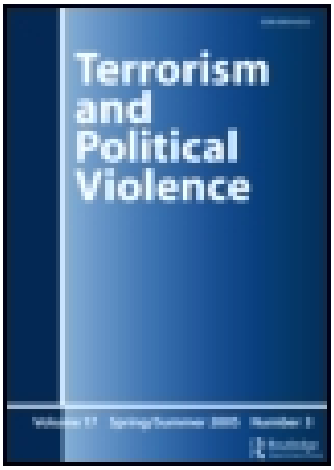

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Looking for Waves of Terrorism

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Looking for Waves of Terrorism[1]

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This article uses ITERATE data on international terrorism 1968–2004 to test Rapoport's wave-like behavior of modern terrorism. While the interpretation encompasses a much longer period of time than can be tested empirically with readily available data, it is possible to examine the past 3–4 decades of terrorist activity for traces of the coming and going of old and new groups. The article codes the type of group (anarchists, nationalists, leftists/Marxists, and religious fundamentalists) and then examines the type of tactics employed, deaths, and targets across time. The results confirm the presence of heterogeneous, wave-like behavior that conforms to the Rapoport interpretation as new and old groups/tactics/issues cycle in and out of activity.

Keywords ITERATE, terrorism, waves

Much is said about old and new terrorism.[2] If one talked or taught about the subject even a decade ago, the stress was usually placed on how it was rational for terrorists to avoid killing too many people if the goal was to increase support for their political agenda. That particular generalization no longer seems very accurate. Public beheadings and events with thousands of casualties are not intended to impress observers with the righteousness of their cause. Yet at no point in time is terrorism activity entirely homogeneous. That is, jihadists are not the only groups who employ terrorist tactics. They compete for attention with Tamil separatists, old Marxists engaging in kidnapping for profit, and even the stray anachronistic anarchist. In any given decade, the nature of terrorist activity is less than monolithic. Since old and new forms of terrorism tend to occur at the same time, it is difficult to make generalizations that assume behavioral homogeneity.

Therefore, should we make a distinction between old and new terrorism? We argue in the affirmative. We begin with the assumption that terrorism is a tactic or family of tactics adopted by political groups engaged in asymmetrical struggles with more powerful groups—a point well developed in Table 1 which compares

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Table 1. Conventional war, guerrilla war, and terrorism

	Conventional war	Guerrilla war	Terrorism
Unit size in battle	Large (armies, corps, divisions)	Medium (platoons, companies, battalions)	Small (usually fewer than 10 people)
Weapons	Full range of military hardware (air force, armor, artillery)	Mostly infantry-type light weapons but sometimes artillery)	Hand guns, grenades, assault rifles and specialized bombs
Tactics	Usually joint operations involving several military branches	Commando type	Kidnapping, assassinations, car bombing, hijacking etc.
Targets	Mostly military units, industrial and transportation infrastructure	Mostly military, police, and administration staff, as well as political opponents	State symbols, political opponents, and the public at large
Intended impact	Physical destruction	Mainly physical attrition of the enemy	Psychological coercion
Control of territory	Yes	Yes	No
Uniform	Yes	Often	No
Recognition of war zones	Limited to recognized geographical area	Limited to the country in strife	No, operations carried out world wide
International legality	If conducted by rules	If conducted by rules	No
Domestic legality	Yes	No	No

Source: Adapted from Ariel Merari, "Terrorism as a Strategy of Insurgency," in Gerard Chaliand and Arnaud Blin (eds.), The History of Terrorism: From Antiquity to Al Qaeda, translated by Edward Schneider, Kathryn Pulver, and Jesse Browner (Berkeley: University of California Press, 2007), 26.

war, insurgency, and terrorism. The greater the symmetry between two opposing groups in conflict, the greater is the tendency for groups to pursue the war end of the continuum. The less the symmetry, the greater is the penchant of at least one group to favor the terrorism end. However, these generalizations do not imply that all groups engaging in terrorism will utilize precisely the same tactics, fight in the same locales, or demand the same things. We maintain that there is variation in the groups which utilize terrorist tactics from decade to decade as old groups win,

are eradicated, or suffer exhaustion. As old groups disappear, new groups are apt to emerge, but not necessarily in the same places and for the same reasons.

A metaphor for dealing with heterogeneity in terrorism groups and tactics is the wave. A wave is a build-up of surface water caused primarily by wind. Below the wave is a mass of water of varying temperature and visibility. The waves that we see may look different than the body of water immediately below. For terrorism groups, waves mean that certain groups stand out as particularly salient in some respect, and that what is salient in one wave is not likely to be equally salient in preceding and following waves. As it happens, though, scholars tend to disagree about how many waves there have been and how best to identify the ones that have been seen.[3] Since it is not possible to sort out all of the disagreements about terrorism waves in one article, we focus here on the first wave interpretation to appear in print.[4] After reviewing its key arguments, we conduct a limited test to see if terrorism manifests a wave-like behavior in terms of which groups dominate terrorist activity, whether different groups favor dissimilar tactics, and what sort of damage different groups achieve. Our findings, limited to the 1968–2004 period, provide empirical support for the Rapoport model that depicts succeeding waves of anarchism, nationalism, leftist/Marxism, and religious fundamentalism. Waves do indeed appear to characterize contemporary terrorist activity.

Rapoport's Model

Rapoport's argument is particularly distinctive because of its emphasis on generational waves of terrorism. Specifically, Rapoport observes four waves since the late 1870s—each one lasting approximately 40 years. The first wave began in Russia and was largely the result of slow democratization processes. Russian anarchists conceptualized the idea and tactics for a strategy of overthrowing political systems by conducting serial attacks on public conventions. The predominant strategy in this first wave centered on the assassination of authority figures, which anarchists sometimes financed through bank robberies. Changes in the world economy's communication and transportation technology especially aided the emergence of this strategy in the last quarter of the nineteenth century. For instance, information on the terrorist attacks could be circulated relatively quickly just as anarchists could travel widely to carry out attacks and to encourage others to do the same. These technological changes also facilitated large-scale emigration from various parts of Europe to more democratic political systems, thereby creating sympathetic audiences abroad (see Table 2).

World War I, precipitated in part by the assassination of Archduke Ferdinand of Austria-Hungary, encouraged reforms and revolution which depressed the incentives for anarchic terrorism. Meanwhile, the post-war treaties also helped to delegitimize colonies and empires by breaking up the imperial and colonial structures of the losers and establishing supposedly temporary mandate arrangements. The winners, on the other hand, were able to hold on to their empires, but they were not able to eradicate the notion of national self-determination. Hence, the second wave of terrorism focused on dissident efforts to secure European withdrawal from overseas territories, particularly in areas where some elements of the local public preferred their colonial status quo in comparison to what independence might bring (e.g., Ireland, Palestine, Algeria). Although World War II extended this second wave of terrorism, it decreased the ability of the European states to hang

Table 2. Rapoport's four waves of terrorism

Focus	Primary strategy	Target identity	Precipitant	Special characteristics
Anarchists 1870–1910s	Elite assassinations Bank robberies	Primarily European states	Failure/ slowness of political reform	Developed basic terrorism strategies and rationales
Nationalist 1920s–1960s	Guerrilla attacks on police and military	European empires	Post-1919 delegitimization of empire	Increased international support (UN and diasporas)
New Left/ Marxist 1960s–1980s	Hijackings, kidnappings, assassination	Governments in general; increasing focus on U.S.	Viet Cong successes	Increased international training/ cooperation/ sponsorship
Religious 1970s–2020s	Suicide bombings	U.S., Israel, and secular regimes with Muslim populations	Iranian Revolution, Soviet invasion of Afghanistan	Casualty escalation, Decline in the number of terrorist groups

Source: Based on the discussion in David C. Rapoport, "The Four Waves of Modern Terrorism," in Audrey K. Cronin and James M. Ludes, eds., *Attacking Terrorism: Elements of a Grand Strategy* (Washington, D.C.: Georgetown University Press, 2004).

on to their empires and hastened the disintegration of the remaining European empires. Consequently, this second wave of terrorism produced by nationalists and anti-colonial groups tapered off.

A third wave of terrorism which predominated in the last third of the twentieth century centered on Marxist revolution. It was also reinforced by the Viet Cong's abilities to withstand the military might of the United States in Vietnam. Tactics such as assassinations came back into favor, along with hijackings of airplanes and public offices, as well as increasingly lucrative kidnappings of individuals whose release required concessions and/or ransoms. Within the Cold War context, training and support for terrorists became increasingly internationalized, as did the targets of terrorist attacks. The end of the Cold War and the international community's sustained resistance to these terrorist demands eventually led to the phasing out of this wave by the 1980s.

A fourth wave coincided with the confluence of two major events in southwest Asia. The first event occurred with the overthrow of the Shah in Iran, bringing to power Islamic clerics who sought to "export the revolution." In the same year, the Soviet Union invaded Afghanistan in an attempt to save a client regime against an internal revolt, mobilizing Muslims to wage a holy war against the infidels. The fourth wave of terrorism quickly assumed a strongly religious orientation, initially centered on Islam. Eventually, terrorism spread to include actions from radical wings of other religions in reaction to militant Islam. In the process, a new tactic,

suicide bombings, emerged, as did a strong emphasis on attacking U.S. targets in order to encourage American withdrawal from the Middle East.

The general pattern thus is not one of random and unstructured violence. Each wave has a life cycle with initial expansion and contraction phases which are influenced by the number of terrorist organizations in operation and the intensity of their attacks. Terrorist organizations that survive the contractionary phase of the wave in which they originated, adapt by taking on the operational characteristics and tactics that appear in the next wave of terrorism. The duration of each wave depends on a myriad of explanations: the presence or lack of successes attributable to terrorism, the resilience of terrorist organizations, and the effectiveness of states' responses to terrorist claims and tactics. Duration also may be contingent on generational differences associated with terrorists' aspirations and calculations about what works and what does not seem to be efficacious. Or, it may be that new generations simply find it easier to break with older strategies that have lost their allure. The central motivation for terrorism in each wave is distinctive as are the tactics that are most likely to be employed. The violence is carried out by non-state organizations and is directed at states and their populations deemed to be antagonistic to the aims of revolutionary organizations. Terrorists, including some of their targets, are apt to view their conflict as warfare, albeit an unconventional form of warfare. Yet, the one recurring pattern in terrorism waves is their limited duration. Each wave is likely to play itself out and to be replaced by a new wave of terrorism that is centered on a motivation that is as difficult to predict as the timing of the next upsurge.

Analytical Questions

Our immediate question focuses on whether terrorism reflects wave-like qualities. In other words, can we discern waves of terrorism in the data on terrorist activity? Unfortunately, we lack long-time series on terrorism at the present. What we have are compendiums of "illustrative" events which cover various periods of time in addition to systematic data bases which usually span shorter periods of time. The main problem with "illustrative" events lists is that the principles used to include or exclude terrorist events are unclear. However, the central problem with data-based lists is the brevity of the time series. For instance, a series that encompasses 37 years is not all that appropriate for an empirical question that deals with 137 years of terrorism activity. Since there are no "illustrative" lists covering events over 100 years, we focus our inquiry initially on the contemporary period. At the same time, we acknowledge that our efforts to discern wave-like patterns in terrorism is not the first attempt to do so. Although not directly focused on waves per se, Pedahzur, Eubank, and Weinberg examined the nature of terrorist group formation in the twentieth century.[5] They concluded that the number of groups peaked in the 1970s and 1980s, reflecting at that time a mixture of nationalist, left- and right-wing, and religious groups. But during the 1990s, new group formation was largely dominated by religious groups.

Enders and Sandler examined time series of terrorist activity and found break points in the mid-1970s, early 1990s, and 2001 that they attribute to various factors.[6] An increase in deaths in 1975 is traced to a rise in the formation of terrorist groups around this time. The early 1990s increase in deaths is said to be due to the decline in left-wing groups and to decreases in state sponsorship. After 9/11, Enders and Sandler find that bombings increased and hostage-taking decreased. They hypothesize

that groups became more interested in the amount of carnage that could be inflicted. While certainly suggestive, these explanations of breakpoints appear largely ad hoc.[7]

In another evocative study, Thompson, who examined a list of terrorism events for the last 50 years of the twentieth century, found that nationalist events had declined from a high of 60 percent to less than a quarter (23%) of the total terrorism underway.[8] Ideological terrorism (both left and right) had peaked in the 1960s at around 53% and declined to 27%. Religious activity had been nonexistent in the 1960s but had risen to 50% of the total by the 1990s. However, this analysis is based on an "illustrative list" and we cannot be sure that its numbers are particularly accurate.

One of the longer and more respected data bases is International Terrorism: Attributes of Terrorist Events (ITERATE).[9] It covers a large number of transnational terrorism events beginning in 1968 with coverage continuing into the present. Our data set continues through 2004, offering some 37 years of contemporary activity. Our specific empirical question, therefore, is whether we find wave-like activity to characterize this time period. Rapoport contends that the waves are distinguished by generational-length periods of ideological predominance. To test this notion, we need data on the identity of the groups engaging in terrorist activity.

Since ITERATE does not provide information on the nature of the groups engaged in terrorism beyond the group's name, if known, our first task is to categorize the 1,483 groups listed in the ITERATE data base.[10] Given the nature of the arguments in the wave literature, we are interested in the main identities of anarchist, nationalist, leftist/Marxist, and religious groups. Since available information on group identities and goals varies a great deal, we proceeded with very simple categorical cues: anarchists are opposed to the existence and regulatory activities of governments, nationalists seek political independence for some population (either vis-à-vis a colonial power or on behalf of some component of the population seeking separatism), leftist/Marxists advocate an array of agendas encompassing social liberalism, socialism, and the more doctrinaire views of Marx or Mao, and religious groups espouse a specific sect or fundamentalist interpretation of non-secular beliefs that has implications for political order. There are obvious grey areas of overlap in these simple categorizations. Nationalists can be leftists/Marxists and, on occasion, religious fundamentalists as well. To deal with this problem, we proceeded to code the group identities on the following basis: nationalist groups were coded as such if they were primarily secular and relatively neutral on the conventional ideological continuum. Leftists/Marxists and religious fundamentalists are predominately tied overtly to their respective dogmas and are usually identified by other sources in precisely these terms.[11]

Each group on the long list of ITERATE groups was investigated using multiple sources, including looking at several online and hard copy data bases on terrorist activity, "googling" the name of the group, and consulting studies of terrorism.[12] Of the 1,483 total groups, 763 (circa 51%) could be identified as either anarchist (18), nationalist (186), leftist/Marxist (251 almost equally divided into the two sub-types), or religious (216).[13]

While other types of groups could be identified, nearly one-half of the groups were too obscure to find any explicit discussion of their identities or goals.[14] We suspect many of these groups were very small in member numbers and did not engage in repeated activity. Figure 1 suggests, however, that the groups that we can identify are responsible for a respectable portion of the total activity (approximately 44%) and do not appear to be unrepresentative of any particular segment of time.[15] The activity of the identified series is highly correlated with the total activity ($r = 0.938$).[16]

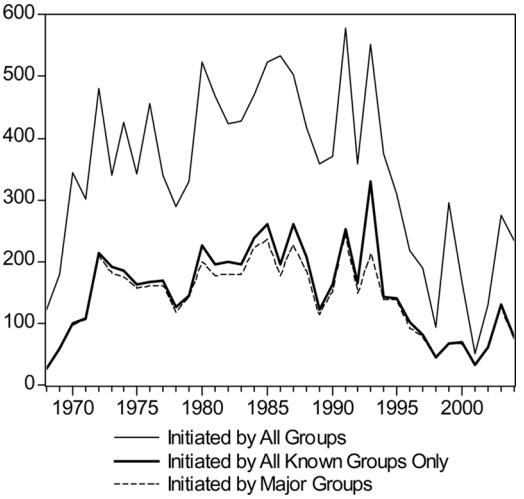

Figure 1. Frequency of transnational terrorism, 1968–2004.

In addition to the four types of groups emphasized by Rapoport, we found groups that could best be categorized as rightist, racist, environmental, tribal, or state agents. For present purposes, we focus exclusively on the activities of the anarchist, nationalist, leftist/Marxist, and religious groupings. Beyond looking at the simple frequency of activity, we also follow Enders and Sandler in grouping the types of incidents into three basic types: BOMBING events include explosive, letter, incendiary, car, and suicide car bombings, missile attacks, and mortar/grenade attacks; HOSTAGE events include kidnappings, skyjackings, nonaerial hijackings, barricade and hostage-taking missions; ASSASSINATIONS encompass politically motivated murders.[17] In addition, we look at the number of deaths, casualties (dead and wounded), and location and targets.

If there are waves of terrorism, we should expect to find the following patterns discernible in the 1968–2004 period:

1. Anarchist terrorism was extremely low in frequency or extinct.
2. Nationalist terrorism would be declining.
3. Leftist/Marxist terrorism should have first increased, peaked, and then declined.
4. Religious terrorism would be increasing.

If waves of terrorism do indeed exist and certain groups favor different tactics, we also expect that the frequency of bombing, hostage-taking, and assassinations will change over time. Since hostage-taking was especially prominent in the New Left/Marxist era and some types of bombing appear to be quite prominent in the most recent era, we anticipate that hostage-takings will decline and bombings will increase. We have no basic expectation about assassinations—a type of tactic historically linked to anarchists but certainly not restricted to the late nineteenth century.

5. The use of bombing will be increasing over time.
6. The use of hostage-taking will be decreasing over time.

One of the central arguments in the debate about old and new terrorism is that "old" terrorists sought to minimize deaths in order to avoid alienating audiences

from whom they were seeking support for their political cause. "New" terrorists, in contrast, are less concerned with eliciting support from external audiences and more concerned with maximizing casualties.

7. Deaths and casualties from terrorist activity will be increasing over time.

Finally, if we find evidence of terrorist waves, we anticipate that leftist/Marxists will have increasingly focused their actions against the United States as the most affluent leader of the capitalist world. Religious groups, especially fundamentalist Islamic groups, will gradually, but not immediately, increase their focus on targeting the U.S. as an adversary. This gradual development of an anti-U.S. focus is the result of two significant events: the U.S. support for the Afghani mujahadeen against the Soviet Union and the Iranian Revolution.

8. Leftist/Marxist and religious terrorist groups will increasingly focus their terrorism against the United States during their respective "heydays" or waves.

Analysis

Is there evidence in the frequency of group activity that follows a wave-like pattern? Table 3 and Figure 2 address this first question. Clearly, anarchist terrorism is a very minor concern and becoming increasingly rare. Nationalist terrorism, the most predominant type of activity, is also fairly clearly on the wane. The data show that nationalist terrorism declined by more than half of the activity reported in the first half of our time period. The average amount of leftist/Marxist terrorism shows a more modest decline, but Figure 2 reveals that this pattern is misleading. Figure 2 shows that this type of terrorism increased from the 1960s through the early 1990s. Since then, leftist/Marxist activity has declined dramatically to the low levels of the 1960s. Figure 2, in fact, suggests something close to a full life cycle for this particular variety of terrorism, starting at a very low level, peaking, and then practically dying out. Religious groups, in marked contrast, began slowly in the 1970s and continued to ascend throughout the 1968–2004 time period.

Overall, then, we have minor anarchist activity, decaying nationalist behavior, ascending and then rapidly declining leftist/Marxist activity, and ascending religious terrorism. We see these patterns as strongly supporting Rapoport's wave hypothesis. The one caveat is that leftists/Marxists did not dominate the 1960s–1990s wave. Nationalist activity continued through this period as the leading type. But, it is also clear that secular nationalism frequencies were on the downswing at least from the mid-1970s while leftist/Marxist activity was very much on the upswing. Since no

Table 3. Means of group activity frequency, 1968–2004

	1968–2004	1968–1986	1987–2004
Anarchist	1.0	1.5	0.4
Nationalist	49.1	65.2	32.0
Leftist/Marxist	40.3	40.8	33.8
Religious	19.2	14.9	23.8

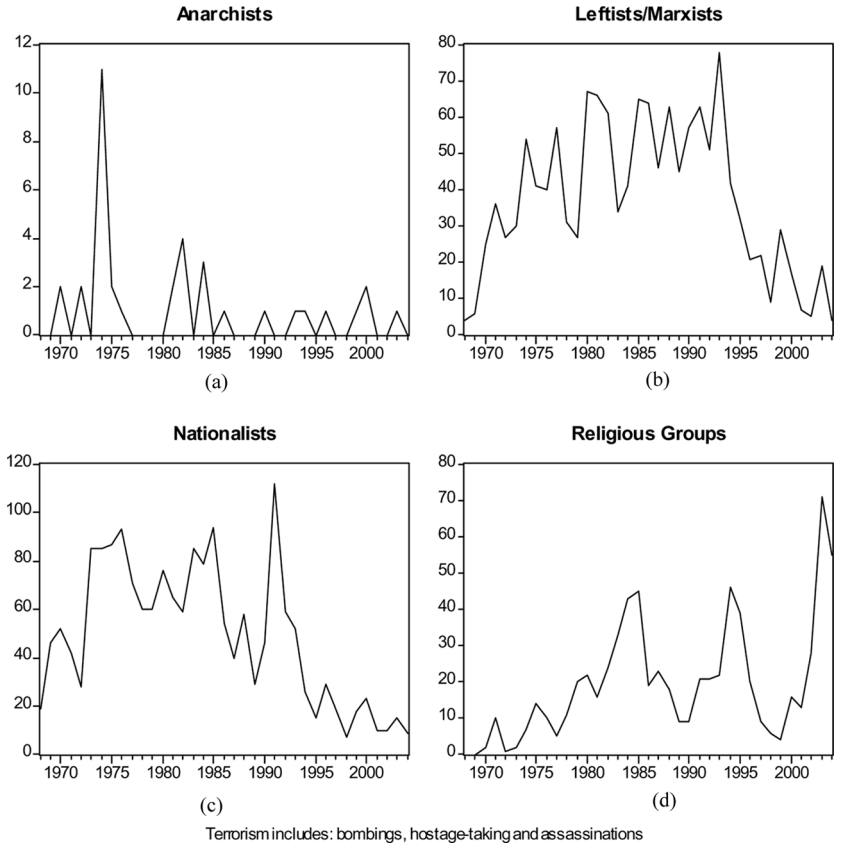

Figure 2. Frequency of transnational terrorism by major groups, 1968–2004.

Table 4. Means of group tactics, 1968–2004

	1968–2004	1968–1986	1987–2004
Hostage-takings			
Anarchists	.5	.1	0.0
Nationalists	8.4	11.1	5.7
Leftists/Marxists	10.5	10.9	10.0
Religious	6.0	5.6	6.5
Bombings			
Anarchists	.9	1.4	0.4
Nationalists	36.1	47.3	24.3
Leftists/Marxists	24.0	26.5	21.3
Religious	10.8	7.5	14.3
Assassinations			
Anarchists	0.0	0.0	0.0
Nationalists	4.6	6.9	2.1
Leftists/Marxists	3.1	3.4	2.7
Religious	2.4	1.8	3.1

Table 5. Deaths and casualties from transnational terrorism

	1968–2004	1968–1986	1987–2004
Deaths			
Anarchists	0.2	0.2	0.3
Nationalists	106.1	113.4	98.4
Leftists/Marxists	37.7	44.4	30.6
Religious	88.9	36.6	144.1
Casualties			
Anarchists	1.5	2.2	0.7
Nationalists	340.4	390.0	288.0
Leftists/Marxists	87.4	98.9	74.7
Religious	280.5	87.8	484.0

one really contends that each wave exhibits only one type of group behavior, we view this finding as only a minor caveat on the wave argument.

Our second question concerns the tactics employed by the four types of groups. Table 4 reveals that anarchists are no longer associated with assassinations or much else for that matter. Secular nationalists, however, were the leading source of bombings in the 1968–1986 period—a finding that we did not anticipate. On average, religious groups have yet to reach the record of nationalists or leftists/Marxists on transnational bombings. Yet, nationalist and leftist/Marxist bombings have been declining while religious bombing is still increasing.

A similar pattern emerges for hostage-takings and assassinations. Secular nationalist and leftist/Marxist groups have been the primary, albeit declining, sources of these tactics. Leftists/Marxists have been slightly more responsible for hostage-takings than nationalists. One important difference is that religious groups have seized the lead in assassinations in the 1987–2004 period and bypassed the nationalists in hostage-taking.

Classifying the tactics into three main categories reveals that while one type of group may have lead for a while in utilizing one class of tactics or another, the distinctions between types of groups appear to be small. However, we realize that this finding may be an artifact of the aggregation procedure. We do not mean to suggest that all groups have been equally likely to employ suicide bombers, skyjackings, or

Table 6. Mean targets of transnational terrorism

	U.S.	Israel	Europe	Middle east	Asia	Africa
Anarchists 1968–1986	.37	0.0	1.2	.05	.11	0.0
Anarchists 1987–2004	.28	0.0	.17	.06	.06	0.0
Nationalists 1968–1986	15.2	14.8	36.9	26.3	1.3	1.9
Nationalists 1987–2004	5.2	1.7	26.8	5.2	2.5	1.4
Leftists/Marxists 1968–1986	19.8	1.2	10.6	2.6	1.8	.89
Leftists/Marxists 1987–2004	14.7	.28	6.8	6.9	4.3	.11
Religious 1968–1986	3.3	1.3	7.3	6.2	1.6	.79
Religious 1987–2004	9.9	2.6	10.2	8.1	3.8	1.1

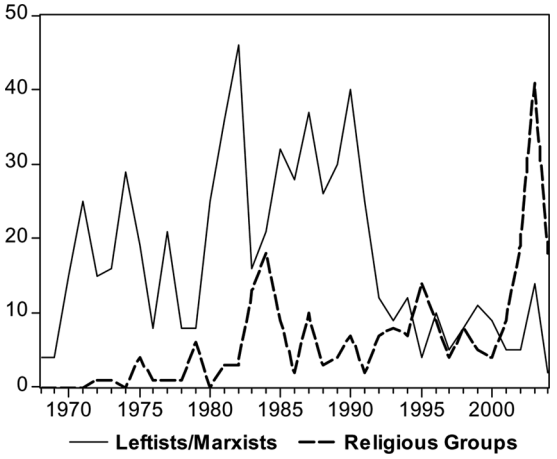

Figure 3. Frequency of U.S. targets by Leftists/Marxists and religious groups, 1968–2004.

beheadings. We believe that each wave can still have idiosyncratic tactical features, but in general all terrorist groups tend to engage in hostage-takings, bombings, and assassinations due to the asymmetrical military context within which they operate.

Which group(s) kill and wound more people? On this issue, we have strong confirmation of the notion that religious groups are more deadly, even controlling for the 9/11 deaths (see Table 5). In the 1968–1986 period, nationalists led the outcome category, killing 113 people per year on average. Leftists/Marxists killed less than half that number and religious groups only about a third. In the second period (1987–2004), nationalists were still killing nearly 100 people per year, leftist/Marxist bloodshed had decreased, but religious killing nearly quadrupled to 144 deaths per year on average. If we add in wounded victims, the same pattern holds. Thus, religious activity has definitely been raising the body count associated with terrorism while other groups have decreased their level of violence.

We had earlier anticipated that the United States and Israel would increasingly be the targets of terrorism, especially terrorism committed by leftist/Marxist and religious groups. Table 6's results are mixed. Leftist/Marxist attacks in the 1968–1986 period led the four groups' tendency to attack U.S. targets (see Figure 3). The level of anti-U.S. activity declined in the 1987–2004 period but not enough to give up the lead. Religious group targeting of the United States tripled on average over our 37-year period, giving this group second place in the 1987–2004 era.

Israeli targets of transnational terrorism were executed primarily by nationalist groups in 1968–1986, but were most likely to come from religious groups after 1987. On the other hand, European targets remain the leading focus of transnational attacks. Middle Eastern targets ran a close second in the 1968–1986 period but have declined considerably since then. With the exception of anarchists, all of the three other types have increased the frequency of attacks on Asian targets. Transnational African targeting has not been all that prominent.

Conclusion

We advanced eight generalizations related to the notion that terrorism comes in waves in which the predominant groups and tactics change from wave to wave.

After differentiating the ITERATE data on transnational terrorism by groups, we find that seven of the eight generalizations were supported. Anarchism was nearly non-existent. Nationalistic groups had reduced their level of activity substantially. Leftists/Marxists had first increased their activity, peaked, and then declined markedly in the 1990s. Religious terrorism has been increasing throughout much of the last 37 years. We did not find that the frequency of bombings was increasing in the absolute sense.[18] That generalization only applied to religious bombings. The frequency of hostage-takings has declined somewhat. Deaths and casualties have definitely increased, due to the activity of religious groups. Finally, leftist/Marxist and religious groups increasingly focused their violence on the United States as a target, but these tendencies did not eclipse European and, earlier, Middle Eastern targets.

All in all, we find these outcomes highly supportive of the wave approach to conceptualizing the history of terrorism and, in particular, the Rapoport interpretation.[19] The ITERATE data, corrected for group identifications, show nationalist groups surrendering to leftist/Marxist groups that, in turn, have yielded to religious groups. These waves do not eliminate all traces of earlier wave-behavior. On the contrary, traces of earlier waves are apparent—weakly as in the case of anarchism and quite strongly as in the case of nationalism.

Thus, the intermingling of "old" and "new" terrorism is an old pattern—not something completely novel.[20] Terrorist movements work much like sectors of economic growth. At any point in time, there are old sectors dying off, new ones just getting started, and others proceeding more or less in their "normal" growth phase.

At the same time, the decline in leftist/Marxist activity is quite abrupt in the 1990s. One possibility that deserves more examination is whether, for some if not all questions, we can talk of terrorist activity per se or whether we need to qualify our generalizations in terms of the types of groups that are carrying out the terrorist tactics. It is evident that the systematic data that we possess are characterized by a high degree of heterogeneity that may preclude our ability to aggregate all terrorist activity at any point in time, but especially in the last 40 years or so.

Most likely, the advisability of aggregation will hinge on the nature of the question being pursued. If we ask, for instance, whether deaths from terrorism are increasing or decreasing, aggregation is appropriate. Should we ask, however, why terrorist groups appear or disappear, aggregation would not help us answer this question.

Another related implication is that we need to focus more closely on the life cycles of the waves and individual groups. Why do groups, once formed, become defunct or inactive? Some of the answers are obvious in the sense that a number of terrorists end up dead or imprisoned by governments. But that does not necessarily explain why their places fail to be filled by new recruits. There are rhythms that may have to do with generations, government suppression, or changing issue salience underlying the flow of terrorist activity for which we need to develop a better understanding.[21]

While it might be tempting to restrict our foci on contemporary behavior, we should also examine the earlier manifestations—if only to investigate the claims for waves preceding the late nineteenth century. But if terrorism comes in waves, the more waves that we can delineate and validate, the better are the chances of deciphering how terrorism waves work. We also need to find ways to assess possible systemic influences—wars, inspirations, globalization accelerations, and changing technology—on the coming and going of waves. It is not too difficult to present attractive hypotheses. It is another matter entirely to find ways of substantiating them.

Notes

1. An earlier version of this paper was delivered at the Pisa meeting of the European Consortium for Political Research, September, 2007. We thank our discussant there, Ekkart Zimmerman, and our anonymous reviewers for their comments.

2. A representative sampling would include Bruce Hoffman, *Inside Terrorism* (New York: Columbia University Press, 1999); R.A. Hudson, *Who Becomes a Terrorist and Why? The 1999 Government Report on Profiling Terrorists* (Guilford: Lyons Press, 1999); Walter Lacqueur, *The New Terrorism: Fanaticism and the Aims of Mass Destruction* (Oxford: Oxford University Press, 1999); I.O. Lesser, Bruce Hoffman, John Arquilla, D.F. Ronfelt, M. Zanini, and B.M. Jenkins, *Countering the New Terrorism* (Santa Monica, CA: Rand, 1999); Robert J. Lifton, *Destroying the World to Save It: Aum Shirikyo, Apocalyptic Violence and the New Global Terrorism* (New York: Metropolitan Books, 1999); Martha Crenshaw, "Why America? The Globalization of Civil War," *Current History* 100 (December, 2001): 425–432; M.B. Jenkins, "Terrorism and Beyond: A 21st Century Perspective," *Studies in Conflict and Terrorism* 24 (2001): 321–327; Paul Kennedy, "Maintaining American Power," in Strobe Talbott and Nanda Chandra, eds., *The Age of Terror* (New York: Basic Books, 2001); David Benjamin and Steven Simon, *The Age of Sacred Terror* (New York: Random House, 2002); Nadine Gurr and Benjamin Coleman, *The New Face of Terrorism: Threats from Weapons of Mass Destruction* (New York: I.B. Tauris, 2002); Charles W. Kegley, *The New Global Terrorism: Characteristics, Causes, Controls* (Upper Saddle Valley, NJ: Prentice Hall, 2002); Mark Juergensmeyer, *Terror in the Mind of God: The Global Rise of Religious Violence* (Berkeley: University of California Press, 2003); Russell D. Howard and Reid L. Sawyer, *Terrorism and Counterterrorism: Understanding the New Security Environment: Readings and Interpretations* (New York: McGraw-Hill/Dushkin, 2005); Thomas R. Mackaitis, *The "New" Terrorism: Myths and Reality* (New York: Praeger, 2006); and John Robb, *Brave New War: The Next Stage of Terrorism and the End of Globalization* (New York: Wiley, 2007).

3. There are at least four variably different arguments, three of which are keyed on the four-wave interpretation found in David C. Rapoport, "The Four Waves of Modern Terrorism," in Audrey K. Cronin and James M. Ludes, eds., *Attacking Terrorism: Elements of a Grand Strategy* (Washington, DC: Georgetown University Press, 2004), 46-73. William R. Thompson, "Emergent Violence, Global Wars, and Terrorism," in Tessaleno Devezas, ed., *Kondratieff Waves, Warfare and World Security* (Amsterdam: IOS Press, 2006), 186–194 adds two earlier waves, pushing the sequence back to the Napoleonic Wars. Mark Sedgwick, "Inspiration and the Origins of Global Wars of Terrorism," *Studies in Conflict and Terrorism* 30 (2007), 97–112 can be read as endorsing the two earlier waves loosely and inserting one between Rapoport's first and second wave, although his perspective stresses opportunities for on-the-job training of terrorists and major periods of global flux. Albert J. Bergesen and Omar Lizardo, "International Terrorism and the World-System," *Sociological Theory* 22 (2004), 38–52 have a different approach altogether, emphasizing globalization, hegemonic decline, and imperial competition, but two of their waves correspond roughly to two of the waves found in the other three. Their third wave, associated with the period preceding the Thirty Years War, suggests an even earlier manifestation than the ones claimed by Thompson and Sedgwick. That makes 8 possible waves, some interesting empirical problems, including one centered on causality. Who is right? How many waves have there been? How does one evaluate wave claims encompassing some 350 or so years? For that matter, are there really waves of distinct activity-as opposed to short-lived concentrations of kindred activity? Assuming that there are waves, is it possible to differentiate the reasons for wave-like activity? Finally, what difference do waves of terrorism make?

4. Rapoport, "Four Waves" (see note 3 above).

5. Ami Pedahzur, William Eubank, and Leonard Weinberg, "The War on Terrorism and the Decline of Terrorist Group Formation: A Research Note," *Terrorism and Political Violence* 14 (2002): 141–147.

6. Walter Enders and Todd Sandler, "After 9/11: Is it All Different Now?" *Journal of Conflict Resolution* 49 (2005): 259–277.

7. Another study of interest is Chris Quillen's "A Historical Analysis of Mass Casualty Bombers," *Studies in Conflict and Terrorism* 25 (September, 2002), 279–292. Quillen, however,

was reluctant to categorize bomber motivations and, therefore, does not speak directly to the question of varying group activity.

8. Thompson (see note 3 above) made use of the terrorism entries found in Cindy C. Combs and Martin Slann, *Encyclopedia of Terrorism* (New York: Facts on File, 2003).

9. ITERATE focuses on systematizing the who, what, where, and outcome of transnational terrorist events. Each event is specified according to date, location, nature of incident, and number of people killed and wounded. Based largely on Foreign Broadcast Information Service (FBIS) sources as described in Edward F. Mickolus, Todd Sandler, Jean M. Murdoch, and Peter Flemming, *International Terrorism: Attributes of Terrorist Events, 1968–2004* (Dunn Loring, VA: Vinyard Software, 2004), its main drawback is that it excludes events occurring within declared wars and military interventions, or against occupying military forces. Another drawback is manifested by the fact that ITERATE lists the New York and Washington D.C. 9/11 attacks as carried out by unknown attackers. Presumably, very early data codings are not updated when better information becomes available. In this case, however, we would have had to control for the impact of the 9/11 events for the purposes of our study. Given this drawback, we do not need to do so and our tests should consequently be seen as a conservative one. Any changes we find in the more recent years of our analysis will have a higher threshold to demonstrate.

10. Actually, there are 1485 coded "actors," but not all of them are groups. "Unidentified Moluccan rebels" for instance could be one coded party believed responsible for a terrorist event. A number are coded simply as unknown actors. We treat these unknowns as unidentified groups, thereby exaggerating our ultimate failure to find all of the group identities. Approximately 36% of the terrorist events are not identified with any group. For a complete list of the groups and their categorization, please e-mail William Thompson: wthompso@indiana.edu

11. The precise distinction between leftists and Marxists in the press and terrorism data bases is treacherous. We tried to distinguish between them but are most comfortable clustering them as a single group.

12. We recognize that some of the names are incomplete and could certainly be spelled differently. Terrorist groups share one characteristic with Chinese and Korean cultures. There are few family names in China and Korea, making it very difficult to design distinctive names. Terrorist groups restrict themselves to a few code words that are altered slightly in the order of presentation. It is possible to find different groups in different regions with identical names. Since the English order of the words in a name are not always the same as the order in names expressed originally in French, Spanish, Arabic and so forth, it is often difficult to trace group identities in virtual space. ITERATE provides some implicit assistance by listing the groups roughly according to the space in which they operate.

13. The number of religious groups suggests that the tendency to proliferate groups is not restricted to any specific type of group.

14. Yet keep in mind that if we had subtracted the events with no group identities at the outset, our 44% of groups identified accounted for 68% of the remainder of activity.

15. More correctly, we do not recognize too many temporal biases. Groups in the first four years in the series (1968–1971) are not well identified (the average is 30%). After 1971, the poorly identified years (less than 44%) occur in 1976, 1981, 1986, 1989, 1994, 1999, and 2004. While 1994 had 38% of the groups identified, 1993 was one of the better years with 60% of the groups identified.

16. We are actually able to identify a few more groups than the 763 but none of the categories yield enough entries to pursue at this point in time. Nor are they all that directly pertinent to our present question. Short of joining a major power's intelligence agency, we doubt that many more groups are likely to be identified.

17. Enders and Sandler (see note 6 above), 263.

18. Enders and Sandler's (ibid.) study examined bombing and hostage-taking as proportions of total activity.

19. Rapoport (see note 3 above).

20. Just how old the heterogeneity pattern is cannot really be assessed with currently available data.

21. See Audrey K. Cronin, "How al-Qaida Ends: The Decline and Demise of Terrorist Groups," *International Security* 31 (2006): 7–48 for an inventory of reasons for the endings of terrorist movements.