

ON THE RADICAL CUSP: ECOTERRORISM IN THE UNITED STATES, 1998-2005*

Colin J. Beck[†]

Political action on the cusp between social movements and militancy provides a robust test of universal theories of both collective action and terrorism. In particular, radical environmentalism and the new wave of ecoterrorism in the United States deserve social science consideration as one such radical cusp movement. Data on 84 ecoterrorist events in the United States, 1998-2005, from the Memorial Institute for the Prevention of Terrorism's Terrorism Incident Database are considered vis-à-vis previous theories to identify possible patterns. A methodology for research on clandestine organizations, the imputation of cells from incident data, is proposed. Analysis suggests that radicalism is a product of social movements and that it diffuses according to exogenous factors, in particular local political climates. Little support is found for theories of continued radicalization in militant movements, but some evidence indicates that a general life cycle of political violence exists.

It seems a rule that broad social movements spawn radical fringes. While some radicals may return to a moderate stance, others veer into militancy and the use of political violence, such as the Black Panthers in the American Civil Rights movement or the Weather Underground of the anti-Vietnam war movement. The environmental movement also has its share of radicals, with direct action groups such as Greenpeace, the Sea Shepherd Society, and Earth First!. Since the early 1980s, radicalism among environmentalists seemed mostly on the decline until a major fire at a Vail, Colorado ski resort in October 1998 sparked a wave of attention on the new "ecoterrorism." A formerly obscure group, the Earth Liberation Front (ELF) claimed the arson attack and seized national headlines with a communiqué: "This action is just a warning. We will be back if this greedy corporation continues to trespass into wild and unroaded areas" (quoted in Rosebraugh 2004: 60).

While the study of social movement radicalism is an established tradition (Piven and Cloward 1977; Tarrow 1989; Koopmans 1993; della Porta 1995) and the study of terrorism is currently a pressing issue, Eagan (1996) found only four citations dealing with environmental terrorism. As recently as the late 1990s work associating terrorism and the environment was confined to analyses of state actions (Schwartz 1998). What little previous work does exist on environmental radicalism focuses primarily on the philosophy of direct action and "deep ecology" (see Bergesen 1995; Eagan 1996; Taylor 1998; Vanderheiden 2005). Other work considers the radical identity of some environmental activists (Einwohner 2002; Shepherd 2002) and the problem it poses for law enforcement (Button, John, and Brearley 2002). But empirical consideration of radical environmentalism has been distinctly absent.

Since the events of September 11th, terrorism is a primary research concern for social scientists. Thorough consideration of radicalism and militancy in social movements can be an extremely useful aspect of this research agenda. On one hand, radical activists may use forms of political violence that are less violent or damaging to human life than members of movements considered terrorist. On the other hand, militants are at least partially a product of

* The author would like to thank Albert J. Bergesen and Douglas McAdam for their helpful comments on previous versions of this article. He is also indebted to two anonymous reviewers for their insights.

† Colin J. Beck, Department of Sociology, Stanford University, 450 Serra Mall, 120-160, Stanford, CA 94305.

peaceful collective action but do not use the common organizational forms or political strategies of traditional participatory movements. Thus, these groups exist “on the radical cusp” between social movements and terrorism. Groups on the radical cusp present a robust test of universal theories of social movement dynamics and of terrorism. Social movements theory has much to offer to the study of terrorism (Oberschall 2004), and theories of terrorism have much to offer the study of social movements.

This study relies on a dual-pronged approach to political violence and militancy in the environmental movement. Using data collected from the Memorial Institute for the Prevention of Terrorism’s (MIPT) Terrorism Incident Database, I consider the dynamics of the latest wave of militant environmentalism in the United States from 1998 to 2005. I employ theories from both the study of social movements and terrorism to consider the geography and diffusion of militancy, its possible sources, and hypothesized patterns in radicalization and a political-violence life cycle. I also suggest a methodology for the study of clandestine organizations that has general implications. While the conclusions are preliminary, given the constraints of the data, the analysis provides some support for previous theories of social movement radicalism as well as the dynamics of terrorism. Before considering the data, however, the issue of what political actions constitute terrorism must be addressed.

IS RADICAL DIRECT ACTION TERRORISM?

Governments often attempt to label militants as terrorists to erode popular support for a movement or justify policies of repression. For similar reasons, many radical activists aggressively deny that their actions constitute terrorism and seek legitimacy under the aegis of civil disobedience. In the case of radical environmentalism, activists call their activities direct action, economic sabotage, or ecotage, but not terrorism. The writer Edward Abbey, in some ways the spiritual leader of radical environmentalism, conducted his master’s thesis in philosophy on this very issue—the morality of political violence. Violence is, according to Abbey, “the illegal or extralegal use of force . . . to obtain political ends” including terrorism but also legitimate resistance (Abbey 1959: 3). Social science research on ecotage eschews the terrorist label (Taylor 1998; Vanderhein 2005), perhaps partially in response to government labels.¹ However, value-neutral definitions of terrorism exist, and I will consider ecotage through those lenses, rather than engaging in an extended treatment of the philosophy of radical direct action.

One common conception of terrorism is the phenomenon of victim-target differentiation (Schmid 1983). Terrorism usually seeks to influence a target group beyond the immediate victim, if only to disseminate fear. There is thus a strategic logic in terrorism that links a victim to a target group. While victim-target differentiation may be present in other forms of political violence, it appears to be a facet common to nearly all incidents widely considered terrorism. Radical environmentalists rationalize economic sabotage as causing direct harm to antienvironmental targets, but also recognize and seemingly hope for effects on policy and practices beyond their immediate victim.² In light of victim-target differentiation, some forms of direct action can be considered terrorism.

Tilly (2004: 5) proposes that terrorism is a political strategy defined as “asymmetrical deployment of threats and violence against enemies using means that fall outside the forms of political struggle routinely operating within some current regime.” This definition includes two compelling criteria. First, as long as the force is asymmetrical, violence can be terrorism no matter who the perpetrator is, whether the state or nonstate actors. Ecotage is clearly an asymmetrical tactic. Second, it is a critical observation that terrorism falls outside the routine forms of political action. This enables us to distinguish between politically motivated labels of terrorism and terrorist, and actual terrorism and terrorists, by considering the context in which actions take place.³ In the American political context, many forms of direct action and civil

disobedience are routine. Vandalism of property during protests, sit-ins and intimidation of targets by crowds are common forms of collective action. However, extensive destruction of property undertaken secretly during the night, as much ecotage is, is not routine political action. While extensive use of this tactic and changes in popular support may one day make ecotage a common form of political struggle, it is not yet, and as such should be considered terrorism according to Tilly's definition.

Finally, in a thorough conceptualization, Gibbs (1989: 330) argues that terrorism is illegal violence or threatened violence that includes five aspects. In his view, terrorism (1) intends to change a norm; (2) has secretive features; (3) is not undertaken for permanent defense of an area; (4) is not conventional warfare; and (5) is perceived by participants to contribute to their goal by creating fear in persons beyond the immediate victims.⁴ Ecotage is certainly illegal, and while one may debate whether property destruction is violence, arson and extensive vandalism are commonly considered violent. The actions of the ELF and other groups also seem intended to change practices regarding the environment, are secretive and clandestine, and are not permanent defense or conventional warfare. As discussed above, ecotage also has victim-target differentiation. Thus, according to Gibbs's basic criteria, ecotage is a form of terrorism.

This brief review of social science definitions leads me to conclude that ecotage in the United States does constitute terrorism. As such, I shall employ the term ecoterrorism in the remainder of this study to describe this form of radical environmental activism. I define ecoterrorism as the clandestine use of force or threat of force outside the normal routines of political action intended to influence targets for an environmental cause.

DATA ON ECOTERRORISM

Attempts to identify incidents of ecoterrorism in the United States have yielded a large variation. In 2002 congressional testimony, the Federal Bureau of Investigation estimated over 600 incidents causing at least 43 million dollars in damage, while *The Oregonian's* 1999 Pulitzer Prize winning series on environmental extremism claimed that there have been only 100 major incidents since 1980 (Denson and Long 1999). A more recent study (Young 2004) found over 1,400 incidents of ecoterrorism between 1993 and 2003 in news wire reports. The variation in these estimates is likely due to inconsistency in defining an event as ecoterrorist, particularly in cases where no claim was made by activists or an organization.

To provide a more standardized empirical picture, I draw on data contained in the MIPT Terrorism Incident Database. The database collects incidents from verifiable news sources, providing information on the incident date, location, tactics, target, and a brief description. Information on domestic terrorist incidents begins in 1998. Examining all domestic events in the database from 1998-2005, I identify 84 incidents of ecoterrorism.

There are some biases present in the MIPT Terrorism Incident Database. First, the reliance on news sources is potentially problematic. Scholars have demonstrated the existence of systemic bias in news accounts of social movement activity (Ortiz, Myers, Walls, and Diaz 2005), but others argued that the "hard news" of an event is mostly reliable and missing cases are more likely a problem (Earl, Martin, McCarthy, and Soule 2004). Also, the media has increased its coverage of terrorism since September 11th. Since the database relies on media reports, it is possible that ecoterrorist incidents were previously undercounted. This is certainly possible for minor incidents, but significant attacks have been heavily reported on reliably since the Vail ski resort fire of 1998. Second, the database does not seek to be comprehensive, but rather to monitor terrorist activity. These issues may result in missing cases. To account for this bias, I examined two additional sources of data. First, I compared the incident list from MIPT to incidents actually claimed by the ELF through 2002 on the now-defunct North American Earth Liberation Front Press Office website⁵ and to those listed in the memoir of the former ELF spokesperson, Craig Rosebraugh. The MIPT database contains

all major ELF actions since 1998. Incidents that are not in the database are relatively minor, primarily acts of vandalism. For a second verification of the database, I systematically searched archives of Associated Press wire reports with variants of the keywords *ecoterrorism* and *environmental terrorism*. Again, the MIPT database contains each major incident that my own search uncovered.

These checks lead me to conclude that for major event types, particularly incidents of arson and attempted arson, the MIPT database is as accurate as possible. Furthermore, the bias of undercounting minor events is not particularly problematic for the purposes of this exploratory study as the patterns I consider are primarily those of significant events. I also conjecture that the discrepancy in the MIPT's count of 84 incidents and previous estimates is due to the inclusion in other lists of minor incidents and incidents whose relation to ecoterrorism is suspect. The Terrorism Incident Database is perhaps more robust than other surveys as it includes only events that are clearly the work of ecoterrorists.

Table 1 presents the basic contours of ecoterrorism by year, region, and target type in the United States from 1998 to 2005. Of the 84 incidents in this time period, the year 2001 is the height of activity with 23 incidents total. A large plurality of incidents take place in California and the Pacific Northwest states of Oregon, Washington, and Idaho, and businesses have been the primary target, accounting for 60% of all events. Furthermore, in the majority of events, 65 cases, the tactic used was arson or attempted arson. Vandalism was the primary tactic in 13 cases, three incidents involved non-fire starting bombs, and three more incidents involved other tactics such as direct threats. The Earth Liberation Front claimed or is suspected in 55 incidents and the Animal Liberation Front in 12 incidents. The perpetrator is unknown in 13 incidents, while two other groups, the Coalition to Save Preserves and the Revolutionary Cells Animal Liberation Brigade, claimed two attacks each.

Table 1. Incidents of Ecoterrorism by Region and Target Type (N=84)

	'98	'99	'00	'01	'02	'03	'04	'05	Category Total	Category % of All Incidents
<i>Region</i>										
Midwest	-	2	5	4	3	3	-	-	17	20.2
Mountain	1	-	1	4	-	1	2	-	9	10.7
West/Southwest	-	1	3	3	4	1	-	3	15	17.9
Pacific Northwest/ West Coast	2	3	-	11	-	9	3	5	33	39.3
South/Southeast	-	-	-	1	6	2	1	-	10	11.9
<i>Target Type</i>										
Business	2	5	2	17	7	11	3	3	50	59.5
Educational Institution	-	1	-	1	1	-	1	-	4	4.8
Government	1	-	2	3	1	1	-	2	10	11.9
Private Property	-	-	5	2	4	4	2	3	20	23.8
<i>Yearly Total</i>	3	6	9	23	13	16	6	8		
<i>Yearly % of All Incidents</i>	4	7	11	27	15	19	7	10		

Note: The number of incidents occurring in each state by region are: Midwest (IL 1, IN 5, MI 7, MN 2, WI 2); Mountain West/Southwest (AZ 3, CO 2, NM 2, UT 2); Northeast (MA 2, MD 1, NJ 1, NY 6, PA 5); Pacific Northwest/West Coast (CA 16, ID 1, OR 9, WA 7); South/Southeast (AL 1, KY 1, TX 1, VA 7)

RESEARCHING CLANDESTINE GROUPS: IMPUTING MEMBER CELLS

Clandestine groups present several problems for the social science researcher. Secretive organizations are unlikely to have available information on membership, geographical scope, and financial supporters. While some organizations make use of websites and communiqués to expound their philosophy, we often can only speculate at specific motivations. These issues loom even larger when the organization is nonhierarchical without formal membership as is the case with many movements who use radical, disruptive, or criminal tactics in environmental protest. Without detailed information publicly available, social scientists must often rely on intelligence gathered by law enforcement and government agencies that may be tainted by political motivations.

One solution is to rely only on public and verifiable information. One form of verifiable and relatively objective information is accounts of attacks or events, such as the data employed in this study. Data on the activity of clandestine organizations are potentially more fertile than they may appear. For many secretive groups, member cells, which carry out attacks and stage other activities independently of each other, are the most basic organizational feature. Using event information alone, it is possible to estimate the number of radical cells in a movement.

Table 2 presents counts of first ecoterrorist incidents in a geographical area and the number of first incidents that have a follow-up incident within two years. Incidents are counted based on substate geographical centers with radii of approximately 100 miles from metropolitan centers.⁶ Since these geographical centers are fairly distinct from one another, not only in distance but in their social geography, each first incident should roughly correspond to the formation of an ecoterrorist cell. While the government has charged a few suspects with attacks across disparate areas, nomadic ecoterrorists responsible for attacks across multiple regions seem an unlikely explanation for the wide diffusion of attacks. Previous accounts of individuals' participation in ecoterrorism (e.g., Eagan 1996; Rosebraugh 2004) indicate that subsequent activity in an area is also likely the work of the same cell. It is possible, however, that incidents in the same area are the work of multiple cells or copycats, particularly for attacks several years after the initial activity.

Table 2. Number of First and Subsequent Incidents in a Geographical Region by Year (subsequent incidents in parentheses)

	'98	'99	'00	'01	'02	'03	'04	'05	Total	Percent
<i>Region</i>										
Midwest	-	2 (0)	2 (0)	3 (3)	1 (0)	1 (0)	-	-	9 (3)	23 (20)
Mountain West/ Southwest	1 (0)	-	-	3 (1)	-	1 (0)	1 (1)	-	6 (2)	15 (13)
Northeast	-	1 (0)	1 (1)	1 (0)	2 (1)	-	-	2 (1)	7 (3)	18 (20)
Pacific Northwest/ West Coast	2 (0)	2 (2)	-	4 (2)	-	3 (2)	1 (0)	-	12 (6)	31 (40)
South/Southeast	-	-	-	1 (0)	1 (1)	2 (0)	1 (0)	-	5 (1)	13 (7)
<i>Total</i>	3 (0)	5 (2)	3 (1)	12 (6)	4 (2)	7 (2)	3 (1)	2 (1)	39 (15)	
<i>Percent</i>	8 (0)	13 (13)	8 (7)	31 (40)	10 (13)	18 (13)	8 (7)	5 (7)		

Table 3. Sprees of Ecoterrorist Activity, 1998-2005

<i>Location</i>	<i>Time Period</i>	<i>Events</i>	<i>Tactic and Target of Each Event in Region</i>
Bloomington, IN area	Jan – Sep 2000	4	1. Arson; home construction 2. Vandalism; construction equipment 3. Arson; chicken farm 4. Arson; county Republican HQ
Long Island, NY	Dec 2000 – Jan 2001	4	1. Arson; condominium complex 2. Attempted arson; home construction 3. Arson; housing development 4. Arson; construction vehicles
Portland, OR area	April – June 2001	3	1. Arson; mining compny vehicles 2. Arson; tree farm 3. Arson; logging trucks
Tucson, AZ	Jun – Sept 2001	2	1. Arson; home construction 2. Arson; fast food restaurant
Detroit, MI area	Jul 2001	2	1. Arson; logging company office 2. Arson; oil company office
Richmond, VA area	Jul – Nov 2002	6	1. Vandalism; private SUVs 2. Vandalism; housing development 3. Attempted arson; construction crane 4. Vandalism; fast food restaurants 5. Vandalism; private SUVs 6. Vandalism; SUV dealership
Erie, PA area	Aug 2002 – Jan 2003	3	1. Arson; US Forest Service station 2. Arson; fur farm 3. Arson; SUV dealership
Chico, CA	Mar – Jun 2003	3	1. Attempted arson; fast food restaurant 2. Arson; fast food restaurant 3. Arson; home construction
Central Michigan	Mar – Jun 2003	2	1. Arson; home construction 2. Arson; home construction
Los Angeles, CA area	Aug 2003	2	1. Arson; condo development 2. Arson; SUV dealership
Provo, UT area	Jun – Jul 2004	2	1. Arson; lumber warehouse 2. Arson; university
Sacramento, CA area	Dec 2004 – Jan 2005	2	1. Attempted arson; housing development 2. Attempted arson; office complex
Seattle, WA area	Mar – Apr 2005	2	1. Arson; home construction 2. Arson; home construction
Southern Maine	Sep – Oct 2005	2	1. Vandalism; landfill equipment 2. Arson; construction company offices

Another way to identify operational cells is to look for spreeds of activity in an area. Spreeds are coded when two or more attacks occur no more than three months after the previous one in a single geographical center. A three-month period is a reasonable amount of time for an ecoterrorist cell to plan a sophisticated attack, and most spreeds actually occur in a shorter time span. This method yielded 14 distinct spreeds covering 39 events, as detailed in table 3. While law enforcement has arrested different perpetrators for events occurring close together in time and space (for instance, according to the MIPT Database, the attacks in Utah in 2004), spreeds are most likely committed by one or two cells at most.

Using initial incidents and spreeds, it is possible to estimate the number of cells active in the United States. Four of the fourteen spreeds were not the first incident in an area. Adding

this to the number of initial incidents yields an estimate of 43 distinct cells, responsible for at least 68 incidents of ecoterrorism. A slightly more liberal estimate would consider subsequent attacks taking place more than two years later as the act of another cell, yielding an additional seven cells for a total of 50 overall.⁷ It is likely that attacks in the same area perpetrated by more than one cell are cancelled out by the possibility of particularly mobile cells active across more than one area. Thus, I estimate that there have been roughly 40 to 50 ecoterrorist cells active in the United States between 1998 and 2005.

The breadth of ecoterrorist organization is quite striking, particularly when many national social movement organizations have only 50 chapters, one for each state. Membership for each cell is probably quite low, perhaps three individuals on average. But the data used here to estimate cells undercounts relatively minor incidents, which may number in the hundreds. This could put ecoterrorists into the thousands with a radical core in the low hundreds, without accounting for the thousands or even tens of thousands of supporters that condone ecoterrorism and may be involved in nonoperational capacities. Ecoterrorism seems more widely spread than at first glance.

The method used here to impute the number of operational cells also has general implications for social science. Taking the context of a clandestine movement into account, it appears possible to provide independent estimates of membership and participation without reliance on suspect sources. I believe that this methodology is potentially a significant area for future social science research on terrorism. With the basic data and methodological concerns of ecoterrorism detailed, I now turn to analyzing ecoterrorism vis-à-vis previous work on radicalism and terrorism.

ISSUE 1: THE GEOGRAPHY AND DIFFUSION OF RADICALISM

Previous work has considered where radicalism is likely to occur and how it diffuses from one area to another. In social movement studies, Van Dyke and Soule (2002) argue that variation between states in right-wing “Patriot” militia activity is explained by socioeconomic factors exogenous to the movement. Similarly, antihomosexual violence has been found to happen in places that have a combination of strong right-wing organizations and recent advances in gay rights (Van Dyke, Soule, and Widom 2001). Others argue that diffusion of social movement activity occurs through media attention (Koopmans and Olzak 2004; Myers 2000), while another view (Tarrow 1993) theorizes that the creation of modular repertoires of collective action allows groups in various locations to create cycles of protest. In the study of terrorism, della Porta (1995) and Oberschall (2004) argue that radicalism stems from the failure of more moderate collective action to reach a movement’s goals or maintain its support.

The spread of ecoterrorist activity across different regions does have a distinct pattern (see table 1). While the Pacific Northwest and the West Coast have the most activity, the first two years of ecoterrorist activity is concentrated in a few states, primarily Oregon and Washington with single incidents occurring in Colorado, Wisconsin, Michigan, and New Jersey. But by the peak of activity in 2001, ecoterrorism had spread across all regions of the United States, including even one attack in Kentucky. Incidents occurring in the Midwest peak rather earlier than other regions in the year 2000, while attacks in the South and Southeast come relatively late. The western regions of the United States, however, maintain a somewhat steady rate of activity, surprisingly intermittent and low for the Mountain West/Southwest, while fairly high in the Pacific Northwest and California.

I postulate that the variation across regions is primarily explained by state-level political leanings. It is striking that the states with the highest amounts of attacks (California, Oregon, and Washington) are known for the strength of their environmental movements and are relatively liberal, considered “blue states.” An independent samples t-test shows that there is a positive relationship between the number of attacks and if the state’s 2000 electoral college

vote was Democratic ($t=2.719$, $p<.01$).⁸ This indicates that radical activity is most likely to occur in places where a movement has already had success or the general political sentiment is favorable. While a sense of slowing progress may inspire radical action, abject failure does not seem to generate ecoterrorism. If it did, the state-level map of ecoterrorism would be almost entirely inverted.

With incident data alone, it is more difficult to draw firm conclusions about processes of diffusion, but some speculations may be made. Since *The Oregonian's* 1999 Pulitzer Prize for a series on environmental radicalism there has been an increase in media coverage. Ecoterrorism has received considerably more attention since September 11th, as the government and media focused on terrorism of all kinds. Over half of all ecoterrorist incidents in the MIPT database have occurred since September 11th, 47 in total. It is possible that increased media coverage may have diffused the tactical model to more individuals in more locations, resulting in the high rates of activity from 2001-03.

It is also noteworthy that September 11th may also have led indirectly to the sharp decline in ecoterrorism in the past few years.⁹ McAdam (1983) argues that spikes in social movement activity occur as a new tactic is innovated and used widely before it is countered and movement activity suppressed. The tactical innovation of firebombing antienvironmental public and private institutions caught on rapidly as McAdam anticipates, but the decline does not seem due to government suppression. If increased government monitoring and law enforcement were responsible for the drop off, there might be a larger number of indictments. Thus, some other cause or causes of decline may be at work here. While media coverage of environmental radicalism has rarely been positive, since September 11th, the media became noticeably more critical. Also, it is possible that a national focus on terrorism and war has deterred potential ecoterrorists through processes of social solidarity and group conformity, or perhaps radicals have become more focused on antiwar or anti-Bush activities than environmental causes. For instance, the ELF itself even targeted a military recruiting center in 2003. While this is speculative, the countering of tactical innovation appears to occur through more ways than countermovement or government action.

ISSUE 2: SOURCES OF MILITANCY

The source of militancy and radicalism has been variously theorized in both social movements and terrorism research. Koopmans (1993) and della Porta (1995) argue that government repression of social movements may generate radical action. Tarrow (1989) believes that militancy is a product of social movement organization competition for resources in contrast to the moderating effect of social movement organizations postulated by Piven and Cloward (1977). In the study of terrorism, it has long been argued that terror is a rational tactic for achieving goals (Crenshaw 1981; Pape 2003) and is available to all movement actors (Tilly 2004). Others have argued that terrorism can be psychologically fulfilling for participants (for a review of psychological perspectives see Victoroff 2005), and work on religious terror often considers militancy a gratifying response to theologically motivated concerns (Juergensmeyer 2000).

Anecdotally, there is some evidence for environmental militancy arising out of social movement dynamics. The ELF claims to have split off from Earth First! in the United Kingdom, while Earth First! and other radical groups splintered from Greenpeace due to growing dissatisfaction with its increasingly moderate views and institutionalized structure (Eagan 1996). On the other hand, unaffiliated militants such as the Unabomber, Theodore Kaczynski, seem to find militancy personally gratifying. Given the data available on ecoterrorism it is difficult to test these competing hypotheses, and is an area for further research. However, using incident data it is possible to identify part of the motivations of the ecoterrorists, by examining the targets selected.

Table 4. Issues/Motivations in Ecoterrorism by Target Type (N=91)

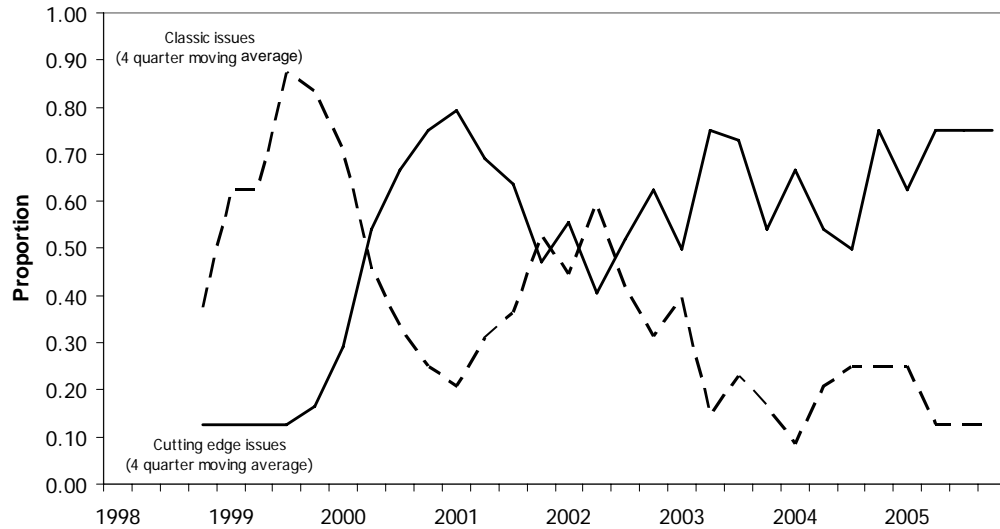
<i>Issue/Motivation</i>	'98	'99	'00	'01	'02	'03	'04	'05	<i>Category Total</i>	<i>Category % of All Incidents</i>
Resource Exploitation	1	1	-	8	-	1	1	-	12	13
Genetic Engineering	1	1	-	5	1	-	-	-	7	8
Industrial Pollution	-	-	1	-	-	-	1	-	2	2
Development/Urban Sprawl	1	-	7	4	4	5	4	5	30	33
Cars	-	-	-	1	3	4	-	-	9	10
Animal Rights	1	3	2	5	3	4	1	1	20	22
AntiGlobalization/Corporation	-	1	-	2	1	3	-	-	7	8
Other/Unknown	-	-	-	1	1	1	-	1	4	4
<i>Yearly Total</i>	4	6	10	26	13	18	7	7	91	
<i>Yearly % of All Issues</i>	4	7	11	29	14	20	8	8		

Table 4 categorizes targets of ecoterrorist attacks according to the underlying issue or motivation they represent. Issues are identified either by the rationale given in a communiqué claiming credit for the attack or by the nature of the target itself, for example logging companies are coded as resource exploitation. If there are two or more motivations explicitly claimed by the perpetrator, each is coded separately. This occurred only in seven cases, yielding 91 target issues/motivations. Of the eight issues categorized, the most frequent is related to development or urban sprawl, usually home developments or sport utility vehicles. If ecoterrorism is indeed related to social movement processes, then the issues and motivations involved in target selection should mirror the concerns of the mainstream environmental movement. Previous research indicates that the environmental movement is locally fragmented and complex (della Porta and Rucht 2002). Thus, if ecoterrorism is purely instrumental, targets would likely be selected as part of ongoing local environmental campaigns. Finally, the view that terrorism is a fulfilling way of life for anarcho-environmentalists implies that there would be little to no pattern in ecoterrorist motivations as they are personal and vary individually.

While some attacks do parallel local environmental struggles, such as the 2001 burning of logging trucks at the site of the Eagle Creek tree sit in Oregon, the overall tendency mirrors the national environmental agenda. In the past ten years, urban sprawl and development has increasingly become a concern of national environmental organizations. That the plurality of ecoterrorist attacks occurred at targets related to these issues provides some evidence that the activists parallel the mainstream environmental movement. Ecoterrorism also appears to be cutting edge as it is less concerned with traditional causes of environmentalism and more in tune with emerging issues. A 2002 ELF communiqué foreshadowed the controversial 2004 critique of traditional environmentalist strategies, "The Death of Environmentalism" by Michael Shellenberger and Ted Norhaus, claiming that the ecoterrorists will "provide the needed protection for our planet that decades of legal battles, pleading, [and] protest . . . have failed so drastically to achieve" (quoted in Rosebraugh 2004: 263).

Figure 1 presents the rate of "classic" and "cutting edge" issues in ecoterrorist targets over time. Classic environmental issues (coded here as resource exploitation, industrial pollution, and animal rights) decline noticeably as a proportion of incidents. On the other hand, emerging environmental issues of genetic engineering, SUVs, housing developments, urban

Figure 1. Proportion of Classic and Cutting Edge Issues/Motivations in Ecoterrorist incidents by Quarter, 1998-2005



sprawl, and antiglobalization are increasingly the focus of ecoterrorists, similar to the mainstream environmental movement. Cutting edge issues do not make up a majority of early ecoterrorist incidents, which indicates that ecoterrorists are not issue innovators, but their activity may be an additional “pull” effect on the environmental agenda.

The patterns in target motivation indicate that the view of militancy arising out of social movement dynamics applies to ecoterrorism. Since the motivations do appear patterned, I believe it is safe to rule out individual gratification as a primary source of ecoterrorism overall, though it may explain some events and activists. The instrumental view of terrorism, however, cannot be ruled out by the data available. While most incidents do not appear to take place in the context of a local environmental struggle, the tactical strategy may be on a national rather than local level. In fact, ecoterrorist communiqués indicate that attacks are meant to garner national attention to environmental issues. Whether ecoterrorism is effective or not is another question, but the strategic thinking in target selection indicates that utilitarian and tactical views of terrorism apply.

ISSUE 3: RADICALIZATION OF TERRORISM

No matter the initial source of militancy, terrorism seems to radicalize. Enders and Sandler (2000) find that transnational terrorism gets more violent over time even as the number of attacks decreases. Social movements research on radicalization (della Porta 1995; Koopmans 1993) also argues that militants become more militant with time, government repression, and a failure to meet initial goals. If radicalization is a universal process of militant groups then it should apply to ecoterrorism, as well. On first glance, ecoterrorism seems to follow the same process. On its former press office website, the ELF rejected violence against people as a legitimate tactic:

If an action similar to one performed by the ELF occurred and resulted in an individual becoming physically injured or losing their life this would not be considered an ELF action. It may have been done for social and political reasons and even may have had the same motives as the ELF but since a life form was injured it would not be considered an actual ELF action. (North American ELF Press Office 2001: 28)

But more recently, much of the rhetoric has become more aggressive. A 2002 ELF communiqué threatened “where it is necessary, we will no longer hesitate to pick up the gun to implement justice” (quoted in Rosebraugh 2004: 263). According to the MIPT incident report, after a 2003 pipe-bombing of a company involved in animal testing, the group responsible, the Revolutionary Cells Animal Liberation Brigade, warned that individuals who were involved in practices harmful to their environment and their families would not be safe in the future.

Empirically, there are two ways to search for radicalization of militancy in the data available. The first is to examine the evolution of incidents within a “spree” of attacks. As previously argued, each spree is likely the work of one ecoterrorist cell in an area. If new cells were to quickly become more militant, their subsequent attacks should see an escalation in tactics, targets, and frequency. However, of the 14 sprees identified (see table 3), only two show any evidence of escalation. In the Bloomington, Indiana, area activists moved from targets of opportunity (construction equipment and a new home construction site) to an established business and the local Republican Party headquarters, and in Maine in 2005 an initial event of vandalism was followed up by coordinated arson attacks on multiple sites in one night. The other 12 sprees show a remarkable consistency in target and tactic choice across incidents, and there is no clear quickening of the pace of attacks. It may be that militants do not radicalize quickly enough for it to appear within the limits of how I define a spree. Or perhaps radicalization tends to occur on the aggregate, as Enders and Sandler (2000) find, rather than within cells of activists, as della Porta (1995) argues. If ecoterrorism radicalizes in the aggregate, then the proportion of major attacks should rise over time.

Table 5 presents the occurrence of significant incidents by region and year. Significant incidents are determined by three criteria. First, they show signs of being well planned—it is not just a target of opportunity (such as a privately owned SUV) and involves some operational knowledge of how to carry out the attack, for example, a sophisticated bombing device or knowledge of the target’s security. Second, the attack must be claimed. Third, major damage beyond vandalism is clearly intended, even if the attack was not successful.

According to these criteria there have been 23 significant incidents (about 28% of all attacks) from 1998 to 2005. A majority of significant attacks occur in the Pacific Northwest

Table 5. Number of Significant Incidents by Year and Region (N=23)

	'98	'99	'00	'01	'02	'03	'04	'05	<i>Region Total</i>	<i>% of All Regional Incidents (N=84)</i>
<i>Region</i>										
Midwest	-	2	1	1	-	1	-	-	5	29
Mountain West/Southwest	1	-	-	1	-	-	1	-	3	33
Northeast	-	-	-	-	2	-	-	-	2	13
Pacific Northwest/West	1	2	-	6	-	3	-	1	13	40
South/Southeast	-	-	-	-	-	-	-	-	0	0
<i>Yearly Total</i>	2	4	1	8	2	4	1	1	23	
<i>% of All Yearly Incidents (N=84)</i>	67	67	11	35	15	25	17	13		

and California, and, in proportion to all incidents, the Northeast and the South/Southeast have the least. This parallels the geography of radicalism previously discussed. More striking is the proportion of incidents deemed significant over time. In 1998 and 1999, fully two-thirds of incidents were major attacks, but this rate decreases to about 13% in 2005, even though the yearly number of incidents decreased since 2001. This is exactly the opposite of the pattern Enders and Sandler find in transnational terrorism.

One explanation of the decrease in major incidents is that the U.S. government has become somewhat better at preventing and prosecuting ecoterrorists. In 2004, the Canadian government arrested, for petty theft, a man on the FBI's most wanted list: alleged arsonist Michael Scarpitti (whose name has been legally changed to Tre Arrow). The United States sought extradition, which is currently pending appeal. And, in early 2006 the U.S. government indicted eleven individuals for involvement in ecoterrorism (Harden 2006). However, the most recent indictments came after a nine-year investigation into early ecoterrorist attacks indicating that justice is perhaps not swift enough to curtail militancy. Furthermore, arrests and indictments account for the perpetrators of only a minority of attacks. Law enforcement is therefore unlikely to account for the decline in major ecoterrorist incidents.

Thus, it seems that ecoterrorism has not followed a pattern of further radicalization. It is possible that the time period under investigation here is too short to show a decades-long process, but it is also possible that the trend identified is accurate—perhaps increasing militancy is not a universal pattern of radicalism and terrorism. This can only be confirmed with time and further research on ecoterrorism, but for now it appears that the radicals are as radical as they are going to get.

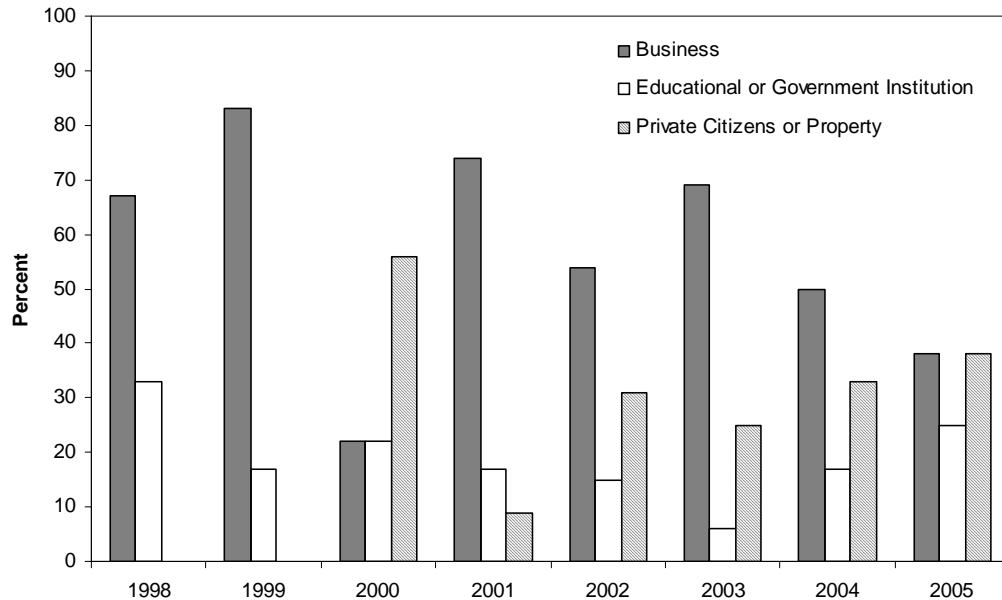
ISSUE 4: THE TERRORIST LIFE CYCLE

Thus far, I have examined two stages of a possible life cycle to terrorism with mixed results. Radicalism in ecoterrorism does appear to result from social movement dynamics, while militancy does not seem to increase over time. But additional stages may exist in a terrorist life cycle. It has long been observed that terrorism seems to “burn out” and subside over time without external intervention (Oberschall 2004). While Koopmans (1993) posits that militancy is most relevant in the late stages of a protest cycle, collective action can decline due to institutionalization or failure of a movement. Bergesen and Lizardo (2004) argue that over time terrorist violence becomes more indiscriminate, and Bergesen and Han (2005) suggest that there might be a life cycle of terrorist targets—over time, tactics become less strategic and rational, and targets become more haphazard and diffuse.

Waves of terrorism seem to descend into a sort of violent nihilism. In the late nineteenth century, anarchists attacked officials and assassinated heads of state in hopes of eliminating organized government, but with time and a decline in support resorted to near-random Molotov cocktail attacks on symbols of bourgeois society such as Parisian cafés. More recently, Chechen guerrillas fought Russia to a standstill in the 1994-96 war of independence and provided substantial resistance to a renewed assault in 1999, but have resorted to diffuse attacks on any Russian target, including theatergoers in Moscow and school children in Beslan.

While ecoterrorism is not as violent, perhaps it, too, diffuses away from strategy towards nihilistic frustration. To consider this empirically, I begin with the social location of ecoterrorist targets. Figure 2 shows the trend in basic types of target over time (see table 1 for raw counts). There is a striking rise in the number of incidents targeting private citizens and private property. Almost nonexistent as a target in the first years of the data, noninstitutional targets are just as common as businesses in 2005. Overall, attacks on organizations, whether businesses, educational, or government institutions, decline noticeably over time. This provides some support for Bergesen and Han's hypothesized life cycle of targets.

Figure 2. Percent of Incidents Targeting Business, Educational or Government Institutions, and Private Citizens or Property by Year, 1998-2005



Data examined in previous sections also points to a growing haphazardness. Issues and motivations of ecoterrorist incidents (see figure 1) move away from clearly identifiable culprits where economic impact may make a difference in environmental practices to more diffuse targets like cars and luxury homes. While urban sprawl is certainly a pressing environmental issue, it is much easier to identify companies like Weyerhaeuser or Boise Cascade as damaging the environment and justify attacks against them than the individual SUV owner. As stated previously, major ecoterrorist incidents decline over time and sprees of attacks occur more frequently. Sprees seem on the whole less planned, less strategic, and more diffuse than significant events. From 1998 to 2000, sprees account for only three of 18 incidents, while in 2004-2005, eight of 14 attacks occur as part of a spree.

The patterns of target type, possible motivations, the increase in sprees and the decline in significant strategic attacks indicate frustrated groups of individuals striking out against any perceived enemy of the environment more than skilled practitioners of “ecotage.” While it is not possible to declare that strategic ecoterrorism is dead, it does seem like the movement has followed the increasing diffusion and nihilism of other militant groups. That this pattern appears here in a relatively tame form of political violence is also noteworthy—a life cycle of terrorism applies not only to extremely violent fringes that may have trouble sustaining attacks against human beings but also to any movement that engages in militant action outside the normal routines of political behavior. The existence of a life cycle of terrorism has critical implications for both social science research and practical counterterrorism, and is an important area for further research.

CONCLUSION

I have argued that political activism “on the radical cusp” between participatory social movements and terrorism is a robust test of universal theories of radicalism and political violence. The examination of theories of both social movement radicalism and terrorist dynamics provides some preliminary evidence of the fruit that such studies might bear. Without trying

to make big claims from small data, exploratory investigation into ecoterrorism indicates that radicalism can be a product of social movement dynamics and political geography. I also find some support for ideas of a terrorist lifecycle that may be universal to the use of political violence, not just its most extreme forms. Surprisingly, there is little clear evidence of a radicalization process within a militant movement. While further events and time may reveal this pattern within ecoterrorism, I take this as a sign that militancy may not always breed more militancy. This leaves room to hope that peaceful solutions may be found to violent conflicts and that those who use terrorism may one day moderate their tactics.

I also believe that the suggested method of imputing cells in a clandestine movement is an important tool for future research. If social science is able to develop its own ways of generating estimates of support and participation in terrorism, we need no longer rely on the potentially suspect appraisals of governments and counterterrorist experts. Any imputation should be sensitive to the context of a particular organization or movement and the data used should be as objective as possible, so it is not possible to detail a universal methodology. But terrorist incident data is available in almost all cases. Logically, all terrorist incidents have perpetrators, and that basic fact can allow social scientists to undertake research with important implications for theory, methodology, and practical application.

Ecoterrorists and their supporters have shown a surprising willingness to resort to violence and ability to carry out sophisticated operations across the country. But the trend of the movement towards more diffuse and less damaging incidents without increasing militancy indicates that ecoterrorism is hardly the threat that the U.S. government has made it out to be. Ecoterrorism is a fringe movement, but an important one for social science. Political struggles over power and policy are likely to continue to spawn radicalism and militancy in the United States and across the world. Not all radicalism will look like routine collective action, and not all militancy will look like extreme terrorism. Thus, future research agendas in both the study of social movements and the study of terrorism should incorporate the “radical cusp.”

NOTES

¹ Ecotage does meet the official Federal Bureau of Investigation (1998) definition of domestic terrorism: the unlawful use, or threatened use, of violence by a group or individual based and operating entirely within the United States (or its territories) without foreign direction, committed against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives.

² Among three major goals of ELF actions listed in the Frequently Asked Questions section of the former website of the North American ELF Press Office is: “to make it known that any entity profiting off the destruction of life for profit may be considered the next target” (formerly available at www.earthliberation.com).

³ While it may be true that one’s person’s ecoterrorist is another’s ecodefender, Tilly’s criteria allows us to go beyond the self-definition of actors without making claims about the legitimacy or illegitimacy of their actions. While rare, some groups or individuals may self-identify as terrorists but it is never the case that they see their own actions as illegitimate.

⁴ Note that the fifth criterion is one version of victim-target differentiation.

⁵ Formerly available at www.earthliberation.com. Archived images of the pages are available through the Internet Archive, www.archive.org.

⁶ The cutoff of roughly 100 mile radius for a geographical center was determined in two ways. First, I examined the clustering of events and roughly apportioned them to sub-state regions. This yielded geographical areas of approximately 200 miles in diameter. Second, I asked how far would an ecoterrorist likely drive to attack a target? 100 miles seems a reasonable, yet conservative, estimate.

⁷ More than a year between actions seems a long time for a committed activist to be dormant. Conservatively, then, two years distinguishes between multiple cells active in an area.

⁸ States are coded into two groups (1=Democratic; 0=Republican) according to which presidential candidate received the most votes in the 2000 election. A more varied estimate of political leanings or environmental support by state or region could yield additional interesting patterns and is an area for future research.

⁹ If anything, the data used may underestimate the rapidity of this decline, given that media may not have reported ecoterrorist incidents as reliably before September 11th. The effect of September 11th on media portrayals of terrorism is an intriguing area for future research.

REFERENCES

- Abbey, Edward. 1959. "Anarchism and the Morality of Violence." Master's thesis, University of New Mexico, Albuquerque, NM.
- Bergesen, Albert J. 1995. "EcoAlienation." *Humboldt Journal of Social Relations* 21(1): 111-126.
- Bergesen, Albert J., and Yi Han. 2005. "New Directions for Terrorism Research." *International Journal of Comparative Sociology* 46(1-2): 133-151.
- Bergesen, Albert J., and Omar Lizardo. 2004. "International Terrorism and the World System." *Sociological Theory* 22(1): 38-52.
- Button, Mark, Tim John, and Nigel Brearley. 2002. "New Challenges in Public Order Policing: The Professionalisation of Environmental Protest and the Emergence of the Militant Environmental Activist." *International Journal of the Sociology of Law* 30: 17-22.
- Crenshaw, Martha. 1981. "The Causes of Terrorism." *Comparative Politics* 13(4): 379-99.
- della Porta, Donatella. 1995. *Social Movements, Political Violence, and the State: A Comparative Analysis of Italy and Germany*. New York: Cambridge University Press.
- della Porta, Donatella, and Dieter Rucht. 2002. "The Dynamics of Environmental Campaigns," *Mobilization* 7(1): 1-14.
- Denson, Bryan, and James Long. 1999. "Crimes in the Name of the Environment: EcoTerrorism Sweeps the West, Part I." *The Oregonian*, September 26.
- Eagan, Sean P. 1996. "From Spikes to Bombs: The Rise of EcoTerrorism." *Studies in Conflict and Terrorism* 19: 1-18.
- Earl, Jennifer, Andrew Martin, John D. McCarthy, and Sarah A. Soule. 2004. "The Use of Newspaper Data in the Study of Collective Action." *Annual Review of Sociology* 30: 65-80.
- Einwohner, Rachel L. 2002. "Bringing the Outsiders In: Opponents' Claims and the Construction of Animal Rights Activists' Identity." *Mobilization* 7(3): 253-68.
- Enders, Walter, and Todd Sandler. 2000. "Is Transnational Terrorism Becoming More Threatening? A Time-Series Investigation." *Journal of Conflict Resolution* 44(3): 307-32.
- Federal Bureau of Investigation. 1998. *Terrorism in the United States 1998*. FBI Counterterrorism Threat Assessment and Warning Unit National Security Division. Washington, DC: U.S. Department of Justice.
- Gibbs, Jack P. 1989. "Conceptualization of Terrorism." *American Sociological Review* 54(3): 329-40.
- Harden, Blaine. 2006. "11 Indicated in 'EcoTerrorism' Case." *Washington Post*, January 21.
- Juergensmeyer, Mark. 2000. *Terror in the Mind of God*. Berkeley: University of California Press.
- Koopmans, Ruud. 1993. "The Dynamics of Protest Waves: West Germany, 1965 to 1989." *American Sociological Review* 58(5): 637-58.
- Koopmans, Ruud, and Susan Olzak. 2004. "Discursive Opportunities and the Evolution of Right-Wing Violence in Germany." *American Journal of Sociology* 110(1): 198-230.
- McAdam, Doug. 1983. "Tactical Innovation and the Pace of Insurgency." *American Sociological Review* 48(6): 735-54.
- Myers, Daniel J. 2000. "The Diffusion of Collective Violence: Infectiousness, Susceptibility, and Mass Media Networks." *American Journal of Sociology* 106(1): 173-208.
- North American ELF Press Office. 2001. "Frequently Asked Questions About the Earth Liberation Front." Retrieved October 2002, from http://www.earthliberationfront.com/library/elf_faq.pdf.
- Oberschall, Anthony. 2004. "Explaining Terrorism: The Contribution of Collective Action Theory." *Sociological Theory* 22(1): 26-37.
- Ortiz, David G., Daniel J. Myers, N. Eugene Walls, and Maria-Elena D. Diaz. 2005. "Where Do We Stand With Newspaper Data?" *Mobilization* 10(3): 397-419.
- Pape, Robert A. 2003. "The Strategic Logic of Suicide Terrorism." *American Political Science Review* 97(3): 343-61.
- Piven, Frances Fox, and Richard A. Cloward. 1977. *Poor People's Movements: Why They Succeed, How They Fail*. New York: Vintage.
- Rosebraugh, Craig. 2004. *Burning Rage of a Dying Planet: Speaking for the Earth Liberation Front*. New York: Lantern.
- Schmid, Alex P. 1983. *Political Terrorism: A Research Guide to Concepts, Theories, Data Bases and Literature*. Amsterdam, Netherlands: North-Holland Publishing.
- Schwartz, Daniel M. 1998. "Environmental Terrorism: Analyzing the Concept." *Journal of Peace Research* 35(4): 483-496.

- Shepherd, Nicole. 2002. "Anarcho-Environmentalists: Ascetics of Late Modernity." *Journal of Contemporary Ethnography* 31(2): 135-157.
- Tarrow, Sidney. 1989. *Democracy and Disorder: Protest and Politics in Italy 1965-1975*. Oxford, UK: Clarendon Press.
- . 1993. "Modular Collective Action and the Rise of the Social Movement: Why the French Revolution Was Not Enough." *Politics & Society* 21(1): 69-90.
- Taylor, Bron. 1998. "Religion, Violence, and Radical Environmentalism." *Terrorism and Political Violence* 10(4): 1-42.
- Tilly, Charles. 2004. "Terror, Terrorism, Terrorists." *Sociological Theory* 22(1): 5-13.
- Vanderheiden, Steve. 2005. "Ecoterrorism or Justified Resistance? Radical Environmentalism and the 'War on Terror.'" *Politics and Society* 33(3): 425-47.
- Van Dyke, Nella, and Sarah A. Soule. 2002. "Structural Social Change and the Mobilizing Effect of Threat: Explaining Levels of Patriot and Militia Organizing in the United States." *Social Problems* 49(4): 497-520.
- Van Dyke, Nella, Sarah A. Soule, and Rebecca Widom. 2001. "The Politics of Hate: Explaining Variation in the Incidence of Anti-Gay Hate Crime." *Research in Political Sociology* 9: 35-58.
- Victoroff, Jeff. 2005. "The Mind of the Terrorist: A Review and Critique of Psychological Approaches." *Journal of Conflict Resolution* 49(1): 3-42.
- Young, Russell Lee. 2004. "A Time Series Analysis of EcoTerrorist Violence in the United States: 1993-2003." Ph.D. dissertation, Sam Houston State University, Huntsville, TX.