indicating a high level.

There were fewer consistent differences in the value references that terrorist and comparison groups in the two different contexts used to describe their enemies. The one exception was that relative to their comparison groups, both terrorist groups used more negative religion value references in describing their enemies, meaning that they more often referred to their enemies as betraying Islam and/or being infidels, sinners, etc.

The only other significant differences between terrorist and comparison groups in the value references used to describe enemies emerged in the Saudi Arabian context. For example, al Qaeda in the Arabian Peninsula described its enemies using more negative autonomy value references, i.e., as not desiring independence and willfully submitting to outside forces. Take, for example, the following discussion of the Saudi government (negative autonomy value references are indicated in italics): “The clashes between the regime and the mujahidin were carried out in the context of Al Sallul’s [Saudi rulers] *clientship* and *puppetry* and their willingness to use their soldiers and resources as a shield to protect the troops of the cross.” (“Saudi Terror Suspect Al-Muqrin Praises Bin Ladin’s Latest Message,” 2004). At the same time in a somewhat surprising finding, MIRA, the nonterrorist comparison group, used more dominance value references and more negative morality value references when describing its enemies than did al Qaeda in the Arabian Peninsula.

Motive imagery

Relative to their respective comparison groups, both terrorist groups expressed higher levels of both power motive imagery and ingroup affiliation motive imagery. Examples of these types of imagery can be found in the following quotation from Bin Ladin in the interview quoted above. The phrases that contain motive imagery are in italics and the type of motive imagery is indicated in brackets:

Our duty—and we carried it out—is to *rouse the nation for jihad* [power] against the United States, Israel, and their supporters for the sake of God. We continue to move in the direction of *instigating people* [power]. The popular movement of the past few months gives hope. It is a step in the right direction to *force the Americans out of the Islamic countries* [power]. Due to the circumstances surrounding us and due to our inability to move outside Afghanistan to closely pursue this, we did only what we could. By the grace of God, *we, together with a large number of our brothers* [ingroup affiliation], *formed the world front for jihad against Jews and crusaders* [power]. We believe matters are proceeding well with many of them (brothers). They are largely active. We hope God will help them uphold religion and *take revenge against the Jews and Americans* [power]. (Al-Jazirah TV Broadcasts, Usama Bin Ladin’s 1998 Interview, 2001)

At the same time, there were no differences in the levels of outgroup affiliation motive imagery expressed by the terrorist and comparison groups, perhaps because all groups in the study expressed very little affiliation—on average, less than 6% of the affiliation images they expressed—towards those whom they did not view as participants in their causes. In addition, both terrorist groups expressed significantly higher levels of achievement motive imagery than did their comparison groups.

Integrative complexity

Finally, both terrorist groups were lower than their respective comparison group in integrative complexity. Below is a quotation typical of moderate complexity scores (this paragraph comes from the control group MIRA):

We hope God will reward you [independent scholars] for keeping away from the regime's crimes. But this is not enough. You have a great responsibility to lead the society to the shore of safety and to protect it from the anarchy to which the regime is pushing us. We do not say that you must ascend the pulpits and defy the rulers. We say that you must start from now to coordinate with the other forces of the society, get rid of fear and hesitation, and reduce [as published] your idealism. You must consider misfortune a case of necessity that we accept from other forces but one that we do not accept when there is stability and peace. This group has a greater responsibility because the people believe them and are ready to respect and obey them more than other groups. Do not despise your role and play it well. (MIRA Bulletin Predicts Anarchy to Prevail in Saudi Arabia When King Fahd Dies, 2002)

This paragraph was assigned a score of 3 for integrative complexity because, despite the overall negative tone, there are multiple differentiations (keeping away from the regime's crimes versus leading society to the shore of safety, ascending to pulpits versus defying rulers, multiple forces within society, etc.).

Contrast this with a paragraph from al Qa'ida in the Arabian Peninsula, their terrorist counterpart: "Oh Allah, revealer of the book, mover of the cloud, crusher of the parties, crush America and its allies, crush and quake them and grant us victory over them, O All-Powerful, O Noble" (Al-Qa'ida Claims Attack on Oil Installation in Eastern Saudi Arabia, 2006). This paragraph was scored as 1 on integrative complexity. Here, we see a similarly negative attitude to aggressors as in the previous paragraph; however, this aggressive attitude is never qualified in any way, nor is it elaborated on in a complex way.

Of course, both terrorist and nonterrorist groups had both simple and complex statements; we use the above dichotomy to illustrate the typical sort of statements for each group. The larger picture indicates, however, that terrorist groups were more likely, on average, to use simpler rhetoric than nonterrorist groups, that this finding was not likely due to chance, and that it held in both geographical contexts.

Discussion

Taken together, these results indicated that there were many significant differences between terrorist and comparison groups in terms of the value references, motive imagery, and integrative complexity they expressed in their rhetoric, and that these findings were generally—although not always—consistent across the two contexts examined.

There was strong evidence that both terrorist groups described themselves using more morality, religion, and aggression value references than did their respective comparison group. (The terrorist group in the Saudi Arabian context also used more group dominance value references.) These findings are generally consistent with previous research (Smith, 2004) that found that terrorist groups described themselves using more morality, culture, and dominance value references than did their nonterrorist counterparts.⁷

In terms of the value references these groups used to describe their enemies, there was only one consistent finding across the two contexts: both terrorist groups described their enemies using more negative religion value references than did their comparison groups. Taken with the findings regarding group religion value references, this seems to highlight the relative importance of the role that religious faith plays in the terrorist groups' evaluations of both themselves and others.

All other value differences between terrorist and comparison groups emerged only in the Saudi Arabian context. On the one hand, the terrorist group described its enemy using more negative autonomy value references. On the other hand, the comparison group described the enemy using more negative morality value references and more dominance value references. The latter finding is particularly interesting given previous research

(Smith, 2004) that found that, for the most part, there were few differences in the value references that terrorist and comparison groups used to describe their enemies, with both types of groups tending to use similarly negative value references. In contrast, the current study demonstrates that in some cases, comparison groups may describe their enemies using even more negative values references than do terrorist groups, highlighting the possibility that comparison groups are expressing through words what terrorist groups are expressing through violence.

The results related to the motive imagery variables were extremely consistent across contexts, with both terrorist groups expressing higher power, ingroup affiliation, and achievement motive imagery than did their comparison groups. Again, these findings support earlier research that found that using high levels of power motive imagery (i.e., expressing the need for impact) and ingroup affiliation motive imagery (i.e., expressing the need for connection with members of one's own group) was related to terrorist aggression (Smith, 2008).

The finding that both terrorist groups expressed significantly more achievement motive imagery than their comparison group was both an unexpected and intriguing one. Specifically, taken together with earlier studies that found that students who used higher levels of achievement motive imagery were more supportive of radical political protest (Winter & Wieking, 1971) and that leaders who came to power through a coup were higher in achievement motive than leaders who did not (Winter, 2002), this result suggests that the possible connection between high achievement motivation and engaging in political violence deserves further investigation.

Finally, consistent with expectations, in both contexts terrorist groups showed significantly lower integrative complexity than their nonterrorist counterparts. This could be for any one, or a combination, of the following conceptually separate reasons. Firstly, terrorist groups may intentionally use simpler rhetoric to accomplish a strategic goal. This "strategic" or "impression management" view (e.g., Tetlock, 1985) implies that, although terrorists are not, of course, coding themselves for integrative complexity, they may be intentionally manipulating their rhetoric (for a specific communication goal) in such a way that necessarily decreases its complexity. For example, terrorists may be especially inclined to "keep it simple" in order to convey to the world the extreme nature of their mission, or may want to project an image of uncompromising dedication to the rightness of their cause (and the wrongness of all opposition). This explanation implies that the complexity score does not reflect the actual level of cognitive complexity, an assumption that is not highly tenable (see below).

Secondly, terrorist groups may attract and promote individuals who function at a low level of stable, trait (conceptual) complexity and are averse to nuanced, balanced, or two-sided information processing. Nonterrorist group members who support the same ultimate goals may be more able or willing to tolerate uncertainty and delay, to accommodate the opinions of other segments of society, and to compromise on noncrucial portions of their program. This hypothesis can be tested by assessing the complexity levels of terrorist and nonterrorist members prior to their joining the group, and in communications unrelated to their ideology and cause.

Thirdly, terrorist groups may be lower in complexity than their nonterrorist counterparts because of cognitive factors not directly related to their rhetoric (but which nonetheless are reflected in that rhetoric). For example, it may be that the lifestyle of terrorist group leaders and members is inherently more stressful than those lived by their nonterrorist counterparts. Planning, and subsequently engaging in, illegal violent actions and the subsequent maneuvers needed to avoid capture may lead to higher levels of

cognitive and emotional stress than simply talking about societal change. As the cognitive manager model (Suedfeld, 1992) suggests, this long-term physical, emotional, and cognitive strain may reach the level at which the capacity to think complexly is impaired (“disruptive stress”).

Fourthly, another explanation pertains to the cognitive extremity of terrorist views. Terrorist groups may be more likely than comparison groups to encourage psychological extremism, which can reduce complexity. Tetlock’s value conflict hypothesis (e.g., Tetlock et al., 1994) posits that complexity is raised when the individual perceives that two important values are in conflict and cannot both be satisfied; it may be that the extremist ideology of terrorist groups is so clearly univalent that no such conflict arises in their minds.⁸

Whether due to predisposing personality factors, psychological stress, or a single overriding value (or some other cognitive factor, or more than one of these), the present results most likely reflect a genuine reduction in the complexity of thinking of terrorist groups rather than an intentional rhetorical tactic. In the existing literature on the topic, the evidence is quite consistent that integrative complexity is a marker of genuine cognitive structural characteristics (Conway et al., 2003, 2003; Suedfeld & Bluck, 1988; Tetlock & Tyler, 1996; Thoemmes & Conway, 2007; see Conway et al., 2001, for a review).

Although there were many similarities in the findings across contexts, there were four instances in which the relationship between engaging in terrorism and the variables coded varied depending on whether one examined Central al Qa’ida and Hizb ut-Tahrir on the one hand or Al Qa’ida in the Arabian Peninsula and MIRA on the other hand. It is interesting to note that all four of these cases related to value references, and three of the four related to the value references used to describe enemies. These findings suggest that if the goal is to distinguish terrorist groups from their radical but nonterrorist counterparts across different contexts, one should pay more attention to the value references they use to describe themselves and their levels of motive imagery and integrative complexity and less attention to the value references they use to describe their enemies.

Limitations and concluding thoughts

Like all approaches to complex problems, this one has its limitations. For example, although this study has highlighted many of the ways in which terrorist groups and their radical comparison groups systematically differ from each other in value references, motive imagery, and integrative complexity, it is not the case—nor will it likely ever be—that all of these differences manifest in every comparison between a terrorist and a nonterrorist radical group. In other words, research on one group may not necessarily generalize to another, requiring that researchers and analysts take a more idiographic approach, conducting in-depth analyses of the groups they are following. Further, the fact that the two terrorist groups included in this study are affiliated suggests that the generalizability of these findings to other groups requires additional investigation.

It is also important to emphasize that we do not imply that the levels of value references, motive imagery, and integrative complexity are principal *causes* of terrorist activity. There are many contextual, ideological, logistical, and psychological factors that facilitate group violence and, without considering all of these factors, it is impossible to determine why particular individuals and groups decide to engage in violence.

However, taking this study together with earlier studies that compared 13 terrorist groups with matched control groups (Smith, 2004; 2008), some consistent differences between the language of terrorist and nonterrorist radical groups seem to be emerging.

Firstly, compared with radical groups that do not engage in violence, terrorist groups tend to describe themselves using more morality, religion/culture, and aggression/dominance values. Secondly, although conventional wisdom might suggest that there are even more differences in the values terrorist and nonterrorist radical groups use to describe their enemies—with terrorist groups describing their enemies in a more negative light—this is largely not the case. Thirdly, the motive imagery expressed by terrorist and nonterrorist radical groups shows consistent differences, with terrorist groups expressing more power motive imagery and more ingroup affiliation motive imagery. Finally, from the results of this study and the nature of the construct, we would expect terrorist groups to exhibit consistently lower levels of integrative complexity.

In addition, although it was not possible in this study to examine whether the above differences existed in the language of terrorist and nonterrorist radical groups before the terrorist groups engaged in violence, in the previous studies (Smith, 2004; 2008), there were an adequate number of pre-terrorism documents to allow for this comparison. The results showed that generally these differences in value references and motive imagery were present before terrorist violence occurred in a context, suggesting that they might serve as indicators that particular groups are more likely to engage in violence than others. Given the lack of pre-terrorism documents issued by the terrorist groups in the current study, we can only hypothesize that we would obtain similar results.

The goal of this study was to provide a further examination of whether quantitative content analysis can be used to distinguish terrorist groups from radical groups that do not engage in terrorism. Our results indicate that characteristics of language used in group documents *can* in fact enable analysts to make such a distinction. Our hope is that the results of this study make clear the importance of collecting open-source materials and using the methods of social science to analyze them. In their statements, terrorist groups are telling us more than just what they want us to hear.

Acknowledgements

The authors would like to thank the following people, all of whom made substantial contributions to this research: Angeles Barrera, Terah J. Blake, Kathrene R. Conway, Ryan Cross, Daniel P. Dodds, Mahmoud A. Elgibali, Laura P. Fox, Caitlin M. Hopping, Stacey K. McClure, Edward R. Rothman, Erin Soriano, Brooke E. Sweet, Kirsten L. Towgood, Susan R. Viscuso, and Michelle Warr. Funding for this project was provided to the first author by the intelligence community and is gratefully acknowledged.

Notes

1. In this study, we will refer to the core al Qa'ida organization created by Usama Bin Ladin and Ayman al-Zawahiri as "Central al Qa'ida" to distinguish it from its local affiliate, al Qa'ida in the Arabian Peninsula.
2. We conducted one-way ANOVAs with document type as a within-group variable to explore whether there were differences in the levels of value references, motive imagery, and integrative complexity expressed by each group based on document type. There were no significant differences on any of the variables reported in this paper.
3. In addition to the OSC translations, one alternate translation was included for each of nine of the documents. These translations came from various sources, including but not limited to al-Jazirah, the Associated Press, and websites such as Jihad Unspun and Global Terror Alert. These were included in order to examine in a preliminary manner whether translation source was related to the levels of value references and motive imagery coded in a document. There were no significant differences between the OSC translations and the alternate translations on any of the value references or motive imagery variables included in this study. Similar analyses were not conducted on the integrative complexity variable due to sampling issues.

4. To give an example of how coding value references differs from coding motive imagery, consider the following statement: “We will persuade the world that dominating others is wrong.” In terms of value references, this sentence conveys that the group in question does *not* value dominance, and a negative dominance value would be scored. In terms of motive imagery, this sentence would be scored for power motive imagery, as it involves an attempt to persuade or convince others—in other words, a concern with impact. In the current study, neither the terrorist nor the radical comparison groups’ explicit endorsement of group dominance values was significantly correlated with these groups’ use of power motive imagery (terrorist groups: $r = .16$, $p = ns$; comparison groups: $r = .06$, $p = ns$).
5. When the document did not include five paragraphs, all of its scorable paragraphs were scored.
6. Because, there were significant differences in the mean levels of several variables based on whether a group was operating in the transnational context (Central al Qa’ida and Hizb ut-Tahrir) or the Saudi Arabian context (al Qa’ida the Arabian Peninsula and MIRA), all *t*-tests were made within context, as opposed to across contexts.
7. In that earlier study, there was not a separate category for aggression values, but rather they were considered a subcategory of dominance values. Further, because not all of the groups were religious in nature, the more general category of “culture” values was coded.
8. Interestingly, some supplementary analyses suggest an account based on factors *other than* psychological extremism. Although not a central part of this paper, we also scored all documents on two subcomponents of integrative complexity: elaborative complexity (a complex elaboration of a single point of view) versus dialectical complexity (a complex recognition that multiple larger views can have legitimacy). Previous work shows that extremists are higher on the first form of complexity (as they elaborate on their preferred view) but lower on the second (as they refuse to acknowledge the legitimacy of competing views; see Conway et al., in press). In our data, while terrorists were lower in complexity for both subtypes, they were—in contradiction to an interpretation based on extremism—especially low (relative to control groups) on the elaborative form of complex thinking. Thus, these supplementary analyses suggest an account of our present findings based on cognitive factors besides psychological extremism.

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