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## **Transnational Islamic Activism and Radicalization: Patterns, Trends, and Prognosticators**

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## Abstract

The research described in this report developed the theoretical and conceptual framework for understanding, recognizing, and anticipating the origins, dynamic mechanisms, perceptions, and social structures of Islamic social reform movements in the Muslim homeland and in diaspora communities. This research has revealed valuable insights into the dynamic mechanisms associated with reform movements and, as such, offers the potential to provide indications and warnings of impending violence. This study produced the following significant findings:

- A framework for understanding Islamic radicalization in the context of Social Movement Theory was developed and implemented. This framework provides a causal structure for the interrelationships among the myriad features of a social movement.
- The degree to which movement-related activity shows *early diffusion* across multiple social contexts is a powerful distinguisher of successful and unsuccessful social movements. Indeed, this measurable appears to have significantly more predictive power than *volume* of such activity and also more power than various system intrinsics.
- Significant social movements can occur only if both
  - the intra-context “infectivity” of the movement exceeds a certain threshold and
  - the inter-context interactions associated with the movement occur with a frequency that is larger than another threshold.

Note that this is reminiscent of, and significantly extends, well-known results for epidemic thresholds in disease propagation models.

- More in-depth content analysis of blogs through the lens of Argumentation Theory has the potential to reveal new insights into radicalization in the context of Social Movement Theory. This connection has the potential to be of value from two important perspectives;
  - first, this connection has the potential to provide more in depth insights into the forces underlying the emergence of radical behavior.
  - second, this connection may provide insights into how to use the blogosphere to influence the emergent dialog to effectively impact the resulting actions taken by the potential radicals.

The authors of this report recognize that Islamic communities are not the only source of radicalism; indeed many other groups, religious and otherwise, have used and continue to use, radicalism to achieve their ends. Further, the authors also recognize that not all Muslims use, or condone the use of, radical behavior. Indeed, only a very small segment of the Muslim communities throughout the world use and/or support such behavior. Nevertheless, the focus of this research is, indeed, on understanding, recognizing, and anticipating the origins, dynamic mechanisms, perceptions, and social structures of Islamic radicalism.

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## Acronyms

DHS	Department of Homeland Security
DVD	digital video disk
HDS	hybrid dynamical system
IA	Intelligent Agents
ICM	a British market research company
NIC	National Intelligence Council
NSM	New Social Movement
O&C	opportunities and constraints
ODE	ordinary differential equations
PBUH	Peace Be Upon Him
PCE	Post/context entropy
RM	Resource Mobilization
SDE	stochastic differential equations
SDP	Swedish Social Democratic Party
S-HDS	stochastic hybrid dynamical system
SMO	social movement organizations
SMT	Social Movement Theory
STIC	Scientific and Technical Intelligence Committee
SVD	singular value decomposition
TIARA	Transnational Islamic Activism and Radicalization
VIP	Vital Issues Process

## Introduction and Background

The research described in this report developed the theoretical and conceptual framework for understanding, recognizing, and anticipating the origins, dynamic mechanisms, perceptions, and social structures of Islamic social reform movements in the Muslim homeland and in diaspora communities. Diaspora here refers to Muslims living as a minority among people of the prevailing religion. This developed framework is based largely, but not exclusively, on Social Movement Theory. To determine the viability of this framework, relevant target case studies were used. This research focused on Muslim reaction to six recent incidents, each of which appeared at the outset to have the potential to trigger significant protest activities:

- publication of photographs and accounts of prisoner abuse at Abu Ghraib in Spring 2004;
- publication of cartoons depicting the prophet Mohammad in the Danish newspaper *Jyllands-Posten*<sup>1</sup> in September 2005;
- distribution of the DVD *I was blind but now I can see* in Egypt in October 2005;
- the lecture given by Pope Benedict XVI in September 2006 in which he quoted controversial material concerning Islam;
- Salman Rushdie being knighted in June 2007;
- re-publication of the “Danish cartoons” in various newspapers in February 2008.

The research reported herein has revealed valuable insights into the dynamic mechanisms associated with reform movements and, as such, offers the potential to provide indications and warnings of impending violence.

Social reform has been and is a fundamental underpinning of civil society. Reforms have been instrumental in shaping societies throughout human existence. It is well known that social reform has come in many shapes and sizes throughout the ages. One such form is *radicalization*. In this report, radicalization is taken to mean fundamental, drastic, revolutionary changes in society, where *violence* is a key agent of change. The focus of this research is on understanding, recognizing, and anticipating the origins, dynamic mechanisms, perceptions, and social structures of Islamic radicalism. The authors of this report recognize that Islamic communities are not the only source of radicalism; indeed, many other groups (religious and otherwise) have used, and continue to use, radicalism to achieve their ends. Further, the authors also recognize that not all Muslims use, or condone the use of, radical behavior. Indeed, only a very small segment of the Muslim communities throughout the world use and/or support such behavior.

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<sup>1</sup> The *Jyllands-Posten* Muhammad cartoons controversy began after twelve editorial cartoons, most of which depicted the Islamic prophet Muhammad, were published in the Danish newspaper *Jyllands-Posten* on 30 September 2005. Appendix A displays these cartoons.

## Approach

Two synergistic methodological approaches were used in this research to develop the theoretical and conceptual framework to understand, recognize, and anticipate the origins, dynamic mechanisms, perceptions, and social structures of Islamic radicalism. The first, hereinafter referred to as the macro model, captures the societal (causal) dynamics while the second, the meso model, focuses on group dynamics within the larger societal context. One important element of this research was to explore the viability of using Social Movement Theory<sup>2</sup> (SMT) to explain the dynamics of Islamic radicalism. The macro model was constructed with a view toward representing SMT in a *causal* modeling context. The meso model focused on developing an understanding of indicators that radical behavior may be emerging.

SMT was used to help develop the theoretical and conceptual framework used in this research. SMT is an interdisciplinary study within the social sciences that generally seeks to explain why social mobilization occurs and the forms under which it manifests, as well as potential social, cultural, and political consequences. SMT is offered, and in some cases required, as part of the university curricula in sociology, political science, and anthropology.

Various aspects of SMT have been published in numerous texts and in many articles appearing in scholarly journals. One text (Wiktorowicz 2004) in particular served as excellent source material for this research. In this text, Wiktorowicz and the other contributors incorporate the study of Islamic activism into SMT. In the context of the Wiktorowicz text, *Islamic activism* is defined as the *mobilization of contention to support Muslim causes*. This does not necessarily equate to radicalization (qua violence) in the sense used in this report. Nevertheless, many of the insights provided in the Wiktorowicz text were valuable to this research. Material taken from this text provided intellectual capital to develop the *SMT kernel*<sup>3</sup> that formed the basis in this research for modeling Social Movement Theory. Appendix C provides graphical representations of the three elements of the SMT kernel that were described by Wiktorowicz namely, *Framing*, *Resource Mobilization (RM)*, and *Opportunities and Constraints (O&C)*. The coupling of these three elements via their interrelationships constitutes the SMT kernel. In computer science, the kernel is the inner or central part of a large program or of an operating system which is unchanged when run on different computers. In abstract algebra, the kernel of a homomorphism measures the degree to which the homomorphism fails to be injective. In general, the notion of a kernel has been used to characterize “the choicest or most essential of most vital part of some idea or experience.”

Another collection of unpublished papers was developed in support of a series of three workshops convened during 2007 on behalf of the Scientific and Technical Intelligence Committee (STIC) of the National Intelligence Council (NIC), the Intelligence

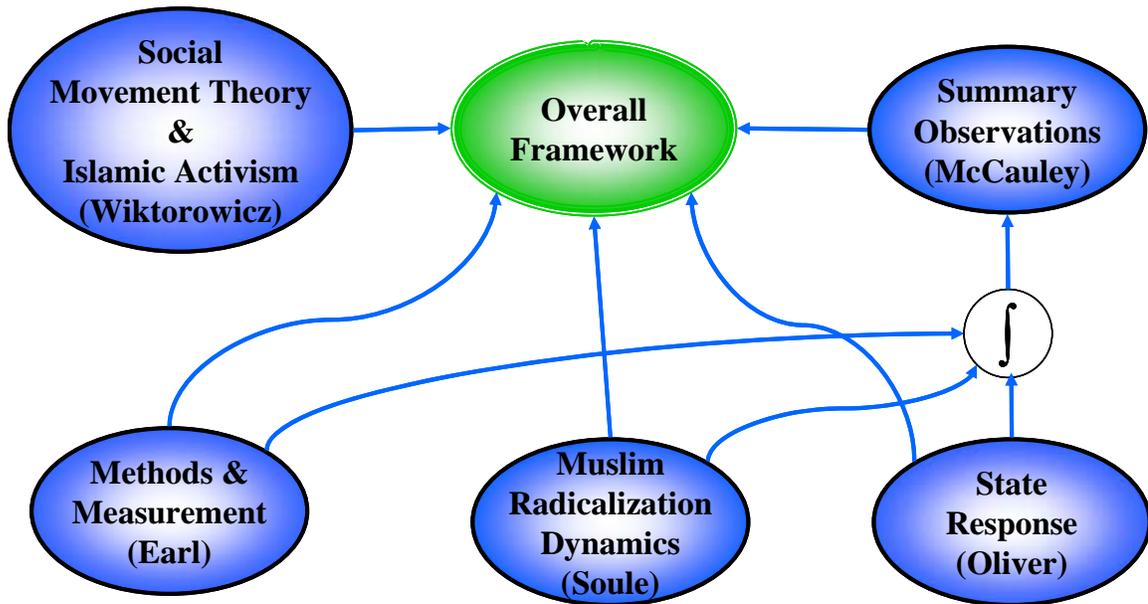
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<sup>2</sup> See (Klandermans and Staggenborg 2002), (Della Porte and Diani 1999), or (McAdam, McCarthy, and Zald 1988) for an overview of SMT.

<sup>3</sup> See <http://wordnet.princeton.edu/perl/webwn?s=kernel>

Community’s center for mid-term and long-term strategic thinking.<sup>4</sup> These workshops were directed toward exploring the “Social Dynamics of Activism and Radicalization” by bringing together academicians expert in SMT and government officials responsible for understanding and countering radicalization, especially that which underlies support for jihadist terrorism. The goal of the workshops was to evaluate current SMT, both theory and research, in relation to understanding trajectories of political activism, radicalization, and terrorism. Three significant concerns were addressed during the first workshop to realize the potential possibilities of using SMT as a framework for understanding activism and trajectories of political violence. The first was to examine SMT as a conceptual model including *resource mobilization, frames, political opportunity*, and their hypothesized relations, and to review the evidence supporting this model including the methods and measures with which these concepts are operationalized. The second was the relevance of SMT to Muslim cultures under diverse socio-political conditions. The third was the extent of SMT’s explanatory and predictive power.

Four unpublished papers (Earl 2006, Oliver 2006, Soule 2006, and McCauley 2006), written in support of the first STIC workshop, provided in draft form in Appendix B, formed the basis for expanding the SMT kernel that was developed using the Wiktorowicz text. These expansions were crucial in moving beyond Islamic activism and into the realm of radicalization qua violence in the SMT kernel. Figure 1 illustrates the integration of these materials to form the overall framework used in this research.



**Figure 1. Integration of Source Materials.**

<sup>4</sup> See [http://www.dni.gov/nic/NIC\\_about.html](http://www.dni.gov/nic/NIC_about.html) for an overview of NIC functions.

To convert the information in these scholarly papers into a form that can facilitate computer modeling and mathematical analysis, an influence diagram<sup>5</sup> representing the R-SMT kernel (the “R” was added to the SMT kernel to reflect the inclusion of Radicalization) was constructed that is helpful in bridging the macro scale modeling of the overall SMT perspective to the meso scale modeling used to discern patterns of emerging radical behavior. The R-SMT kernel formed the framework for bridging the meso and macro scale modeling perspectives in this research.

The theoretical framework described above can be *operationalized* to yield a methodology for understanding, recognizing, and anticipating Islamic activism and radicalization. A key element of the proposed analysis methodology is proper characterization of the interplay between the persuasiveness of an argument or *intrinsic aspects* of a social process and the *social dynamics*, which is its realization of the way the argument propagates through a segment of society. The notion of an *argument* was explored in depth in this research, particularly as an aid to content analysis. This characterization enables us to:

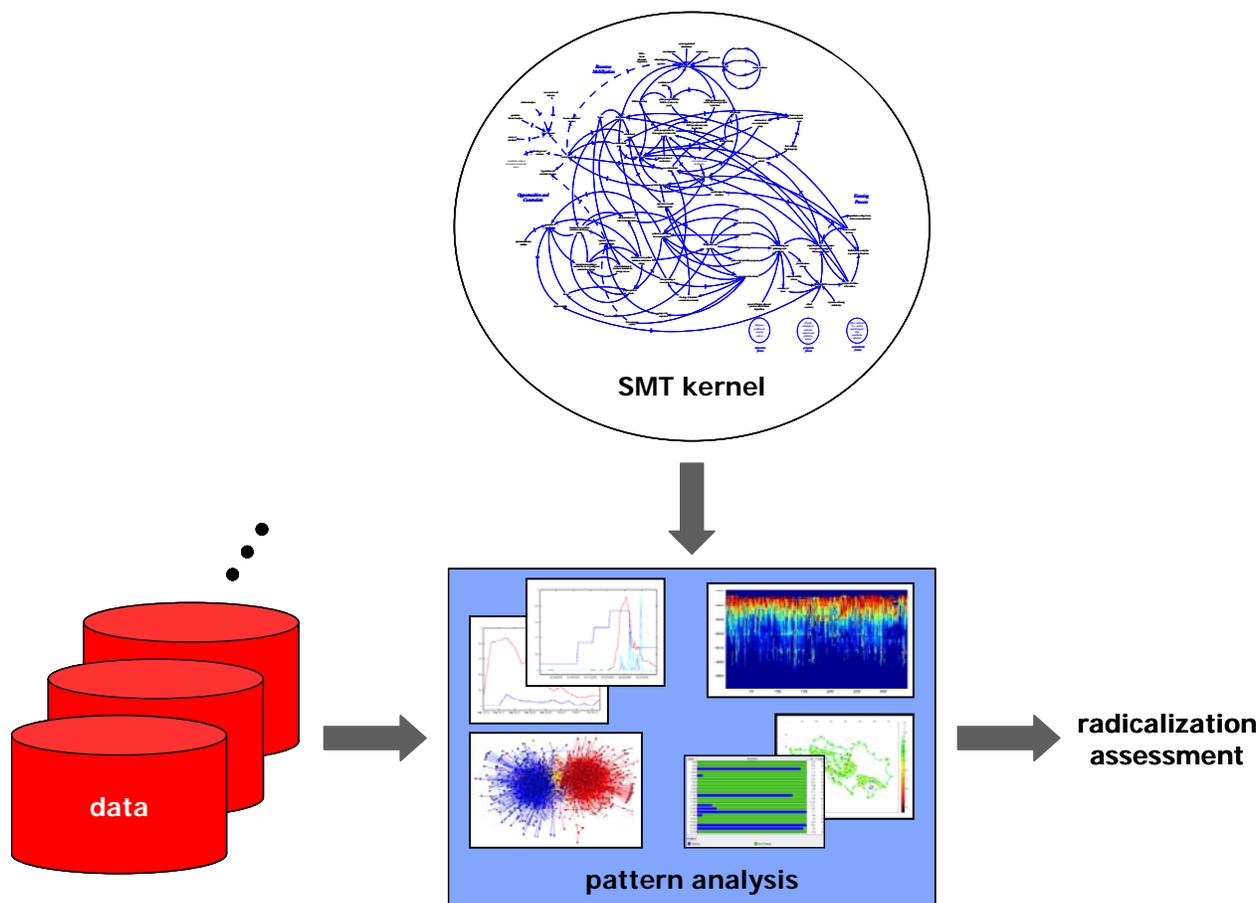
1. Identify those measurable components and associated data patterns useful for situational awareness and warning analysis for radicalization phenomena and
2. Develop data-driven algorithms to provide robust, scalable situational awareness and warning. Specific capabilities derived in this way include those for:
  - early warning analysis of Islamic mobilization and radicalization,
  - assessment of the potential for ethnic violence in a given region, and
  - automatic identification and classification of documents instantiating the framing processes that are central to many social movements including radicalization.

The considerable potential for these capabilities to affect situational awareness and warning analysis of social movements in general, and Islamic radicalization in particular is illustrated through both theoretical and empirical case studies described in subsequent sections of this report.

While radicalization phenomena have attracted the attention of researchers and analysts for decades, most work in this area has been of a qualitative, descriptive nature and, therefore, does not naturally support quantitative situational awareness and warning analysis. Recently, researchers have proposed that SMT may provide a useful framework within which to study Islamic activism and radicalization (Earl 2006, Oliver 2006, Soule 2006, McCauley 2006, and Wiktorowicz 2004). The application of SMT to radicalization proposed by these authors, while still largely qualitative, represents an important contribution and provides the basis for constructing the R-SMT Kernel, our quantitative, dynamical extension of their basic formulation. The R-SMT Kernel is a key enabler in our proposed approach to quantitative radicalization situational awareness and warning analysis as shown in Figure 2.

---

<sup>5</sup> Influence diagrams also called *relevance diagrams*, are directed graphs representing decision problems. See [Howard and Matheson 1984] for a review of the use of influence diagrams in decision analysis.



**Figure 2. Components of the Radicalization Assessment.**

The operational framework described above was used to analyze actual data sets and to develop a demonstration of the methodology. The case studies chosen for this research were:

- publication of photographs and accounts of prisoner abuse at Abu Ghraib in Spring 2004;
- publication of cartoons depicting the prophet Mohammad in the Danish newspaper *Jyllands-Posten* in September 2005;
- distribution of the DVD *I was blind but now I can see* in Egypt in October 2005;
- the lecture given by Pope Benedict XVI in September 2006 in which he quoted controversial material concerning Islam;
- Salman Rushdie being knighted in June 2007;
- re-publication of the “Danish cartoons” in various newspapers in February 2008.

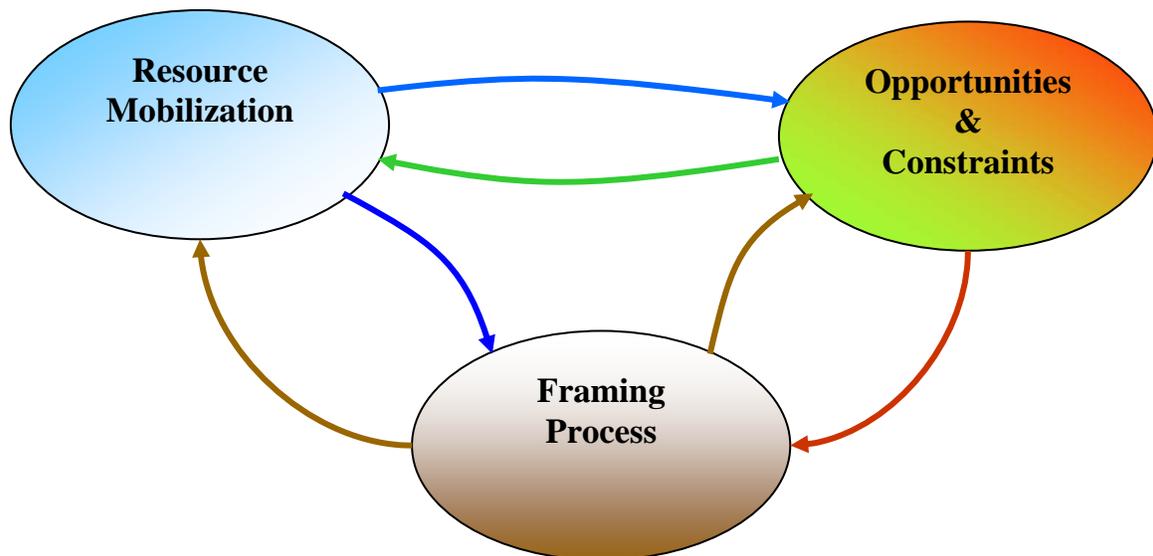
This collection of case studies provided an excellent test bed for the methodology being developed. The next section of this report describes the results of this analysis.

## Results

As shown previously in Figure 2, the proposed approach to operationalizing SMT for radicalization situational awareness and early warning analysis integrates two elements: an expressive, quantitative encoding (and extension) of SMT as it applies to radicalization, denoted the SMT kernel, and a collection of “pattern analysis” algorithms that combine this kernel with real world data to produce radicalization assessments. We now describe each of these elements; additional information on the elements is provided in the Appendices of this report.

### Framework Development

The nature of SMT used in this research involves its characterization in terms of three fundamental elements; (1) Resource Mobilization, (2) Opportunities and Constraints, and (3) the Framing Process. Further, it is assumed that these elements interact with one another to form the dynamics of SMT, as shown in Figure 3.



**Figure 3. Dynamic Coupling of SMT Elements.**

These elements are defined<sup>6</sup> as follows:

*Resource Mobilization.* This school of social movement analysis, developed from the 1960s onward, has been, and remains, the dominant approach among sociologists, though it has increasingly been challenged in recent years. Resource Mobilization Theory stresses the ways in which movements are shaped by, and work within, limits set by the resources (especially economic, political, and communications resources) available

<sup>6</sup> These definitions were taken from <http://www.wsu.edu/~amerstu/smc/glossary.html>.

to the group and the organizational skills of movement leaders in utilizing those resources. It is especially interested in direct, measurable impacts of movements on political issues and is less interested in the expressive, ideological, identity-shaping, and consciousness-raising dimensions of movements. More recently, the attention of scholars in this school has been turning slowly toward some of these more cultural questions.

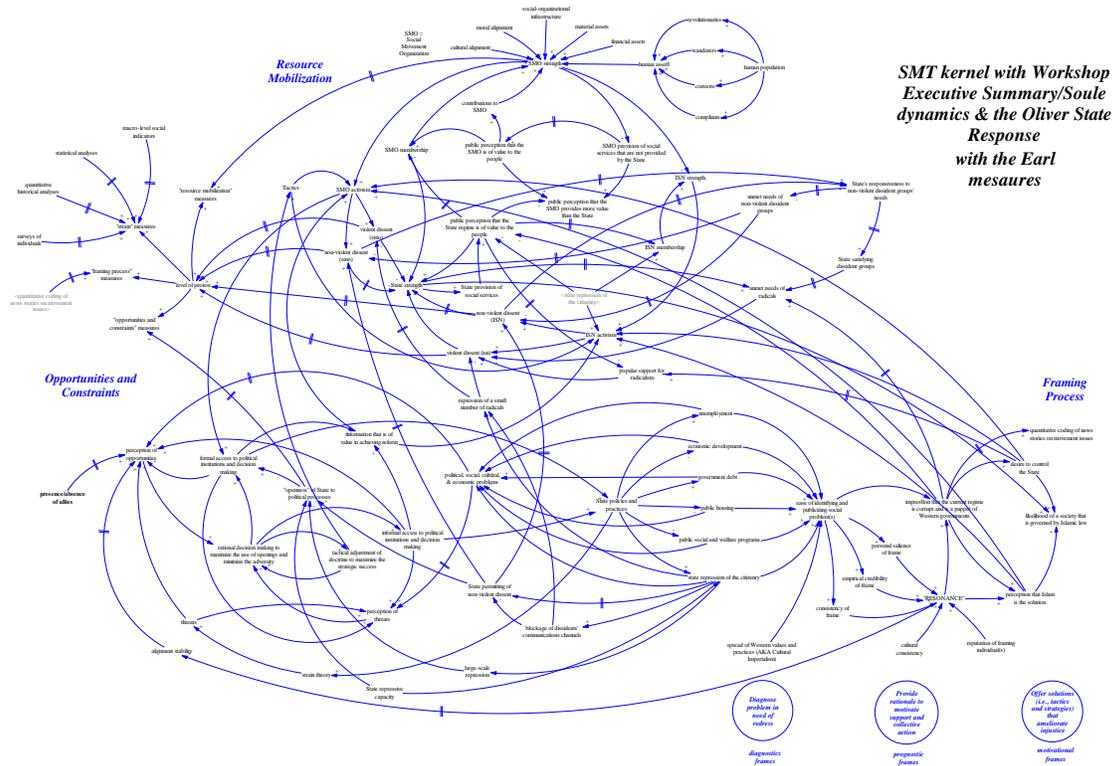
*Opportunities & Constraints (or Political Processes).* This form of social movement analysis stresses the ways in which the wider political system opens up and closes down opportunities for organizing resistance. An example of the opening up would be the positive Supreme Court decision against segregation in *Brown v. Board of Education*, while an example of closing down would be the infiltration and repression of Black, Red, and Brown Power groups in the late 1960s and early 1970s by the FBI and other state agencies. Political Process Modeling is closely connected to Resource Mobilization Theory but looks more broadly at the political context in which movements mobilize their resources.

*Framing Process.* The concept of frames or framing is used in the contexts of some social movement analysis to mean patterns of perception and/or schemata of interpretation employed by social movement participants or social movement organizations viewed collectively. A frame might be imagined as a kind of template or filter that organizes how one processes new information encountered in the world. Frames organize that information based on previously held beliefs or previously shaped patterns of perception and interpretation.

The SMT kernel developed using the Wiktorowicz text as the primary source material is depicted in Appendix C. The three fundamental elements, Resource Mobilization, Political Processes, and the Framing Process, were modeled individually in Figures C-1, C-2, and C-3 respectively, by constructing influence diagrams to represent the salient sub-elements of each of these three primary elements, including their interrelations. Next, these three primary elements were coupled by developing the interrelations among these three elements as depicted in Figure C-4, in Appendix C. The coupled set of primary elements formed the SMT kernel. In the spirit of the classical usage of the term *kernel*, the SMT kernel developed for this research is intended to provide a graph-theoretic representation of the essential parts of the ideas embodied in SMT.

The next step in constructing the framework used in this research was to extend the SMT kernel to specifically include the findings from the STIC workshop. This extended form of the SMT kernel (referred to as “the R-SMT kernel”) is intended to represent the distinguishing features, and their interactions, of *radicalization*. The R-SMT kernel is shown in Figure 4. It is noteworthy that although this extended form of the SMT Kernel has been discussed with academicians and other specialists from the intelligence

community<sup>7</sup> who have expertise in SMT and in radicalism (they have been most helpful in providing critical feedback that was used in the evolution of this form), this does not constitute a *validation*<sup>8</sup> of the R-SMT kernel. Nevertheless, this form provides a valuable means to help understand the dynamics of radicalization in the context of the underlying causal mechanisms associated with SMT.



**Figure 4. Extended Form of the SMT Kernel (R-SMT Kernel)**

<sup>7</sup> The extended form of the SMT kernel was discussed extensively in private communications with Gary Ackerman , Research Director of the National Consortium for the Study of Terrorism and Responses to Terrorism and Director of the Center for Terrorism and Intelligence Studies, University of Maryland; Dr. Jennifer Earl, Associate Professor, Department of Sociology, University of California, Santa Barbara; Emile Nakhleh (former Director of the CIA’s Political Islam Strategic Analysis Programme); Dr. Kathryn Hochstetler, Professor, Department of Political Science, University of New Mexico; Dr. Pamela Oliver, Professor, Department of Sociology, University of Wisconsin; and Dr. Quintan Wiktorowicz (Senior Analyst, National Counter Terrorism Center). Each of these scholars provided insights that were invaluable in the evolution of this extended form of the SMT kernel.

<sup>8</sup> The extended form of the SMT kernel has not been *validated* in that it has not been demonstrated to consistently and accurately represent the dynamics of radicalization in the context of Social Movement Theory.

# Pattern Discovery and Analysis

## *Introduction*

In this section, we present a collection of pattern discovery and analysis algorithms that leverage the R-SMT kernel to enable real-world observables to be mapped to robust, timely situational awareness and warning analysis; the basic idea was depicted in Figure 2. A central challenge in the pattern analysis process is discovering which aspects of a social system, if any, are sufficiently predictive of radicalization to be useful for situational awareness and warning analysis. While the R-SMT kernel identifies features and processes that can be relevant to radicalization, the representation is at a high level of abstraction and does not relate directly to real world data. One difficulty associated with establishing this relationship is the nature of social system data sets—they are usually too “coarse-grained” and incomplete to be of direct use in situational awareness and warning analysis. For instance, Gulden (2002) finds that certain spatial distributions of ethnic groups exhibit increased rates of ethnic violence. However, determining whether these distributions are present requires data of significantly higher spatial resolution than are usually available. Perhaps more importantly, even if data of adequate resolution and fidelity are available, it is typically unclear what particular features of the data have predictive power. Thus, for example, it is plausible that public opinion dynamics may be important for some radicalization phenomena and that these dynamics may be inferred from online, web-based sources such as blogs. But what aspects of these online interactions should be measured to characterize, and possibly even anticipate, the intensity and dynamics of public opinion concerning a given issue?

We address this challenge through the use of our recently developed approach to predictive analysis for social processes (Colbaugh and Glass 2007). Briefly, this approach begins by considering problem solvability—is the phenomenon of interest *predictable*? Assessing predictability before attempting prediction is, of course, scientifically sensible. Moreover, because formal predictability analysis evaluates the possibility to make predictions using a specific set of observables, this analysis plays a key role in identifying those observables most useful for prediction. For instance, the work reported in Colbaugh and Glass (2007) shows that for many social processes the observables commonly used for prediction actually possess little or no predictive power; this is one reason standard prediction methods are frequently unsuccessful. Interestingly, this result often implies the existence of other system observables that do have predictive power and that can form the basis for successful prediction (Colbaugh and Glass 2007). Additional details regarding this approach to predictive analysis are given in Appendix D.

This part of the report makes four main contributions. First, we show how formal predictive analysis can be used to develop pattern analysis algorithms that relate the R-SMT kernel to real world data, thereby operationalizing this theoretical framework. Second, we consider the question of whether public opinion dynamics are relevant to radicalization phenomena and provide evidence that the two are indeed related and that, in fact, public opinion can be predictive of radicalization. Next we present an algorithm for characterizing, and predicting, Islamic mobilization and public opinion dynamics and

show how this algorithm can be used to provide an automated early warning capability for “cascading” mobilization and protest events. Finally, we describe two algorithms for situational awareness analysis, one that detects regions with increased likelihood for ethnic violence and one that automatically identifies framing documents in large text corpora.

We close these introductory remarks with an illustrative example of the way the R-SMT kernel and pattern analysis methods can be combined to enable real world data to be mapped to radicalization assessments. Consider the role played by social dynamics in radicalization. Examination of the R-SMT kernel reveals that this role is crucial, for instance underlying much of resource mobilization and also impacting framing (e.g., in frame dissemination). Moreover, the R-SMT kernel suggests that these social dynamics should be of the “positive externality” variety, in which the adoption of an opinion or idea by an individual’s neighbors *increases* the probability that the individual will also adopt the opinion. This in turn leads to the identification of particular social dynamics models (Hedstrom et al. 2000) to incorporate into the pattern analysis algorithms (see Appendix D).

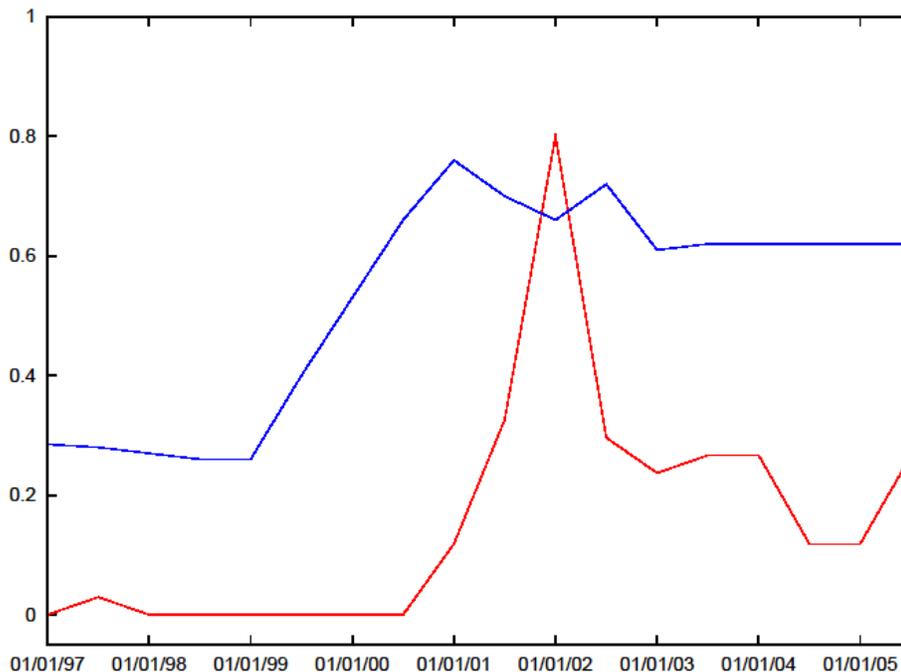
### *Public Opinion Dynamics and Radicalization*

An important ultimate objective of the work initiated in this project is the development of capabilities for understanding, recognizing, and anticipating Islamic radicalization, and we propose that the synthesis of SMT and pattern analysis depicted in Figure 2 provides the setting to achieve this goal. The R-SMT kernel summarized above relates SMT to radicalization, thereby providing a quantitative framework within which to study situational awareness and warning analysis for radicalization. The focus of the pattern analysis results presented in subsequent sections is the public opinion and mobilization dynamics associated with radicalization. This focus is motivated in part by the fact that these phenomena are shown to be important for radicalization by the R-SMT kernel, and in part because of the availability of high resolution data for recent opinion dynamics / mobilization events and not for the underlying radicalization. This section, which addresses the connection between radicalization and public opinion dynamics from an empirical perspective, provides a “bridge” between the R-SMT framework and the pattern analysis results for social dynamics situational awareness and warning analysis.

Here we consider the following question: Is public opinion dynamics in a particular society related to the radicalization of groups in that society? Examination of the R-SMT Kernel reveals that public opinion may influence the behavior of extremists through a variety of channels. For example, extremist elements in a society may depend upon that society for financial and other support, as a pool from which to recruit new members, and as an accommodating environment for development and dissemination of radical ideologies. However, the relationship between public opinion and violent behavior by extremists is complex and difficult to quantify from SMT considerations alone, so it is desirable to explore this issue empirically as well.

We investigate the relationship between public opinion dynamics and the extremist groups' use of violent tactics by studying this aspect of the Israel-Palestine conflict. The choice of analysis target is motivated in large part by the availability of fairly high resolution temporal data for both Palestinian public opinion regarding suicide bombing and suicide bombing activities by extremist groups. In particular, we obtained public opinion data from surveys conducted by the Jerusalem Media and Communication Center and suicide bombing event data from the MIPT (see <http://www.mipt.org/>) and START (see <http://www.start.umd.edu/>) terrorism databases.

We collected and analyzed data for 1) Palestinian public opinion regarding suicide bombing against Israel and 2) suicide bombing attacks against Israel by the Palestinian groups Fatah, Hamas, PFLP, and PIJ, for the period 1997 to 2006. This is the largest time period for which both public opinion and events data are available. These time series are plotted in Figure 5, and visual examination of this plot suggests the possibility that the dynamics of public opinion and suicide bombings are correlated. The blue line represents the percent in favor (public opinion) and the red line represents suicide bombing attacks against Israel by Palestinian groups (normalized). Analysis of the time series confirms this impression: public opinion regarding suicide bombing and suicide bombing events are strongly correlated, with public opinion leading bombing events by 12 months ( $R = 0.8$ ,  $P < 0.0001$ ). Note that this result suggests the possibility that public opinion dynamics data could be *predictive* for extremist activity in certain situations.



**Figure 5. Palestinian Public Opinion Regarding Suicide Bombing Against Israel**

The empirical evidence obtained in this study and the theoretical insights captured by the R-SMT kernel support the notion that public opinion dynamics can be an important element in radicalization. Indeed, Oliver and Myers (2000) suggest that social

movements can be understood as interrelated sets of diffusion processes, many reflecting the propagation of ideas and opinions. Thus, in much of what follows, we concentrate on understanding social dynamics and diffusion phenomena and estimating these dynamics from real-world data. We investigate three related social dynamics problems. First we consider early warning analysis for social cascades, with a focus on Islamic mobilization/protest events. Of particular interest is early warning via dynamical analysis of *online* Internet-based social behavior. Next we examine the possibility of estimating the context for social dynamics—in this case ethnic mix and its relation to ethnic violence—from coarse-grained demographic data. Finally, we study the problem of automatically identifying framing documents in a large text resource such as the Web. Among other applications, we expect this capability to be useful for tracking and assessing the diffusion of frames and ideologies through a society. Recall that frame diffusion has been shown to be important for a variety of social movements (Oliver and Myers 2000).

### *Warning Analysis: Social Dynamics and Radicalization*

Identifying reliable, practically measurable early indicators of impending radicalization is of considerable interest to the national security community. Of course, anticipating the evolution of complex processes that possess a social component, such as radicalization, is quite difficult. In fact, recent experiments suggest that there are fundamental limits to the predictability of many social processes, at least if the predictions are to be formed using standard methods (Salganik et al. 2006, Colbaugh and Glass 2007). Moreover, this work indicates that much of the difficulty associated with social system prediction is a consequence of the subtle, intricate dynamics that underlie many social processes. For example, radicalization emerges from a complex interplay between intrinsic features of the situation, such as regime oppressiveness or perceived religious legitimacy, and the social network dynamics that define the way individual beliefs and preferences become collective actions. Successful early warning analysis for social movements such as radicalization would appear to demand that these complex dynamics be understood.

We have recently developed a scientifically rigorous, computationally tractable approach to predictive analysis for social processes that is well-suited to the task of obtaining this understanding (Colbaugh and Glass 2007]. A crucial step in the approach is to assess the predictability of the process of interest. Among other things, predictability assessment enables identification of those measurables that are most useful for prediction. We expect this function to be important, as there are myriad measurables associated with radicalization that *may* have predictive power. Identifying those measurables is both challenging and critical for successful warning analysis. A brief summary of this predictive analysis methodology is given in Appendix D.

We now apply this predictive analysis methodology to the early warning analysis for social movements, including radicalization-related information propagation and mobilization. The study consists of three phases: 1) a *theoretical investigation* of social movement warning analysis using SMT models and formal predictability assessment, 2) an *empirical study* of social movement warning analysis involving “data-rich” social movement case studies such as the emergence and diffusion through Sweden of their

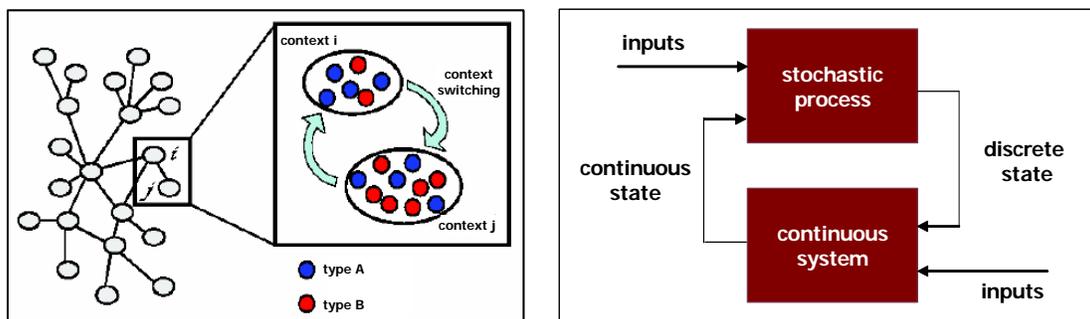
Social Democratic Party, and 3) a combined *empirical/theoretical investigation* of Islamic mobilization warning analysis involving both successful and unsuccessful mobilization events and using online social activity as the main data source.

It is widely recognized that collective dynamics are central to a variety of social movement processes such as recruitment, attracting support, development and dissemination of ideas, and expressive action. However, there has been little done to rigorously explore the implications of these dynamics for anticipating successful movements. A key step in understanding these dynamics and their impact on predictive analysis is the formulation of appropriate social dynamics models. Recent work has clearly demonstrated the importance of capturing social network effects when modeling social processes (Newman 2003). Unfortunately, detailed information concerning the relevant social networks is not typically available. Additionally, even when these data can be estimated, naïve approaches to modeling the networks often lead to unnecessarily complicated models and subsequent analytic difficulties.

These facts motivate the development of a class of *multi-scale* models for social processes. The proposed multi-scale representation reflects the essential structures present in the social systems of interest through the use of three modeling scales:

- a *micro-scale*, for modeling the behavior of individuals;
- a *meso-scale*, which enables efficient yet accurate representation of the collective dynamics within social contexts (via “fully mixed” models for the interaction dynamics);
- a *macro-scale*, which characterizes the interaction between the social contexts.

A schematic of the basic framework is given in Figure 6.



**Figure 6. Multi-scale Model for Social Processes**

The drawing at left illustrates the basic model structure, in which individuals represented by blue and red nodes interact *within* social contexts of ellipses encircling nodes via fully mixed dynamics and *between* contexts according to the network topology characterizing context relationships. The block diagram at right depicts a hybrid dynamical system encoding of the model.

This multi-scale approach alleviates the need for detailed social network data because interactions within social contexts are modeled as fully mixed. Moreover, by distinguishing between the way individuals interact within and across social contexts, we simultaneously capture the important social network structure and obtain analytically tractable mathematical formulations. Note that the characterization of intra-context and inter-context dynamics implicit in the proposed multi-scale framework is based on established social science understanding (Watts et al. 2002).

We develop and analyze multi-scale social dynamics models using the hybrid dynamical system (HDS) formalism (Bemporad et al. 2007, Colbaugh et al. 2007). Briefly, HDS's are feedback interconnections of continuous dynamics, such as the dynamics of individuals exchanging ideas within a social context, and discrete dynamics, capturing for instance the switching behavior encountered when an individual from one context moves to another and introduces an idea that is novel in the latter context (see Figure 6). An advantage of representing multi-scale social dynamics using an HDS framework is that the resulting models are amenable to quantitative analysis. For example, the approach to predictability assessment summarized in Appendix D can be implemented with HDS models, enabling rigorous analysis of these systems (Colbaugh and Glass 2007); see Appendix D for sample Matlab programs for performing this analysis.

As indicated above, we begin our study of the early warning problem with an investigation of *general* social movements. This broader setting is reasonably well-characterized both theoretically and empirically and therefore provides the opportunity to identify candidate early indicators in a principled way. Candidate indicators, if any, can then be tested for relevance to Islamic mobilization and radicalization. Consider the problem of identifying those measurables that permit successful social movements attracting significant following to be distinguished from unsuccessful ones early in their lifecycle. This problem is naturally formulated within the proposed predictability assessment framework. Movement success is quantified by defining a subset  $X_s$  of the social system state space that corresponds to a level of movement membership consistent with movement goals, and we seek measurables that allow early identification of those movements that are likely to evolve to  $X_s$  (see Appendix D).

In the theoretical study of social movements, we first collect a family of models from the SMT literature and formulate these within our multi-scale, HDS framework. This approach yields models that appropriately represent social network effects while remaining broadly consistent with current SMT thinking. We adopt a stochastic hybrid system (S-HDS) representation for social movements (see Appendix D) and find that this formulation enables *simultaneous* analysis of an entire collection of relevant SMT models. More precisely, the model abstraction methodology presented in (Colbaugh et al. 2007) is employed to derive a "base model" whose parameterization enables any model in the family of interest to be recovered through suitable specification of parameter values. We then work with the complete family of models all at once by conducting the analysis for the entire set of feasible parameter values.

The continuous system portion of the S-HDS model (see Figure 6) is a collection of stochastic differential equations (SDE), each of which captures a particular instantiation of the intra-context social dynamics. This collection is indexed by a discrete “mode”  $q \in Q$  that specifies which vector SDE is currently active. The mode  $q$  concisely quantifies the history of inter-context interactions, and specification of the appropriate active SDE is based on this history. Thus, for example, a particular sequence of inter-context communications concerning new information leads to a certain distribution of informed individuals across social contexts, and this distribution in turn impacts the subsequent intra-context dynamics. Mode  $q$  evolves according to a Markov chain with state set  $Q$  and continuous state dependent transition probabilities. This is the discrete system component of the S-HDS (see Figure 6).

Let us describe one such S-HDS model in more specific terms. Consider for simplicity a social system composed of only two contexts, one which contains a small fraction of individuals who have adopted an opinion and one that has not been exposed to this new idea. We can model the diffusion of the opinion within the two contexts using one set of coupled differential equations for each context (e.g., the Hedstrom model analyzed in Appendix E); these two sets of differential equations form the continuous system within the S-HDS framework. The discrete system part of the S-HDS then captures the dynamics associated with an individual from the first context moving to the second and introducing the novel idea there. One way to model this context switching phenomenon is to use a Markov chain with continuous state-dependent transition probabilities. This dependency enables us to monitor only the movement of individuals who have adopted the novel opinion, as this is all that is needed to assess the possibility of the opinion “escaping” the first context (see Appendix D for additional details).

Predictability assessment is performed for the collection of S-HDS social movement models within a stochastic setting. That is, we compute provably correct upper and lower bounds for the probability that any model in the collection will reach  $X_s$  from  $X_0$  (the set of admissible initial states.) Because this computation does not require forward simulation and can be conducted for *sets* of initial states and parameter values, we can efficiently explore the way various measurables affect these probability bounds. Those measurables for which the probability of reaching  $X_s$  exhibits sensitive dependence are designated to be potentially useful indicators of movement success.

Briefly, this study produced two main results. First, the degree to which movement-related activity shows *early diffusion* across multiple social contexts is a powerful distinguisher of successful and unsuccessful social movements. Indeed, this measurable appears to have significantly more predictive power than *volume* of such activity and also more power than various system intrinsics. Second, significant social movements can occur only if both 1) the intra-context “infectivity” of the movement exceeds a certain threshold, and 2) the inter-context interactions associated with the movement occur with a frequency that is larger than another threshold. Note that this is reminiscent of, and significantly extends, well-known results for epidemic thresholds in disease propagation models (see Appendix D for additional details).

The empirical investigation of early warning analysis for social movements involved several data-rich social movement case studies, including the emergence and growth of the Swedish Social Democratic Party (SDP). The case of the SDP is particularly relevant for our purposes, as the early activities of political “agitators” associated with the SDP led to the establishment of a well-defined and well-documented network linking previously disparate geographically and demographically based social contexts in Sweden (Hedstrom et al. 2000).<sup>9</sup> We explore the role played by this inter-context network by analyzing archived data and published accounts describing the dynamics of the SDP. Our investigation uses standard time series analysis techniques similar to those employed in (Hedstrom et al. 2000) and reveals that an important predictor of SDP spatio-temporal dynamics is *early diffusion* of SDP-related activity across social contexts. In fact, this measurable has more predictive power than demographic and political features of the population.

The visualization at the top of Figure 7 depicts the temporal evolution of the concentration of SDP members in approximately 360 Swedish jurisdictional districts over the period 1885 to 1947. In this rendering of the data, the horizontal coordinate axis is district index, the vertical coordinate is time, and the colors indicate variation from minimum member concentration (dark blue) to maximum concentration (red). Visual inspection of the figure reveals the expected “contagion” effect in membership evolution, in which districts that are close geographically experience similar membership trajectories (geographically proximate districts have index values that are close). However, this visualization also shows that in the early years of the party, some geographically disparate districts initiated local party chapters almost simultaneously and then experienced similar growth patterns.

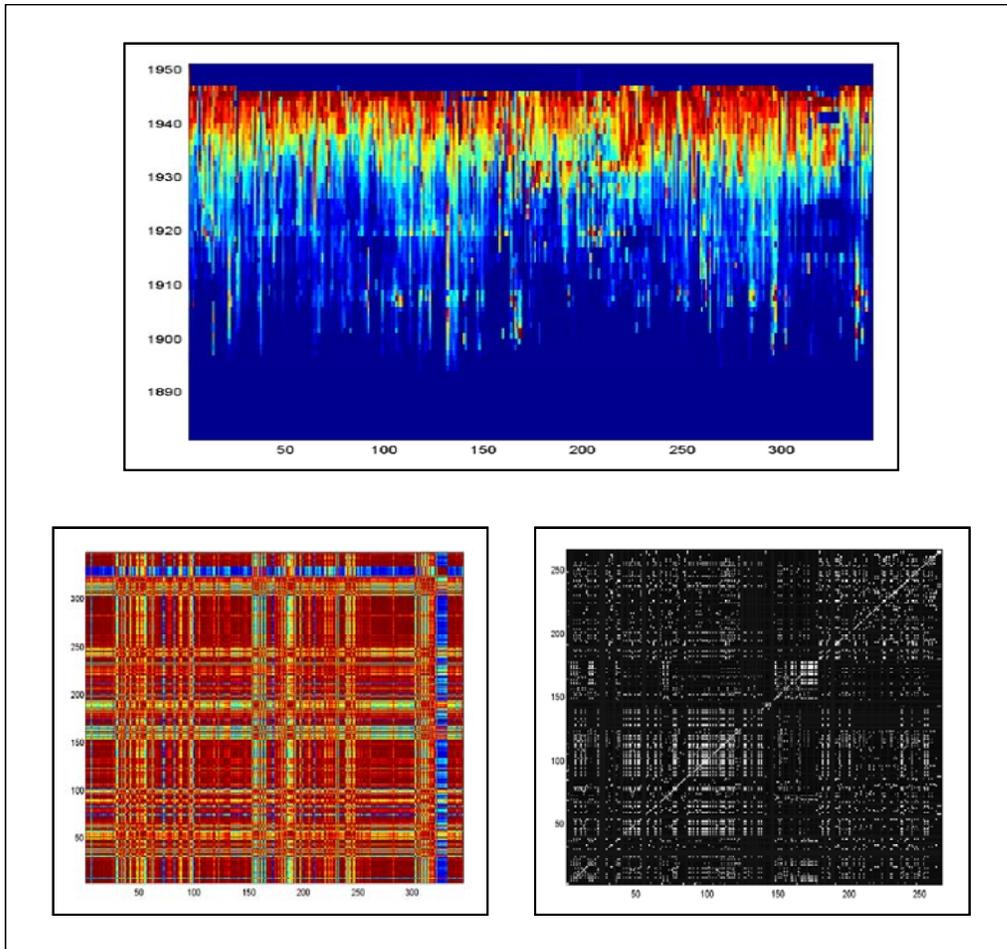
The cross-correlation results at the bottom of Figure 7 confirm this observation. The time series of membership concentration on the left and local party office founding on the right show both local geographic correlations, corresponding to contagion effects, and also non-local effects. Further analysis (not shown) indicates that these correlations are significantly larger than those observed in appropriately randomized data. More interestingly, we find that the non-local correlations can be explained by the inter-context network established by early party activists: those districts that exhibit similar early party initiation and growth are also those with direct (activist-induced) inter-context links. Thus inter-context dynamics appear to have played an important role in the emergence and growth of the SDP.

The theoretical and empirical results summarized above suggest social network dynamics are critical to social movement success. Moreover, the results show that the features of these dynamics that may be useful early indicators of movement success are practically measurable in many applications. For instance, diffusion across social contexts often can be inferred from analysis of public opinion and demographic data, as this measure requires only incomplete information regarding the relevant social networks. For instance, in a preliminary examination of Palestine public opinion data regarding suicide

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<sup>9</sup> The Hedstrom model was explored in depth during this research to better understand the inherent dynamics of the underlying phenomenology of social movements. This exploration is reported in Appendix E.

bombings, we find that social contexts inferred from age, education level, and geographic location data produce results that are consistent with those obtained in the theoretical and SDP studies.



**Figure 7. Sample Results for the Swedish Social Democratic Party Case Study**

We investigated whether diffusion across social contexts is a useful early indicator for Islamic mobilization and protest events. More specifically, we explored the extent to which this measurable distinguishes successful and unsuccessful Islamic mobilization events early in the mobilization process. Recall that there is considerable theoretical and empirical evidence indicating that understanding such events, and the associated social dynamics and overall social environment, is central to understanding and anticipating Islamic radicalization

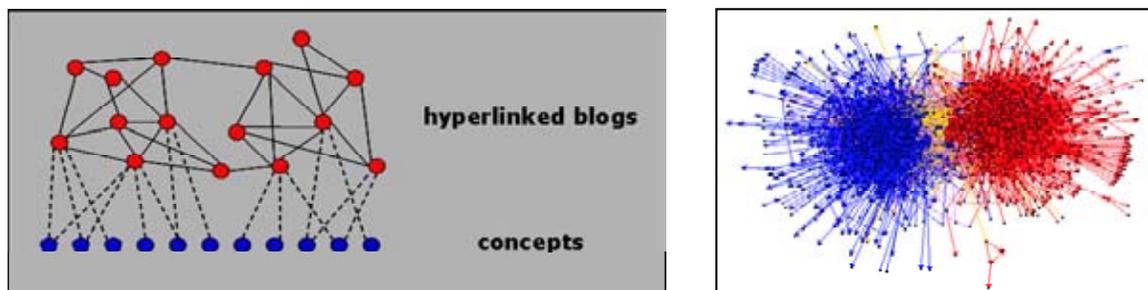
The study focuses on Muslim reaction to six recent incidents, each of which appeared at the outset to have the potential to trigger significant protest activities:

- publication of photographs and accounts of prisoner abuse at Abu Ghraib in Spring 2004;

- publication of cartoons depicting the prophet Mohammad in the Danish newspaper *Jyllands-Posten* in September 2005;
- distribution of the DVD *I was blind but now I can see* in Egypt in October 2005;
- the lecture given by Pope Benedict XVI in September 2006 in which he quoted controversial material concerning Islam;
- Salman Rushdie being knighted in June 2007;
- re-publication of the “Danish cartoons” in various newspapers in February 2008.

Recall that the first of the Danish cartoons events ultimately led to substantial Muslim mobilization, including massive protests and considerable violence and that the Egypt DVD event also resulted in significant Muslim mobilization and violence. In contrast, Muslim outrage triggered by Abu Ghraib, the Pope lecture, the Rushdie knighting, and the second Danish cartoons event all subsided quickly with essentially no violence. Therefore, taken together, these six events provide a useful setting for testing whether the extent of early diffusion across social contexts can be used to distinguish nascent Islamic mobilization events that become large and self-sustaining, and also potentially violent, from those that quickly dissipate.

A central element in the proposed approach to early warning analysis is the measurement, and appropriate processing, of social dynamics associated with the process of interest. Indeed, the preceding results suggest that in many cases, reliable warning analysis *requires* such data. In the present case study, we use online social activity as a proxy for “real world” diffusion of mobilization-relevant information. More specifically, we use blog-based communications and discussions as our primary data set. The “blogosphere” is modeled as a graph composed of two types of vertices, the blogs themselves and the concepts that appear in them. Two blogs are linked if a post in one hyperlinks to a post in the other, and a blog is linked to a concept if the blog contains a significant occurrence of that concept. Figure 8 shows a schematic representation of this sort of blog graph. Among other things, this blog graph model enables the identification of blog communities—that is, sets of blogs with intra-group edge densities that are significantly higher than expected [Newman 2003]. In what follows, these blog communities serve as one proxy for social contexts as shown in Figure 8.



**Figure 8. Schematic Representation of Blog Graph Model.**

The schematic on left depicts the basic graph structure, in which blogs (red vertices) can be connected to each other via hyperlinks (solid edges) and also connected to concepts

(blue vertices) they contain. Blog graph on right corresponds to political blogs; note that in this graph, liberal (blue) and conservative (red) blogs form two distinct communities.

We propose the following procedure or steps for warning analysis using blog data given a potential “triggering” event of interest

1. Use key words and concepts associated with the triggering event to collect relevant blog posts and build the associated blog graph.
2. Identify the blog social contexts (e.g., graph community-based, language-based).
3. Construct the post volume time series for each social context. Compute the post/context entropy time series associated with the post volume time series.
4. Construct a synthetic ensemble of post/context entropy time series from (actual) post volume time series using a general S-HDS social diffusion model.
5. Perform motif detection: compare the actual post / context entropy time series to the synthetic ensemble series to determine if the early diffusion of activity across contexts is “excessive.” Flag events with excessive early diffusion for further (e.g., manual) analysis.

Step 1 is by now a standard operation in web mining applications, and various “off the shelf” tools exist that can perform this task. For instance, in this study we employ Google Blogs together with tools developed by the Artificial Intelligence Laboratory at the University of Arizona [AI Lab 2007].

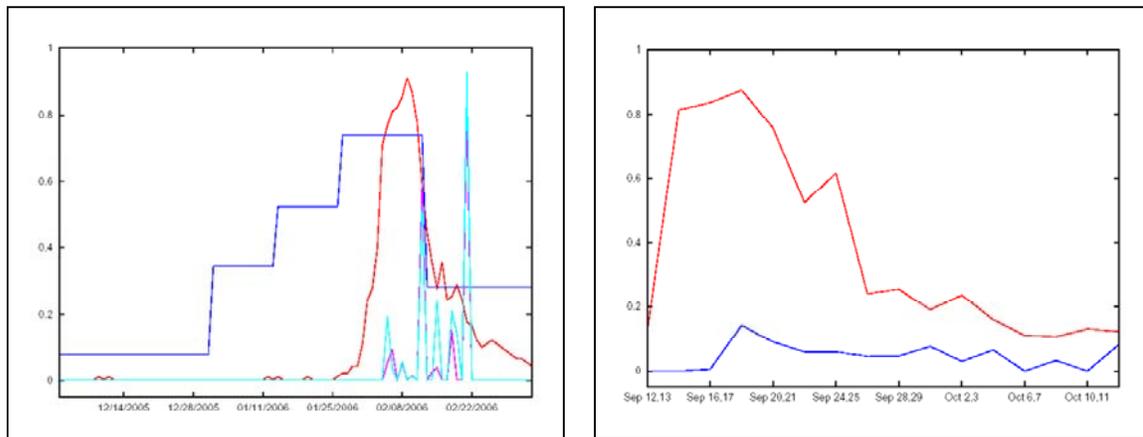
In Step 2 we use two definitions for blog social context: graph-community based, in which the contexts are graph communities found through standard community extraction applied to the blog graph, and language-based, in which contexts are defined based on language of the posts. Google Blogs archives blog posts in 43 languages.

In Step 3, post volume for a given context  $i$  and sampling interval  $t$  is obtained by counting the number of relevant posts made in the blogs comprising context  $i$  during interval  $t$ , and the post volume time series are simply the concatenation of these counts. Post/context entropy (PCE) for a given sampling interval  $t$  is defined as follows:

$$\text{PCE}(t) = -\sum_i f_i(t) \log(f_i(t)),$$

where  $f_i(t)$  is the fraction of total relevant posts during interval  $t$  which occur in context  $i$ ; the associated time series is again simply the sequence of these values.

Given the post volume time series obtained in Step 3, Step 4 involves the construction of an ensemble of PCE time series that would be expected under “normal circumstances,” that is, if Muslim reaction to the triggering event diffused from a small “seed set” of initiators according to SMT social dynamics. For this study, we use the multi-scale S-HDS modeling framework to generate the PCE time series ensembles. Finally, motif detection in Step 5 is carried out by searching for periods, if any, during which the actual PCE time series is excessive relative to the synthetic PCE ensemble (e.g., exceeds the mean of the ensemble by two standard deviations).



<u>Time series motif analysis</u>	
Event	Motif
Danish cartoons 1:	1/1–1/26/2006.
Egypt DVD release:	10/2–10/9/2005.
Abu Ghraib story:	none.
Pope lecture:	none.
Rushdie knighting:	none.
Danish cartoons 2:	none

**Figure 9. Sample Results for Islamic Mobilization Case Study.**

The time series plots at the top correspond to the first Danish cartoon event (left) and the Pope event (right). In each plot, the red curve is blog volume and the blue curve is blog entropy; the Danish cartoon plot also shows two measures of violence (pale blue and purple lines). Note that while the data are scaled to allow multiple data sets to be graphed on each plot, the scale for entropy is consistent across plots to enable cross-event comparison. The table at the bottom summarizes the result of the motif analysis study. Note that only the first Danish cartoons event and Egypt DVD event exhibit time series motifs.

We now apply the proposed approach to early warning analysis to the Islamic mobilization case study. If early diffusion of discussions across blog communities is an indicator that the associated Islamic mobilization event will be large, we would expect to observe such diffusion with the mobilization associated with the first Danish cartoons and Egypt DVD events and not with the other four events. Additionally, we would expect this early diffusion to be excessive, relative to the synthetic ensemble, for the first two events and not for the latter four. As can be seen in Figure 9, this is precisely what we find. In the case of the first Danish cartoons event, the entropy of diffusion of relevant discussions across blog communities (blue curve) experiences a dramatic increase a few weeks before the corresponding increase in the volume of blog discussions (red curve); this latter increase, in turn, occurs before any violence. In contrast, in the case of the Pope event, the entropy of diffusion of discussions across blog communities is small relative to the cartoons event, and any increase in this measure lags discussion volume. Similar curves are obtained for the other four events. More importantly, the proposed motif detection process also yields the expected result: motifs are found only for the Danish cartoons and Egypt DVD events, and these motifs precede significant blog volume and

real world violence. Note that qualitatively similar results are obtained for both the graph community-based and language-based definitions of social context. This case study suggests that early diffusion of mobilization-related activity (here blog discussions) across disparate social contexts (blog communities) may be a useful early indicator of successful mobilization events.

The Muslim response to the publication of cartoons by the Danish newspaper *Jyllands-Posten* was explored in more depth in this research through the lenses of Social Movement and Argumentation Theories. Appendix A contains the collection of these cartoons.

In the meso model a *bag-of-words* approach was used to provide this content analysis. To delve further into blog content, a collection of eight blogs was examined in more depth. The eight chosen (see Appendix F) were those that were assessed to be *seminal* in the sense that they stimulated a significant level of subsequent blogging activity. The purpose of this more in-depth analysis of the content of these blogs was to more carefully explore for relationships to SMT and specifically to seek information regarding motivation and intent of the bloggers.

The next level of detail in this content analysis was directed toward determination of relative emphasis—*within each blog*—on each of the three elements of SMT; namely, Framing, Opportunities & Constraints, and Resource Mobilization. The relativistic assessment, using pairwise comparisons of the use of the three SMT elements for each of the eight seminal blogs, revealed that the *Framing Element* of SMT is the dominant theme for most of the eight blogs. Appendix G contains the detailed results of this analysis. Further, the summary statistics for the relativistic composite of the eight seminal blogs provided the insights that:

- framing is clearly the most dominant of the three SMT dimensions,
- resource mobilization and opportunities/constraints are nearly equivalent, and
- the eight bloggers were most consistent in their use of resource mobilization and least consistent in their use of opportunities/constraints.

These summary statistics are intuitively consistent with the relationships between the underlying themes of the three fundamental elements of SMT and the motivation and intent of the bloggers. Because the Framing element is focused on:

- diagnosing the problem(s) and the need for redress;
- providing the rationale to motivate support and collective action, and
- offering solutions, strategies, and tactics that ameliorate the injustice;

the Framing element of SMT is the element of choice for those wishing to stimulate support for their cause. Further, because of the relative consistency of need for the mobilization of resources (RM) to support the cause and because of the emergence and disappearance of both opportunities and constraints (O&C), it is not surprising that there is less variability in the use of the RM than there is in O&C by the bloggers.

The final level of detail in content analysis for this research focused specifically on one of the eight seminal blogs. Appendix G provides a discussion of this analysis. This blog

was chosen because it was viewed as being especially relevant to the motivation and intent imperative in that it framed the cartoons as an affront to the Islamic religion (motivation) and argued for a reaction (intent) to stimulate amusement, shock, and fear among Muslims. This analysis was conducted using the well-developed discipline of argumentation. Argumentation<sup>10</sup> is the study of reasons given by people to justify their acts or beliefs and to influence the thoughts or action of others. Although argumentation theory is well developed, the authors are unaware of a direct application of this theory to the analysis of blogs

Elements of argument are:

- *Claims* are the statements that we want listeners to believe and on which we want them to act.
- *Evidence*<sup>11</sup> represents the grounds for making the claim.
- The *inference* is the main proof line leading from evidence to claim.
- The *warrant* is the license to make the claim.

Further, the four basic forms of claims are:

- Claims of *fact* involve description.
- Claims of *definition* involve interpretation.
- Claims of *value* involve judgment.
- Claims of *policy* involve action.

In the case of blog Number 8, which can be found in Appendix F, the dominant claims are those of value (judgment) and of fact (description). This example is one that was assessed to be essentially a framing blog.

In drawing a qualitative connection between Argumentation and Social Movement Theories, a collection of relative relationships are listed in Table 1 below. These relationships are intuitive estimates and are not based on any rigorous analyses.

**Table 1. Potential Relationships among the Categories of Argumentation Claims and the Fundamental Elements of Social Movement Theory.**

	Framing	Opp & Constraints	Res Mobilization
Description	Moderate	High	
Interpretation	Moderate	High	
Judgment	High		
Action	High		High

Nevertheless, they do provide one vantage point for understanding Islamic radicalization in the context of SMT through the lens of Argumentation Theory. This connection has the potential to be of value from two important aspects. First, this vantage point has the potential to provide more in-depth insights into the forces underlying the emergence of

<sup>10</sup> An excellent overview of Argumentation is provided in the text authored by David Zarefsky, *Argumentation: The Study of Effective Reasoning*, 2<sup>nd</sup> edition, The Teaching Company, 2005.

<sup>11</sup> Both the evidence and the warrant must either be accepted by the audience or they must be established by a separate argument.

radical behavior. Second, this vantage point may provide insights into how to use the blogosphere to influence the emergent dialog to effectively create an impact on the resulting actions take by the potential radicals.

### *Situational Awareness: Context and Framing*

In addition to developing methods for early warning analysis of Islamic mobilization and protest events, and showing that such capabilities are likely to be of importance for understanding and anticipating radicalization, we also derived two techniques for obtaining situational awareness of relevance to radicalization phenomena. These two capabilities leverage insights provided by the R-SMT kernel, particularly related to the framing and opportunities and constraints aspects of the kernel, and take the form of algorithms that map real world data to situational awareness as shown previously in Figure 2. The two algorithms are now briefly summarized. A detailed description of these capabilities and the results obtained when applying them to several case studies are given in Appendices I and J.

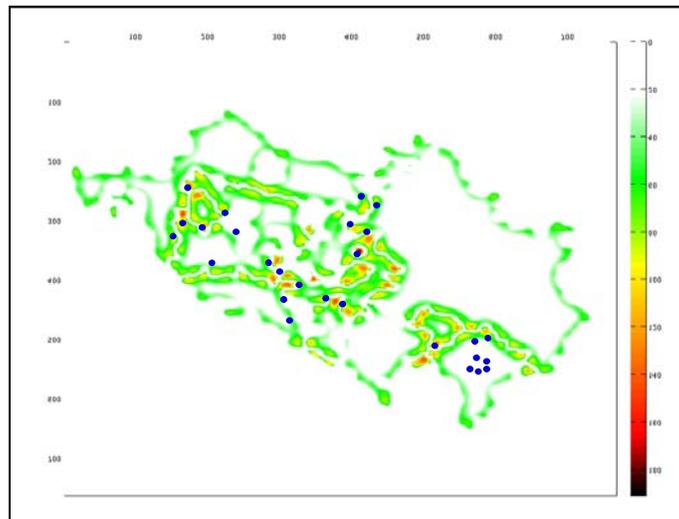
#### **Technique One for obtaining situational awareness**

Ethnic/cultural violence is an important element of global conflict in general and much radicalization phenomena in particular. The first of our two situational awareness algorithms detects regions of the world with increased likelihood for ethnic violence, and has the potential to contribute to the objectives of understanding and anticipating radicalization by enabling analysts to focus their attention on “hot spots” with elevated potential for conflict and violence. The analytic approach is based on recent results reported in Gulden (2002) and Lim et al. (2007), each of which shows quantitative correlations between outbreaks of regional violence and certain features of the spatial distribution of ethnic groups. These results form the foundations for our development of a “filtering” algorithm that maps coarse-grained data on the spatial distribution of ethnic populations to quantitative assessments of violence potential. More specifically, the algorithm operates on data defining the spatial distribution of ethnic groups in the region of interest, convolving this data with the “Mexican hat” approximation of the two-dimensional Laplacian. The resulting filter identifies regions in which the minority occupies a peninsular region surrounded by the majority, a distribution found to be correlated with ethnic violence. The algorithm is computationally robust and practically implementable because it requires only fairly low resolution data.

The algorithm was tested through case studies involving ethnic conflict in the former Yugoslavia during the 1990s and in Guatemala during the period 1977 to 1986. In each case, the “hot spots” nominated by the algorithm are in good agreement with the locations that experienced violent conflict as shown in Figure 10 by the blue dots, although violent events that occurred in Kosovo are missed. Additional discussion of the algorithm and its performance on former Yugoslavia and Guatemala data are provided in Appendix I.

#### **Technique Two for obtaining situational awareness**

The second situational awareness capability is a method for automatically identifying and characterizing framing documents in a large text resource. For more information see Appendix J: Automated Identification and Analysis of Framing Document for Global Climate Change. Framing is a crucial element of social movements, including radicalization. For instance, the R-SMT kernel identifies and quantifies the important roles played by framing in social movements, and our preliminary findings in blog content analysis supports this characterization. However, for analysts to exploit the valuable information contained in framing documents, it is necessary to locate such documents in the vast text resource on the web, in classified and unclassified collections of reports, and in other repositories of potentially relevant documents. Manual monitoring of these data sets in the search for text that is indicative of the framing process is not feasible in the time frame necessary to detect a growing trend towards violent social action. Thus, it is necessary to develop techniques for automatically ingesting text documents and sifting out those texts that are part of the framing process.



**Figure 10. Sites of Ethnic Violence (blue dots) and Algorithm Nominated “Hot Spots” in the Former Yugoslavia.**

This situational awareness methodology provides the capability to automatically distinguish framing from nonframing documents and further classify a framing document as performing one of the three framing tasks specified in the R-SMT kernel: diagnostic, prognostic, and motivation. The proposed analytic process combines Latent Semantic Analysis techniques and statistical modeling to produce text analysis algorithms that, once trained, can classify new documents with high accuracy. More specifically, the proposed analysis process consists of three main steps:

- Parse the documents and map them into a matrix representation in which matrix rows and columns correspond to corpus terms and documents, respectively, and the term weights (frequencies) populate the matrix cells.

- Approximate the corpus matrix constructed above with a low rank matrix obtained through Singular Value Decomposition and calculate a set of numerical values for each text document. These values are the “features” used by the document classification algorithm.
- Construct and train a logistic regression classification algorithm which identifies and characterizes framing documents based on the document features computed above.

The proposed methodology was tested on a collection of documents associated with the global warming debate. This choice of case study was motivated in part by the availability of open-source text documents, in electronic form, addressing the topic of global warming. Briefly, the classification algorithm performed very well in this case study. For instance, the algorithm correctly classified approximately 98 percent of the framing documents and 96 percent of the nonframing documents in the test data set. Additional discussion of the methodology and its performance in the global warming case study is given in Appendix J.

# Recommendations for Next Phases of This Research

## Phase I: Develop and demonstrate a prototype

This task will focus on demonstrating the Transnational Islamic Activism and Radicalism (TIARA) methodology by using the Danish cartoons as a case study. An argument will be provided that draws clear parallels between that case study and other important, relevant cases. The complementary analytical modalities in this prototype will be the meso-scale, which focuses on the social dynamics of groups, and the macro-scale, which focuses on the system dynamics of the societies writ large.

The prototype will:

- Provide both a meso and macro-scale analysis of both Danish cartoon events, including analysis aimed at explaining why these two events evolved so differently.
- Develop and demonstrate analytic mathematical relationships between the meso and macro scale models. This will center on the framing perspective of SMT.
- Quantitatively explore the relationship between public/group opinion dynamics, such as those reflected in the Danish cartoon case study, and radicalization/terrorist activity. Evidence of such a relationship would provide support for the national security relevance of the Danish cartoon case study.

## Phase II: Exploration and demonstration

The exploration will be directed toward the enhancement of TIARA's predictive capabilities by:

- Including message content analysis in the analysis of social dynamics,
- Extending the federated modeling tools to include the dynamics of Individuals as well as that of Groups and the collective Society; and
- Developing a more comprehensive characterization and exploitation of Social Movement Theory that includes the Framing Process and Opportunities & Constraints in addition to Resource Mobilization.

The demonstration will be centered on applying TIARA to an emergent threat of significant value to the Department of Homeland Security (DHS). The demonstration will apply the full suite of TIARA's federated methodologies, the full spectrum of the SMT dimensions, and the enhanced message content analysis to the case studies that are chosen by the DHS stakeholder community.

### Task II.1 – Develop and demonstrate enhanced message content analysis

The preliminary analysis conducted for the prototype used simple keyword-based analysis to identify appropriate blogs to analyze, and applied novel, sophisticated dynamical systems and graph theoretic analysis to extract useful “warning” information from the blog time series. We propose to enhance this capability by performing

substantially deeper content analysis so as to retain computational tractability. We expect to realize these competing goals by leveraging both SMT and our previous results in blog time series analysis.

### **Task II.2 – Define the case studies on which to demonstrate TIARA**

The Danish cartoon cases that were analyzed during Phase I demonstrated the value of TIARA information in the context of a well documented social phenomenon. The next step is to demonstrate the TIARA methodology using a case study that is of strategic importance to the Department of Homeland Security (DHS). In order to select the most appropriate case studies a rigorous stakeholder dialog, the Vital Issues Process (VIP), will be implemented. This process is described in more depth in Appendix K. The dialog will have both qualitative as well as quantitative components. The qualitative component is based on real time textual analysis which facilitates deconstruction of the relationships among the participating stakeholders and the identification and definition of objectives through consensus-building techniques. The quantitative component generates a cardinal ranking (the first moment) that can be used in nonlinear optimization and quantification of the level of agreement among stakeholders (the second moment) that is intrinsically valuable for risk assessment. This task will employ two VIP panel meetings:

- VIP1 to identify the criteria by which to choose the case studies and the relative importance to the DHS, and
- VIP2 to determine the candidate case studies and their relative value to the DHS.

### **Task II.3 – Extend the federated analytical tools to include micro-scale modeling**

The two methodologies used to form the basis of TIARA during Phase I were Social Dynamics and System Dynamics. These two methodologies captured the Group and the Societal dynamics, respectively. The intent of this task is to explore the inclusion into TIARA of modeling the dynamics of the Individual. The methodology to be explored for modeling the Individual Dynamics is Intelligent Agents (IA). The product of this task will be a TIARA methodology that is a federated suite of tools to capture the intricate interplay among the three Social Dimensions: the Individual, the Group, and the Societal. Improvements in the predictive capabilities resulting from the enhanced fidelity of this federated suite of tools will be explored in this task. It is noteworthy that IAs can also be of use in gathering information. The use of IAs in on-line environments such as the blogosphere will also be explored.

### **Task II.4 – Develop and implement the analytic relationships for all three dimensions of Social Movement Theory; Resource Mobilization, Opportunities & Constraints, and Framing Processes**

Phase I of TIARA developed a preliminary characterization of Social Movement Theory using the three fundamental dimensions: Resource Mobilization, Opportunities &

Constraints, and the Framing Process. During Phase I the interplay between the Group Dynamics and the Societal Dynamics was modeled with a focus on Resource Mobilization. The intent of this task is to enhance the understanding and ideally, the predictive fidelity of TIARA by extending this modeling scope to include the other two fundamental dimensions of Opportunities and Constraints, and the Framing Process.

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## Appendix B: Scientific and Technical Intelligence Committee Workshop Papers

*Note: These papers are presented here in the original DRAFT format with no attempts to correct grammar or spelling.*

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This essay offers brief descriptions of four (4) different social movement perspectives that have been used to explain social movement emergence and fluctuations. The essay also attempts to describe what each of these perspectives may say about *why* some social movement groups turn to radicalization and violence.

### *Strain Theories*

Strain theories, popular through the 1950s and 1960s, argued that groups will mobilize when they face broad-scale social changes, including economic crisis, wars, the loss of supporting social institutions, or mass migrations (Gusfield 1963; Hofstadter 1955; Kornhauser 1959). The strain theories of the early 1960s focused primarily on the right-wing movements (e.g., Nazism, fascism, Stalinism, McCarthyism) active throughout the 1940s, 1950s and early 1960s (Garner 1997), and included both macro- and individual-level components. At the *macro-level*, the theory argued that mobilization is influenced by broad social changes, including the restructuring of the economy (Bell 1963), changes in international relations (Parsons 1963), and immigration (Lipset 1963). Those enjoying relatively powerful positions in society by virtue of their class, gender, ethnicity, and so on, may have sufficient economic and organizational resources and political leverage to mobilize, but may only be inspired to do so only when faced with a loss of this power. The *individual-level* (or social psychological) component of the theory suggested that socially isolated individuals are more likely to participate in movements, and that participation was a response to psychological distress (Kornhauser 1959; Turner and Killian 1986). While strain theory was popular through the mid-1960s, research on the left-oriented movements that emerged during the 1960's led to questions about its utility (Garner 1997). Associated with the strain perspective, as it has evolved, are at least four rather different claims or themes: One is the *mass society* variant that accents the disintegration of social ties (Kornhauser 1959); a second is the *absolute deprivation* thesis that focuses on immiserating life conditions, such as extreme poverty (Van Dyke and Soule 2002); a third is the *relative deprivation* thesis, with its emphasis on the perceived discrepancy between expectation and attainment (Gurr 1969), and a fourth is the "quotidian disruption" thesis, which highlights the disruption of everyday subsistence and survival routines (Snow et al. 1998; Walsh 1981).

*Applied to Radicalization:* Strain theories (especially the individual-oriented components) have fallen from favor of scholars in this area. However, it might be worth examining the potential utility of strain models with respect to some social movements, in particular

*reactive social movements*, or those which mobilization in response to the real or perceived loss of power or resources (Tilly 1978; Van Dyke and Soule 2002). It is important to consider the effect of *threat* (both real and perceived) on mobilization and radicalization. Several scholars studying right right-wing extremism and racial violence have suggested that mobilization is a function of unstable macro-level phenomena such as unemployment and changes in the size of minority populations (Barret 1987; Beck 2000; Koopmans 1996; McVeigh 1999). Koopmans (1996), for example, demonstrates that an influx of refugees into Western European countries is associated with an increase in right-wing racist violence. Kitschelt (1995) shows that right-wing political parties in Europe have also responded to increased immigration, and to changes in the economic structure. And, Castells (1997) argues that processes of globalization and economic restructuring have influenced the rise of fundamentalist movements in all parts of the world. Thus, it might be useful to consider the ways in which threat can lead to mobilization and radicalization.

### Resource Mobilization (RMT)

The central, orienting premise of the resource mobilization perspective is that the emergence and persistence of social movement activity is contingent on the availability of resources that can be channeled into movement mobilization and activity (Jenkins 1983; McCarthy and Zald 1977; McAdam, McCarthy, and Zald 1988). According to this perspective, the availability, aggregation, and deployment of resources are regarded as among the most critical determinants of the development and character of social movements. Although people, money, organizations, and legitimacy are typically mentioned as major resources, there continue to be efforts to clarify conceptually and operationally what constitutes an essential “resource” and to assess the relative importance of different resources (Cress and Snow 1996; Edwards and McCarthy 2004).

*Applied to Radicalization:* How the *source* of resources impacts the tactics chosen by a particular group is one of the issues that might be examined with respect to the role of resources in radicalization. Juska and Edwards (2005), for example, discuss the contributions by the Animal Welfare Institute, an advocacy organization in the US, to a confrontational direct action campaign in Poland designed to block corporate-style farming in that country. While this advocacy organization did not participate directly in the confrontational actions, they did provide a variety of different kinds of resources to a group that did use confrontational tactics. The flipside of this is when certain sources of resources lead to *less* radical and confrontational resources, as was the case in Jenkins and Eckert’s (1986) study of foundation funding of movements, which lead to more moderate movement goals and tactics. Or, we can also think about how funding and other resources provided by religious organizations and or corporations (Edwards and McCarthy 2004) may impact tactical choice of groups.

A second issue that we might consider is precisely the level of resources needed for various tactics. Some tactics require more or less of a given kind of resource. For example, some protest tactics cost more money than others to deploy (e.g., costs of travel, information dissemination, materials, etc). Or, certain tactics cost more in terms of

“people-resources”. For example, mass demonstrations require a critical mass of people, while the September 11<sup>th</sup> attacks required fewer people, however those people needed to possess a set of skills (e.g., piloting airliners).

A final and related issue is that we might consider not just the number of people (as a resource) needed for certain activities, but the social bases of these people. People who are familiar with the workings of the institutional bases of the political system of a given country or state are one type of resource. Movements drawing on this type of people-resource may favor more institutional and less confrontational tactics and goals. However, people who are outsiders to the political system may favor more radical and violent tactics, thus movements drawing on this type of people-resource may be more inclined toward radicalization. Thus, considering the social bases of support for a particular movement ought to be critical.

### Political Opportunity Structure

Overlapping with the resource mobilization perspective, with its emphasis on the resource context and related organizational factors, is the political process model, with its emphasis on the context or structure of political opportunities (McAdam 1982; Tarrow 1994; Tilly 1978). Although there is no single, consensual definition of political opportunity structure, Tarrow’s working conceptualization will suffice: “consistent... dimensions of the political environment that provide incentives for people to undertake collective action by affecting their expectations for success or failure” (1994: 85). Underlying this conception are three interrelated observations: that political systems can vary considerably in terms of how receptive (open) or unreceptive (closed) they are to organized protest and challenge; that this variability is signaled by or read from the system’s ongoing functioning; and that these signals to or readings by social and political actors either encourage or discourage their mobilization into social movements. In his synthesis of a number of scholarly treatments of this issue, McAdam (1996: 26-29) has identified a “highly consensual list of (four) dimensions of political opportunity:” (1) system accessibility or the degree to which a political system is open or closed to challenge; (2) the relative stability of the pattern of political alignments within a system; (3) the presence or absence of influential allies; and (4) the repressive capacity of the state or relevant political entity.

*Applied to radicalization:* One key issue that might be considered overlaps with the discussion (above, Strain section) on the mobilizing effect of “threat.” In that section, threats came primarily from immigration, economic recession, and globalization. But, it is also worthy of note that early versions of political opportunity structure (Tilly 1978) argued that protest is stimulated not only by opportunity, but also by threat. It could be that elite allies do not stimulate protest; instead, the lack of such allies could present a threat, which stimulates protest (Goldstone and Tilly 2001). McAdam (2004), in reflecting on two decades of empirical and theoretical work in this area, agrees that the importance of threat as a stimulant to protest has been eclipsed by opportunity. He notes that, “...in polities where there is some expectation of state responsiveness and few formal barriers to mobilization, we should expect perceived threats to group interests to

serve, along with expanded opportunities, as two distinct precipitants of collective action (2004: 205). Importantly, empirical work has shown this to be the case. For example, Van Dyke and Soule (2002) and Snow, Soule, and Cress (2005) have pointed out that the absence of political allies may imply a threatening political environment, which can stimulate protest and, in the case of Van Dyke and Soule (2002), stimulate *extremist* forms of protest. Snow, Soule, and Cress (2005) make the explicit link to tactical use, noting that it might be the case that more radical types of protest are necessary when groups do *not* have allies in power, since nearly by definition, more institutional channels are blocked in these cases.

Another point that should be thought about is how state repression (one dimension of the political opportunity structure) affects subsequent levels of mobilization and changes in tactical deployment. Soule and Earl (unpublished paper) review the literature on the question of how repression impacts mobilization levels, as does Koopmans (1997). More germane to the task at hand, though, is how repression impacts radicalization of tactics. McAdam (1983) points to the way in which social movement organizations need to innovate in response to state repression; often tactical innovation can mean escalation and/or radicalization (see also Zwerman and Steinhoff (2005). Others have talked about how repression can increase radicalization of ideology (Adamek and Lewis 1973; Opp and Roehl 1990).

### Collective Action Frames

It has often been noted that RMT, political opportunity structure, and Strain theories neglect the power of ideology and the related concept of *collective action frames* (Snow and Benford 1988; Benford and Snow 2000; Snow 2004). Collective action frames (or “frames” for short) are interpretive schemas that allow people to make sense of a situation or set of events. They allow people to identify a problem (*diagnostic frames*), place blame on some entity for the problem (*prognostic frames*), and provide a rationale for action (*motivational frames*). Benford and Snow argue that “frames are constructed as movement adherents negotiate a shared understanding of some problematic condition or situation they define as in need of change, make attributions regarding who or what is to blame, articulate an alternative set of arrangements, and urge others to act in concert to affect change” (2000, 615). As such, frames have been called “punctuating” devices (Snow 2004:384), since they help to clarify an event or set of events.

One of the key functions of frames is to mobilize people by helping to interpret strains and grievances. One of the reasons that strains (e.g., immigration, economic recession, etc) do not automatically generate mobilization is that they are subject to differential interpretation. That is to say the meanings or implications of those conditions for some kind of action are contestable and thus open to discussion and debate. Such debate and discussion is how a coherent frame is arrived upon and how it comes to be used to bring previously un-mobilized individuals into a given movement.

*Applied to Radicalization:* The role of ideology is one of the most intriguing questions that we might ask when looking at the radicalization of political groups. Diagnostic

frames can be used very powerfully to recruit people to a given movement because they can help crystallize a set of ideas and experiences into a worldview that can lead to action. When this is accomplished, a prognostic frame can be offered as a way to solve the problem via certain forms of mobilization – sometimes the prognoses will be radicalization and violence. The framing process thus offers the link between objectively experienced grievances or strains and mobilization, which sometimes can be radical and violent.

Snow (forthcoming) has analyzed three core framing tasks used by the modern Islamacist movement. He argues that *diagnostic frames* (who is to blame?) are evident in much of the commentary by Islamic leaders in pamphlets and on websites. These sources, Snow argues, are devoted to making the causal link between the current suffering and injustice of Muslims to Western (and especially American) sources, such as moral laxity and political and economic presence throughout the globe. Second, Snow argues that *prognostic frames* (what is to be done about this?) are evident in the statements of Osama bin Laden and his followers, who have called for jihad and for the killing of Americans and the plundering of their riches. Third, Snow shows that *motivational frames* (calls to action) are evident in a number of ways. For example, he points to the rhetoric used by this movement of “religious duty and obligation” to mobilize people. He also discusses the rewards of suicide bombers both on earth via the posting of their pictures and overall honoring of these individuals as “martyrs,” and after death by the promise of 72 virgins.

Another interesting question is how different actors frame radical behavior. In a paper on the French riots of October 2005, Snow, Vliegenthart, and Corrigan-Brown (2006) examine how various media and government actors framed these riots. While not so much about how frames can lead to radicalization, this work is quite an interesting analysis of news accounts of radical social movement activity.

## Summary

In summary, it is worth noting that the above theories in conjunction with one another point to a couple of places where we might begin our discussion.

- We ought not disregard the mobilizing effects of threat, particularly in conjunction with framing processes. We should consider the effects of several different kinds of threat including economic restructuring, globalization, immigration, as well as absence of political allies and closure of political systems. And we should consider how careful framing of these grievances/strains or threats can lead to mobilization and radicalization. (Note that this point combines elements of Strain, political opportunity structure, and Framing Theories.)
- We ought to examine carefully the types, sources and levels of resources, as well as the social bases of supporters of social movements. When thinking about the social bases of supporters, we should examine their positions relative to the institutional political systems (i.e., are they insiders or outsiders, and if they are outsiders, what does this mean about available tactics?). Note that this point

combines insights from resource mobilization and political opportunity structure theories.

And, it might be worth throwing out a few points for us to consider in our discussion.

- We might also spend some time talking about how *diffusion processes* and *networks* matter to recruitment into radical groups. In particular, we can talk about the different roles of direct (e.g., interpersonal relationships) and indirect/mediated connections (e.g., media, Internet).
- We might also talk about the role of *leadership*, both as a resource and also in the framing process.

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*Muslim Radicalization Dynamics—Social Science Methods and Models for Global Assessments*

This project is sponsored by the Scientific and Technical Intelligence Committee (Office of the Director of National Intelligence). Project Introduction and Executive Summary of Conference 1 from Clark McCauley (cmccaule@psych.upenn.edu), drawing on the notes of all participants of 5-6 Jan conference.

**Project Introduction**

*Project Tasks and Products*

Academic experts and security analysts are invited to three conferences. The first reviewed the current status of Social Movement Theory (SMT), including concepts, predictions, and evidence base. The second conference will review applications of SMT to understanding the different histories of the Muslim Brotherhood in Egypt, Sudan, and Jordan/Syria. The third conference will review applications of SMT to Muslim diaspora communities in Europe and the U.S. A core group of academics and analysts who attend all three conferences will convene after the third conference to work on a consensus report that will evaluate both promise and problems of SMT for understanding Islamic radicalization and mobilization for political violence. An executive summary of each conference is developed from combined notes of conference participants.

*The problem*

Understanding the degree of support for political violence among Muslim communities worldwide -- and support for local and US efforts to counter violent Islam -- is vital to inform U.S. diplomatic and security policies. Understanding non-violent activism for Muslim causes is also important, because violent activists often begin as non-violent activists. The relevant Muslim communities include not only the majorities in predominantly Muslim countries, but the Muslim diaspora communities in Europe, North America, Australia, and South Asia. Sympathies for Muslim causes among majority citizens of non-Muslim countries can also be important for development of international cooperation against terrorism. Thus understanding the base of sympathy and support for jihadist violence is the larger problem, in which is located current efforts to understand the mobilization to violence of small groups inspired by Al Qaeda but with little organizational connection with Al Qaeda leadership—the “franchise model” of Islamic terrorism.

*Radicalization* refers to changes in beliefs, feelings, and behavior toward increasing support for group conflict—increasing identification with and action for *us* versus *them*. Radicalization is thus more a process rather than a condition, and this process may be importantly different depending on the unit of analysis: individuals, groups, organizations, and mass publics. Behavioral radicalization is increased personal sacrifice for the cause, but readiness for sacrifice need not mean violence.

*Activism* refers to legal and non-violent political organization and action, and, as Ghandi famously demonstrated, this form of conflict can be as powerful as violence. Activism no less than radicalization depends on development of beliefs, feelings, and behaviors that support intergroup conflict—an increasing identification with and action for *us* versus *them*. The difference between activism and radicalism is in tactics: nonviolent or violent. Thus the problem is to understand behavioral radicalization that includes commitment to violence as a means to social change, and to understand this problem in the context of a much larger number of activists and sympathizers who agree with radical goals but not radical means.

This is a difficult problem. Polls in six Muslim countries in 2005 asked whether “..suicide bombing and other forms of violence against civilian targets are justified in order to defend Islam from its enemies.” Percentages of Muslim respondents saying “often justified” or “sometimes justified” ranged from 13-15% in Morocco, Turkey and Indonesia to 25% in Pakistan, 39% in Lebanon, and 57% in Jordan. Obviously it can be only a tiny percentage of the millions approving suicide terrorism who actually attempt a suicide bombing.

Similarly an ICM poll of UK Muslims after the July 7, 2005 suicide bombings in the London Underground asked, “Do you think any further attacks by British suicide bombers in the UK are justified or unjustified?” Five percent of respondents said “justified.” There are approximately 1.6 million Muslims in the UK; thus approximately 80,000 UK Muslims believed the London attacks were justified. But only about 80 UK Muslims have been implicated in the July 7 bombings and other planned or attempted bombings. The clear implication is that only one in a thousand is acting on his or her belief that suicide terrorism in the UK is justified. How are the few mobilized from the many who share their beliefs?

### *The promise of Social Movement Theory*

SMT is a theoretical perspective developed by sociologists trying to understand how movements aiming for social change begin and end, and why some movements are more successful than others. The promise of SMT for understanding radicalization is signaled by several characteristics of SMT research. First, SMT is interdisciplinary at least in the sense of borrowing from research in economics, psychology, and political science. Second, SMT offers the possibility of integrating across levels of analysis, at least to the extent that SMT researchers have looked at individual, small group, organizational, and mass determinants of movement success and failure. Third, and perhaps most important, SMT researchers take an explicitly dynamic perspective in which the choices and outcomes of a social movement are the result of actions over time. In this perspective, social movements emerge, succeed, and fail in cycles of action and reaction with multiple players: movements, states, and counter-movements.

### *Executive Summary of Conference 1*

The two-day conference was held at the Solomon Asch Center for the Study of Ethnopolitical Violence (Philadelphia, PA), January 5 – 6, 2007.

Three papers were presented: “Overview of Social Movement Theories and Applicability to Radicalization” (Professor Sarah A. Soule, Department of Sociology, Cornell University), “Methods and Measurement in Social Movement Studies” (Professor Jennifer Earl, Director, Center for Information Technology and Society, University of California – Irvine), and an evaluation of SMT-based predictions, especially those concerning interaction of movement action and state response (Professor Pamela Oliver, University of Wisconsin, Madison).

#### *Brief history of Social Movement Theory (SMT) research*

Research in the 1950s and early 1960s focused on the rise of totalitarian and authoritarian movements: Nazism, communism, fascism, McCarthyism. The theoretical perspective was unflattering: macro-level strains such as war, depression, and immigration leave individuals feeling frustrated and out of control. According to *strain theory*, individuals join right wing movements for an illusion of control over forces they do not understand.

Research in the late 1960s and early 1970s focused on left-leaning movements more congenial to SMT scholars. Thus civil rights and anti-war movements were seen as rational responses to injustice—rational both in *resource mobilization* and in responding to *political opportunities*.

Attention in the 1980s turned toward ‘new movements’ such as those seeking women’s liberation, gay and lesbian liberation, and disability rights. These were ‘new’ in seeking changes in society and culture that go beyond economic or political advancement. Such movements tend to have loose and informal organizational structure—often associated with participative and anti-hierarchical values. SMT scholars examining these New Social Movements (NSMs) have emphasized the importance of ideas and *action frames* for mobilizing movement supporters.

Finally, recent years have seen resurgent interest in *perceived threat* as a source of mobilization. Examples include movements to save endangered species, environments, and cultures. Consistent with this interest is psychological research indicating that losses and potential losses are more motivating than gains of the same size. Threat can be considered a negative part of the structure of political opportunity, or a return to strain theory’s emphasis on the dislocations brought by war, depression, and immigration.

Although SMT aspires to understand social movements of every kind, in practice SMT has focused on movements aiming to change the state or state policy. This focus is an advantage for understanding pathways to terrorism, insofar as terrorist violence is often aimed at changing state policies or even state leadership.

### *Unpacking resources, opportunities, and frames*

Attention to *resources* begins with the observation that even a powerful and shared grievance does not produce collective action in the absence of resources for action, including material, human, social-organizational, moral, and cultural resources. Thus intangibles such as perceived legitimacy of a cause, or perceived legitimacy of an organization as representing a cause, can be important resources. Similarly, organizational structures need not be formal organizations with membership lists; grass roots settings of work and neighborhood—churches, clubs, teams—can provide the informal friendship networks in which trust can support collective action.

*Political opportunity* includes any aspect of the environment that can make protest easier—or more difficult. Opportunities may be structural and stable, or emergent and shifting. States differ in *political opportunity structures*: open or closed to protest, with stable or unstable elites, with potential allies or opponents, and with more or less capacity to repress dissent. Over time within a state, *volatile political opportunities* can favor or inhibit state challengers. Movement actions and state responses—including repression—are principal sources of volatile opportunities.

*Action frames* are shared meanings that join opportunities with organization and action. An effective action frame diagnoses what is wrong, who is responsible, and what to do about righting the wrong. Bin Laden's diagnosis is that Muslims are humiliated, the West is responsible, and "Islam is the answer." Frames translate objective opportunities into perceived opportunities, personal grievance into group grievance, and individual helplessness into collective efficacy. Frame analysis usually focuses on the impact of a frame on sympathizers and potential sympathizers, and on the competition of frames of movements and counter-movements (abortion vs choice).

### *SMT ideas particularly relevant to radicalization*

*Fractionating repression.* State repression is an interesting example of a volatile political opportunity with complex implications. Repression typically imposes costs on a challenge group, including loss of material, human, and social-organizational resources. However repression can also increase moral and cultural resources of a challenge group if the group is able to frame repression as illegitimate or excessive. Thus the effects of repression are varied: protest reduction (Tiananmen Square), protest acceleration (Indian independence movement), and protest unchanged (Korean workers' protests, 1990-1991—see Nan, *Mobilization*, 2006).

At the conference, Jennifer Earl argued that the concept of repression is misleadingly narrow. Instead she suggests attention to *protest control*, which includes the full range of responses to movement protest activities. Police responses can aim not only to inhibit protest but to channel it with measures as varied as tax law, surveillance, and parade permits. Responses by non-state groups can likewise aim to inhibit or channel protest with means ranging from violence to elite patronage.

In a similar move for better specification of the meaning of “repression,” Donatella della Porta has offered a number of dimensions with which to characterize police response to protest. These dimensions include reactive vs. preventive intervention, level of communication between police and protestors, level of force used, legality of police behavior, and number of groups and behaviors proscribed.

It seems likely that predictions about the effects of “state repression” can be improved by more precise specification of state and non-state responses to movement challenges. Similar improvements may come from comparing different kinds of resources (material vs. moral) or comparing different kinds of political opportunities (structural changes vs. volatile events)

*Radical Flank Effects.* What is the effect on moderates of a more radical element in the same movement? There are two mechanisms. First, the moderates gain advantage to the extent that opponents, including state policy makers, are more likely to deal with the moderates in order to undermine the radicals. An example is the foundation support for moderate civil rights groups in the face of Black Panther threat. Second, moderates are advantaged to the extent that those already sympathetic to the cause are likely to offer more support to the moderates in order to control the radicals. An example is the additional support for Fatah after Hamas won elections. Thus both ingroup and outgroup reactions to the radical flank will tend to give advantage to the moderates.

*Resources and tactics.* It seems likely that there is a relation between resources and use of violent tactics. A group with moderate mass support has something to lose if it turns to violence and its support base does not approve of violence. In contrast a group with a tiny support base may see nothing to lose in turning to violence, and similarly a group with overwhelming support may see little to lose in turning to violence. Thus the relation between level of support and likelihood of turning to violence may be curvilinear, an inverted U.

Sometimes it is not mass support but support of one or two key sources that is at issue. In this case, the reaction of these few sources of support can be an important restraint on use of violence. When foundations fund movements, for instance, they are likely to encourage moderate and non-violent tactics. When states fund terrorist groups, the need for mass support can be diminished and the brake on violence diminished.

*NSMs.* New Social Movements, with their non-hierarchical organizations and participative values, seem particularly akin to Islamic radicalization among Euro-Muslims. Review of research on NSMs, especially research emphasizing identity politics and grass-roots organizing, may provide useful ideas for understanding trajectories that lead to franchise-style Islamic terrorism. Unfortunately, as Obershall has noted (Sociological Theory, 2004), NSM researchers have focused on secular ideologies and have given little attention to religious movements.

### *Current limitations of SMT*

*Evidence base.* The evidence used by SMT researchers is most often newspaper reports, sometimes government and organizational records, perhaps least often interviews with movement actors and state actors. Although interest in action frames suggests the potential of studying frame ‘resonance’ in survey research, such research has so far seen little attention by SMT scholars. Research that uses triangulation of different kinds of evidence is also relatively uncommon. Historically, case studies of a single movement are more common than research comparing movements.

*Leadership.* Leadership style, especially “charismatic leadership,” is often invoked to understand how different movements develop differently. And movements can split over leadership conflicts that sometimes seem as much about personality as politics (e.g. Melkonian vs. Hagopian split in Armenian Secret Army for the Liberation of Armenia). Leadership can be considered a resource and an input to framing strategy, but is not yet well integrated into SMT.

*Failed or disbanded groups.* As there is much more attention to how terrorism begins than to how terrorism ends, so there is much more SMT research on the origins of social movements, especially relatively successful movements, than on failed or dissolved movements. Understanding the origins of successful movements requires more attention to less successful movements.

*Odious groups and movements.* As noted in the brief history, each decade of SMT research is likely to focus on the newest round of movements congenial to the values of SMT scholars. The result is relatively less attention to less congenial groups, such as neo-nazi, white-survival, anti-abortion, and fundamentalist religious groups. An SMT approach to Islamic radicalization is hardly five years old.

*Non-Western groups and movements.* Most SMT researchers are North American or European; attention to groups and movements in other parts of the world is relatively uncommon. Language difficulty is one part of the barrier, but the absence of reliable records from news agencies or government are additional barriers to research in less developed parts of the world.

*Micro-mobilization.* Resources theory has focused on organizations that could mobilize resources--movements that could be counted as membership lists. Less attention has been devoted to issues of micro-mobilization: how individuals are or are not moved to action. Still, there is some interesting work at this level. Linden & Klandermans (*Mobilization*, June 2006) interviewed 36 extreme-right activists in the Netherlands and noted four different pathways to radical commitment: *revolutionaries* (lifetime commitment to extreme-right politics), *wanderers* (history of trying one radical party after another), *converts* (life changing events opening susceptibility to extreme right appeals), and *compliant*s (invited into radical group by friends or family despite weak interest in politics). This result is consistent with the idea that there is no one path to radicalization that can be identified and interrupted.

*Diffusion and mobilization via networks.* There is considerable recent interest in networks, especially networks developed or maintained via the Internet. Network definition requires specifying node-to-node links, including individual-to-individual, individual-to-movement, and movement-to-movement links. It may be important to characterize links according to their significance: friendship, kinship, religious/ideological, business, or criminal. When there are qualitative differences in significance of links, a network map may be difficult to interpret. A cluster of links may not indicate a group boundary and the size of the cluster may not indicate anything about group dynamics.

A related problem is that a retrospective network map will inevitably show pre-existing links among members of a violent group. But a prospective network map—one that includes all an individual's contacts at some point in time before participation in violence—will likely include a great majority of innocent contacts who have nothing to do with violence. Thus, without qualitative information about the nature of the links, the predictive power of network analysis may be limited.

On the other hand, group dynamics are likely to be particularly powerful in defining morality and action when links among group members combine many kinds of significance: personal, ideological, and economic ties combined. This kind of group is sometimes referred to as *encapsulated* or *barricaded*: the social world of group members is contracted to a single high-cohesion group. Underground terrorist groups are usually thus encapsulated, as are small army units in combat. SMT recognizes the special power of such groups to promote radicalization and self-sacrifice.

#### *Conclusion: Current value of SMT*

SMT is a collection of ideas about what is important in the birth and life of a group seeking social change. Expansion and contraction of opportunities, frames that turn opportunities into action, and resources organized for action—these are useful categories for organizing information about groups and movements. These are categories of information to be gathered, filed, and tracked over time to evaluate the threat posed by groups and movements that challenge the state.

These categories may also be of use for assessing the impact of state action in response to protest and violence. Is the political structure becoming more open or more closed to the movement's cause? Is the latest political event reducing or increasing perceived threat to the cause the movement stands for? Are the movement's frames resonating less or more with movement sympathizers and potential sympathizers? Are the resources of the movement increasing or decreasing? The answers to these questions will often need to be multiple and qualified rather than univocal, but the questions introduce at least a disciplined approach to evaluation of 'protest control.'

SMT does not offer mechanical cause and effect predictions, but at least some of its concepts offer probabilistic predictions. Perhaps more important, SMT encourages a view of the future as a fanning out of possible trajectories of the competition between

state and non-state challenger. A particular action by state or challenger will decrease the likelihood of some trajectories and increase the likelihood of others—or perhaps make no difference. The competition between state and challenger is complicated by reactions of other groups: changes in the sympathies of bystander states, and changes in the success of multiple challenge groups competing for the same base of support.

Thus SMT is useful in moving attention beyond the violent few to the dynamics of group competition from which radicals evolve and in which they must struggle for survival. SMT points to the importance of political context for understanding the life course of activist and radical groups and movements. SMT encourages a view of counter-terrorism as an iterated game of action and reaction between state and terrorists, a many-sided game that includes at each step the reactions of other states and other challenge groups. Terrorism in the SMT perspective is politics by other means.

## *Overview of Social Movement-Related Methods and Measurements*

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Prepared for the Science and Technology for Intelligence Committee (STIC) of the National Intelligence Council

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This memo discusses selected trends in social movement research methods and measures over the past several decades and more recently. I also include short break out discussions on recent research on repression, research advances around social networks and cautions on appropriate uses of these methods, and Internet research.

### Common Measures in Major Approaches within Social Movements

When examining major theoretical paradigms in social movement research, most methods and measurement issues can be dissolved into attempts to measure the level of protest (or other form of collective action that is of interest) and causally relating that protest level to measures of factors thought to stimulate or dampen protest.

#### *Measuring Protest Levels*

Measuring the level of protest (or measuring other forms of collective action) has actually proven a much trickier measurement issue than one might imagine. Since no government agency, or private agency, is responsible for counting protests, and protests can happen without warning to authorities, there is no central databank from which draw measures of protests. Some kinds of protests and collective action are better tracked by government and private entities than others, particularly major explosive events such as revolutions, riots (civilian or prison), major labor strikes, etc. Even within each of these kinds of events there are questions about the completeness and accuracy of records of such events.

Protest events have proven very hard to systematically track. Some scholars have worked with police departments to try to build records of protests in limited geographical areas (e.g., Madison, WI, led by Pam Oliver; Washington D.C., led by Clark McPhail and John McCarthy, various European localities, etc.). These approaches are limited among other reasons by the unwillingness of police to share their records, the bias that those records may hold given some police departments' negative views of protest, and the completeness of those records, given that not all protests are permitted and that police record keeping can be spotty for protests.

A more popular, although sometimes criticized, approach to trying to build a record of protest events involves using newspaper reporting of protest events (for a review of this approach, see Earl et al. 2004). If participants of the workshop are interested in learning more about this approach, the three presenters represent two established collectors and users of such data (Soule and Earl) and a published critic of such data who has also collected newspaper data (Oliver). Whether discussing newspaper records of protest

events, or any other form of collecting data on protest, it is clear that getting complete, accurate, and verifiable data on all protest events that occur within a given geographic area in a given time period can be extremely difficult, and yet is an important research building block for social movement studies.

In addition to measuring protest levels, or levels of other forms of collective action (e.g., strikes, collective violence, riots), scholars examining major research paradigms must also try to measure the factors that they believe stimulate or dampen protest and other forms of collective action. The following brief review of measures across various major research approaches follows the order of Dr. Soule's memo.

*Strain Theories:* Early social movement research often treated social movement activity and collective gatherings more generally with a very skeptical eye. Early explanations focused on psychological defects that were thought to either make individuals more susceptible to protest behavior or psychological transformations that were thought to take place when individuals collectively gathered and acted together (e.g., LeBon 1960 [1895]). Measures, therefore, focused on personality dispositions, such as authoritarianism (Adorno et al. 1950) or alienation (Kornhauser 1959).

In the 1960s and 1970s, strain-based theories were reformatted around an entirely different set of assumptions, which embraces the rationality and even importance of protest to healthy civic and democratic societies (Buechler 2004 offers a good summary of strain theories and changes within this approach over time). As this theoretical shift occurred, measures also changed. Measures moved away from a focus on psychological dispositions and moved toward understanding how individuals might evaluate and react to inequality (e.g., Gurr's 1969 book focused on relative deprivation). While Gurr's work made an important shift toward looking at the social conditions that may lead individuals to desire change, his work was still couched within a fairly social-psychological framework; he argued that aggression and frustration built over time, eventually leading to collective outbursts.

Other strain approaches broke more fully from these psychological and social-psychological models, assuming that collective action was a rationale response to collective grievances. Studies that followed this more solid shift away from psychological determinants of protest focused on measuring various kinds of grievances—from suddenly imposed grievances (e.g., the Three Mile Island incident, Walsh and Warland 1983) to quotidian disruptions (i.e., major changes to people's daily lived experience, Snow et al. 1998)—and causally connecting those grievances to collective action. Ways of measuring grievances varied widely, ranging surveys of individuals (as in Walsh and Warland 1983, Useem 1980) to historical, qualitative research (e.g., Einwohner's 2003 research on Jewish resistance while imprisoned in Nazi ghettos in WWII and Goldstone's 1991 work on revolutions), to statistical analyses correlating the frequency of various kinds of events (protest, militia organizing) to macro-level social indicators (Van Dyke and Soule 2002).

It is worth remarking on the relative prevalence of this strand of theorizing in many

military, National Guard, and police documents that I have reviewed, particularly in terms of the tendency to embrace older, more psychological or social-psychological variants of strain theory. And yet, in my opinion, this theory does not reflect the state of the art in social movement research, particularly when focused on more psychological variants. New versions that focus on threat are quite promising, and are an important part of contemporary theorizing, but these versions are only distant relatives of the psychological approaches from decades ago.

*Resource Mobilization (RM):* Social movement scholars examining a RM approach tend to focus on the birth, growth, death, and size of social movement organizations (SMOs), as well as the flow of various kinds of resources to different SMOs. The goal here is to determine whether there are positive causal relationships between protest and the number, size, and/or resources of SMOs. Sometimes analyses focus on more specific aspects of protest, beyond simply protest frequency, such as protest size and radicalization of tactics or ideology. Specific measures often involve the founding date of SMOs, the number of SMOs in various social movement fields at a given time (sometimes broken down by type of SMO), membership size for SMOs, and financial resources of SMOs. Edwards and McCarthy (2004) have a nice review of RM and research on SMOs for interested participants.

*Political Opportunities (PO):* In this approach, scholars are generally interested in how open or closed a polity/government is to protest. Scholars typically distinguish between two types of political opportunities: (1) stable political opportunity structures, which tend to be more glacially changing, structural elements of regimes, such as voting formats, the structure of the legislative process, the availability of direct democracy avenues such as initiative and referendum, etc.; and (2) more volatile political opportunities, which tend to change frequently and often tied to the political sensibilities of ruling elites, as well as factions and internal conflict that may exist within the elite.

Common measures of stable political opportunities tend to be categorical measures that group countries with common structural governmental designs, such as constitutional democracies versus monarchies versus military rulers. Such measures are most commonly used in cross-national research. Common measures of volatile political opportunities include periodization schemes in longitudinal research (where a host of factors are used to designate “periods” that are open or closed to various kinds of civic participation), or measures of political party strength (e.g., the percentage of a legislature held by a particular party, the party of the President, whether different branches of government are headed by the same or different parties, or the percentage of voters who voted for a specific party’s candidate in the last election).

As one can see, these often tend to be very coarse measures of the political opportunities, although some researchers have attempted to refine their measures to focus on legislative trajectories and action (e.g., number of bills on a topic introduced in prior legislative sessions, number of Congressional hearings on a topic in prior legislative sessions), or presidential attitude (e.g., through examining the content of State of the Union addresses) and action (e.g., the timing of relevant executive orders).

*Framing:* Most of the measurement involved in framing seeks to identify the presence and prevalence of various frames across a social movement field, and the diffusion of various frames into public dialogue. For instance, quantitative content coding of news stories on a movement issue may be used to identify how frequently frames supported by various sides in a conflict are being publicly aired. Various qualitative techniques have been used to understand the development and change in frames over time as well.

I was asked to comment about trends in methods and measurement in social movement studies. While much could be said about this, I focus on three trends that I think are particularly important to this group.

*General Trend 1: American-focused Research:* While there is a great deal of interesting and important work that examines collective action in other countries and/or examines collective action from a cross-national perspective, it remains the case that a large amount of the empirical data that has been collected and analyzed on protest, or other forms of collective action (except for revolutions), has focused on the American case. The generalizability of many findings that are based upon American, or Western European, cases to different regions, political environments, and cultures has been a subject of debate. To the extent that research on foreign countries, or other regions of the world, may usefully inform US foreign policy, questions about the generalizability of research on American and European cases, and the slower rate of research on other countries, may be a concern to policy makers.

*General Trend 2: Discord Over What is Included In the Study of Collective Action:* There has been some debate over the confines of social movement studies and over how expansive of a vision of collective action can be usefully understood using social movement theories. For instance, are social movement scholars focused on contentious politics (McAdam et al. 2001), ideologically structured action (Zald 2000), or challenges to institutional authorities (Snow et al. 2004)? Are cultural movements readily understood using current theories in social movement research? Similarly, are religious movements best understood using theories from the sociology of religion or using theories derived from social movement studies? Can collective violence, riots, and other forms of more ephemeral collectives be properly understood using social movement studies? There has been marked discord over these types of questions and it may be useful to consider what types of experts might be consulted, in addition to social movement scholars, when discussing terrorism or religious extremism.

*General Trend 3: Improving Measures:* As research in social movement studies develops, scholars are refining and improving measures, particularly where measures involved in more meso-level questions are involved. For instance, research on repression is improving as scholars recognize critical theoretical differences between various types of repressive action (see Earl 2003 for a discussion on this point), making more refined hypotheses and analyses possible. Along side these developments, the nuance in specific measures has also been improving. For instance, along with Sarah Soule and John McCarthy, I introduced a new measure for studying police presence and action at protest

events that has helped to refine our understanding of what may lead to various police actions (Earl et al. 2003; Earl and Soule 2004; 2006), as well as the consequences of such action for protest frequency in the following weeks (Earl and Soule unpublished). The same could be said for other areas of social movement research, where complex concepts such as social movement leadership are being condensed into more empirically identifiable component parts (e.g., Earl forthcoming)

This memo concludes with three short break-out discussions from the email requesting memos.

*Repression Research:* In addition to the brief remarks above on theoretical advances in the study of repression and methodological advances in quantitative studies of repression, there has also been very high quality qualitative research conducted on repression recently. Of particular note is Cunningham's (2004) study of several specific COINTELPRO programs carried out by the FBI in the 1950s through 1970s. In this work, Cunningham details how the program was structured, elaborates on factors that affected who the program targeted and how, and discusses the effect of this program. In addition, Cunningham argues that Hoover's ideological belief in the connection between Communism and some protest movements drove the FBI to ignore negative findings in investigations and interpret those negative findings instead as evidence that the conspiracy they were looking for must be much deeper, and therefore require more investigative resources, versus interpreting those findings as evidence against a conspiracy. In part, this led to inefficient uses of FBI resources and manpower as the FBI was driven by its beliefs, instead of its investigatory findings. This work stands as a caution for any agency dedicated to efficiently using its resources for public safety and public good.

*Research on Social Networks:* Research on social networks in social movement studies has suggested the importance of network connections for becoming involved in protest and for sustaining commitment to protest. Much of this research examines person-to-person ties. Some research has expanded to examine inter-organizational networks, coalitions, or other inter-organizational dynamics, often by building on the concept of duality (Brieger 1974). Duality acknowledges that groups are made up of people and that people's attitudes and behaviors can be shaped by the groups they belong to. Research measures designed to capture or build on duality are built around understanding these person-organization relationships (although one could use duality to understand other unit-group relationships). In other research areas, such measures are used to understand the relationships between businesses with overlapping board memberships, whereas in social movement studies they are often used to understand the development of organizations and coalitions when members are shared.

One caution should be considered in using social network analysis. Many people tend to think of social network analysis as if demonstrating a tie between units (e.g., a tie between two people) necessarily implies common behavior or attitudes. In fact, the importance of that tie for structuring beliefs and behaviors will vary markedly by the type of tie along with a host of other factors. In practice, this suggests that an analysis that

attempts to identify likely extremists by common ties to known or suspected extremists will be not be very effective—collecting and analyzing data on ties in large networks involves a great deal of noise, very little precision, high levels of inefficiency, and a large risk of mistaken inferences. As well, collecting data on large networks likely involves important trade-offs with civil liberties, which should be very seriously considered.

*Research on Social Movements and the Internet:* Measurement in this area is still evolving. One major methodological issue, which I have addressed in some of my own work (Earl 2006) involves how one identifies websites to study (Earl, 2006). It would appear that some non-probabilistic sampling techniques may have led to wide concern about an abundance of extremism online. While there is undeniably extremist content online, subsequent research using alternative samplings strategies has not found such content to be as ubiquitous as many initially claimed and/or feared.

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*Dynamics of Political Activism and Radicalization Workshop*  
Pamela Oliver  
January 2, 2007

*Assignment: Overview of predictions from SMT theory and research for improving government response to movement challenges: challenge and response at levels ranging from protest and policing to terrorism and genocide, short-term vs long-term effectiveness of state responses at different levels; evidence base for whatever generalizations are emerging; evaluation of directions for improving these predictions (Oliver).*

My work is not as far along as I would have hoped, for which I apologize. This document is still largely in outline form. (This makes it take up 10 pages, but the amount of content is closer to the assigned four pages.) My emphasis is on the theoretical predicts of extant theory. As I understand it, there is relatively little solid research in this area.

The main points:

- (1) There is a great deal of theory that provides an analytic lens for understanding how movements radicalize and become violent and that suggests possible points of intervention. In general, satisfying people and permitting nonviolent dissent are expected to be more effective ways of preventing popular support for violence than repression of populations. If violent actors are a small, relatively isolated group who lack support from a broader population, selective targeted repression can be effective. Intelligence and network access that permit accurate differentiation between violent and non-violent actors are especially important, as coercive repression targeted on non-violent actors tends to increase popular dissatisfaction. Repression targeted on blocking communication networks can be an effective way of suppressing collective action. However, dissidents respond to extreme repression by hiding and becoming more difficult to find.
- (2) There is very little consistent data on the impact of state responses to movements. Most studies have focused on coercive repression or, less often, facilitation. Results between studies are inconsistent. Most of the studies use news sources for measures of dissent or repression. There is substantial reason to believe that the measured relation between dissent and repression is distorted in the news record. Additionally, many studies fail to recognize the crucial difference between “acts of repression” and “repression.” Specifically, to the extent that repression “works” to quell dissent, it does not actually have to be used, and there will be no “acts of repression.” I am aware of no work that analyzes the impact of intelligence or the suppression of communication networks.
- (3) There is substantial theoretical reason to believe that responses to state interventions cannot be highly controlled or predicted, except in very narrow instances. There are three main reasons for this. First, both states and movements are complex multi-actor fields. It is generally impossible to isolate an intervention from the actions of others that may change its impact. Second, most potential interventions have contrary effects, and it is difficult to predict the net

effect of these contrary forces. Third, actions against particular dissidents impact the attitudes and actions of bystanders, and the nature of these impacts is highly contingent and depends upon the network relations between dissidents and bystanders as well as the discursive construction of events in news media and popular discussions.

- (4) In considering possible interventions, it is necessary to work with a theory of how the movement is organized and how radicalization occurs. For this reason, I include a section on assumptions about Islamic movements and a section on religion and movements.
1. Broad overview: states and movements are in a close coevolutionary relationship. The “political opportunity” concept points to these issues but I believe there are more useful approaches to these general ideas.
  - 1.1. Political context or culture: Framework of desires/needs/goals & framework of acceptable forms of action are shaped by the broader social context. Political/social contexts differ both in what forms of action are meaningful/interpretable/acceptable and in what forms of action are disruptive. Popular protest is threatening when there is a large pool of aggrieved, discontented people who will be emboldened by the protest and whose satisfaction entails a major disruption in the privileges of existing power holders. Some systems can easily tolerate peaceful protest by some sectors, and systems vary in how much protest they can tolerate and by who before the existing order is threatened. This is relevant to understanding why peaceful protest may be repressed and why some forms of violence have popular support.
  - 1.2. Grievances are related to unmet needs/desires. When groups control the government or have their needs/desires met, they do not have any reason to protest/rebel.
  - 1.3. A general heuristic (old political opportunity theory, Eisenman]: an inverted U shaped relation between a group’s power and its disruptiveness. Very strong groups don’t need to be disruptive; very weak groups are just oppressed and don’t have the capacity to be disruptive. Peak disruption occurs at moderate levels of power where a group does not enough power to get what it wants routinely, but enough to cause trouble & avoid genocide.
  - 1.4. A general idea from political science (especially Lichbach): states shape movements, avoid violence by responding with concessions or benefits to non-violent expressions of dissent and responding to violence with repression. This is grounded in rational action and learning theory.
    - 1.4.1. Summary of Moore: (1) Lichbach 1987: repression of nonviolent protest → violent protest (2) Gupta et al: repression of protest in democracies → protest, while impact of repression on protest in authoritarian states is inverted-U. (3) Rasler: repression reduces protest in the short term but increases dissent and thus protest in the long term, + concessions provoke protest in a revolutionary context. Data is NYT and regional news diaries. Sequences are constructed of state and movement action to determine whether there are consistent patterns. Only Lichbach is supported. For Peru

and Sri Lanka, crackdown on violence leads to less violence; in Sri Lanka but not Peru, repression of nonviolence leads to more violence.

- 1.4.2. States can foment dissident violence by reducing the incentive to avoid violence if they either: (1) punish non-violent protest as aggressively as they punish violence; or (2) ignore non-violent protest but respond with concessions to violence. Conversely, states reduce violence by responding positively to non-violent expressions of grievance and by satisfying the needs and desires of their citizens.
  - 1.4.3. States have historically fomented violence not only by their own violent acts against dissidents or minorities but by overtly or tacitly supporting violence by one group against another (i.e. majority against minority or dissidents). Much of the world's terrorism and violence is linked to communal or ethnic conflict.
  - 1.4.4. Populations that have had violence used against them may cease overt dissent in the face of overwhelming force, but they rarely accord legitimacy to a regime that has used violence against them. Thus, a population quelled by state violence is one ready to rebel if it can find a way. Repressive regimes that loosen their repression often face revolutionary upheaval.
  - 1.5. States are not monolithic. It is very common for the same movement to be facilitated by one part of the state while opposed or repressed by another. Similarly, movements are not monolithic. It is very common for movements to have factions that advocate different goals and engage in different tactics. Thus, the dynamics of state-movement interactions can get very complex. In general, societies have different interest groups with different degrees of power in the state and different levels of movement mobilization within them.
  - 1.6. Private police forces and security companies are an important feature of current repression systems, as they have been in the past. Domestic forces include the TSA and a wide variety of security firms that operate in schools, private businesses, and some residential areas, as well as the private firms that operate prisons. International forces include a wide array of private military and police forces that operate under government contracts.
  - 1.7. State agents operate in this multi-actor field. Thus, the outcomes of state actions cannot, in general, be as neatly predictable as would be expected from a two-actor model. Not only are the movements complex, but one set of state agents may be impacted by the actions of another set outside the first group's control.
2. A discussion of possible state responses requires some specification of what the empirical phenomenon is. I am not an expert in Islamic movements, but my thinking about relevant aspects of state response is shaped by what I believe about the empirical phenomenon, so I sketch that here.
    - 2.1. Regimes in many Muslim countries are corrupt and/or repressive and/or unstable. European colonialism, US imperialism historically created or supported many of these regimes. "Islamic fundamentalism" arose in this context.
    - 2.2. Popular peaceful movements against many of these states have been repressed.
    - 2.3. Muslim immigrants in Europe are generally segregated and disadvantaged.

- 2.4. The creation of Israel as a Jewish state is widely viewed among Muslim as unjust, as an example of European/US imperialism. Displaced Palestinians were/are a source of instability in many Middle Eastern countries. Israel's occupation of the West Bank has been particularly oppressive and has fueled violent resistance to the occupation. Muslims elsewhere identify with that struggle.
    - 2.4.1. Data point: Frank Hairgrove's survey of Indonesian Muslim fundamentalists finds that a much higher proportion approve of suicide bombers against Israel than approve of suicide bombers in Indonesia.
  - 2.5. There is widespread popular antipathy toward the US/Europe and secularists and/or Christians/Jews among Muslims around the world. This is the broader "sentiment pool" from which the more violent movements draw.
  - 2.6. There are groups who have grievances against the government in most predominantly-Muslim nations, and that, in the current period, these grievances are increasingly interpreted as the state being un-Islamic.
  - 2.7. There has been a shift toward Islam rather than Communism as the organizing ideology for movements of lower class resistance, especially since 1989. The mass killings of Communists in Indonesia in the 1960s and the Soviet invasion of Afghanistan presumably also were factors. It seems likely that US anti-Communist efforts may also have directly or indirectly fostered Islamic organizing as an alternative to Communist organizing during the Cold War.
  - 2.8. There is a cadre of activists/leaders who are recruiting through religious channels. A small number of people advocate and practice violent tactics while a larger pool of people have some sympathy with these actions, especially if they are directed at targets that are far away or stigmatized.
  - 2.9. Leaders of majority Muslim nations risk losing popular legitimacy if they are seen as following instructions of "western" leaders.
  - 2.10. Immigrant youths in Europe are one of the major sources of violent actors and ethnic/cultural conflicts in Europe are one of the underlying sources of grievance.
3. Types of state responses. An analytic general way of thinking about this is as a continuum of repression & facilitation. There are analytically two broad categories of repression/facilitation: a) state actions that reward or punish particular forms of movement action; b) state actions that block or promote the conditions that permit collective action. The political science literature has focused primarily on state uses of rewards and punishments rather than impacts on conditions of action and, within this, primarily on coercive repression by states, coupled with some recognition of facilitation.
    - 3.1. How the state responds to a group's actions: is the action rewarded or punished?
      - 3.1.1. Punishment: death, injury, arrest and incarceration, monetary fines. These affect future action through both incapacitation and deterrence.
        - 3.1.1.1. Incapacitation: death, injury or incarceration makes it impossible for that actor to engage in further actions.

- 3.1.1.2.Deterrence: the punishment of one actor at time 1 makes other actors (or the same actor at later times) decide that the risk of punishment is too high.

Punishment "works" in two ways. In the language of crime control theory, those who are killed or incarcerated are directly "incapacitated" from further dissent or crime. Killing someone permanently incapacitates them, while incarceration incapacitates only for the duration of the incarceration. Otherwise, punishment "works" indirectly: the threat of punishment deters crime or dissent by changing people's calculations of the expected costs and benefits of actions. A point often overlooked is the negative relation between the strength of a deterrent effect and the extent to which punishment actually has to be used. If deterrence really works, there will be no dissent, and thus no punishment. Systems with high levels of deterrence should need only the occasional punishment to remind everyone that the system is still there. Conversely, if we see a system with high levels of dissent and repression, we can be theoretically sure that deterrence is not strong in that system. High levels of punishment ought to deter dissent and thus ought to bring dissent – and thus the punishment of dissent – back down to low levels. If we see high levels of repression in a system, we should ask why deterrence is not working in that system.

- 3.1.1.3.Punishment is two-sided because it tends to increase the dissatisfaction and sense of grievance in those punished. This, although the punishment effect may reduce dissident action, the increased grievance effect may increase it. Depending on the perceived legitimacy of the punishment and the relation between the person punished and others, punishment may also impact the satisfaction and sense of grievance among bystanders. This paradox is central to much of the literature on the impact of repression. This implies that it is important to understand the social relation between those punished and the larger population.

The key debate in political science has been around the idea that coercive repression always is a two-edged sword. On the one hand, "repression works" to quote Tilly's apt phrase. Coercion can suppress action. On the other hand, repression can backfire. The reliance on coercion almost uniformly leads the targets of coercion to reduce their support for the coercive agents and often fosters a desire for revenge. Furthermore, the use of coercion can alienate bystanders who are not themselves coerced. Of course, sometimes bystanders approve of the coercive repression of dissidents. Thus, the net effect of coercion on regime legitimacy hinges on the bystanders: do they view the dissidents as alien or dangerous and approve of the coercion, or do they approve of the dissidents or disapprove of the level of coercion exerted by the state? Coercive tactics which spill over – which punish bystanders who have not engaged in the dissenting behavior – almost inevitably have the negative effect of decreasing regime support among those punished.

On the other side, groups that engage in violence tend to be viewed as illegitimate by bystanders – especially if they (the bystanders) are impacted by the violence. Violence-

using groups tend to be supported only by those who believe the targets of violence are, themselves, evil or dangerous. Most often those targets are stigmatized minorities. Sometimes they are states or majorities that are viewed as violent, oppressive, and dangerous.

- 3.1.2. Rewards, yielding benefits in response to petition or challenge: grant concessions; promote a group's well-being and goal-attainment; avoid policies that outrage group sensibilities; accord the group legitimacy and provide mechanisms to include the ground in decision-making. Positive responses to a group set in motion contradictory forces that tend to both increase and decrease dissent.
    - 3.1.2.1.Reinforcement. A reinforcement effect leads rewarded behaviors to be repeated. Thus, a positive response to a given form of action at time 1 is likely to lead both that actor and others more likely to repeat that form of action in the future. This will increase that form of protest.
    - 3.1.2.2.Satisfaction. On the other hand, receiving desired benefits reduces dissatisfaction, and groups that are more satisfied should protest less.
    - 3.1.2.3.As the reinforcement effect and the satisfaction effect work in opposite directions, it is not clear what the net outcome will be on the level of protest. There is, however, a longstanding recognition that revolt is especially likely in times of "rising expectations." However, as these are generally cases in which repressive regimes ease their repression, there are multiple forces in motion. Thus, the outcome is uncertain.
  - 3.1.3. Apart from rewarding or punishing dissent, states have other reactions. One is to either ignore the challenge – the strongest stance – or to ridicule or trivialize it, the next strongest stance. Ignoring a movement avoids setting off the contradictory forces of punishment and reward. Ignored movements typically do not get publicity and are not able to attract new members. This does, however, tend to encourage the aggrieved to escalate tactics.
  - 3.1.4. Cooptation. If a movement is too strong to ignore, another deescalating response is cooptation: accept the vocabulary and issue, discursively repackage the issue to grant as little concession as possible. This becomes a battle of discourse and perception.
  - 3.1.5. States also create rules and regulations that constrain forms of action: tax laws, permitting procedures. These provide rewards such as inexpensive postage and traffic control for following the rules, and punishments such as arrest and fines for not following them.
- 3.2. Actions that affect the group's ability to draw in others and/or to coordinate their actions. This prevents action from occurring in the first place, essentially by blocking the diffusion of ideas. Note: these approaches entail violations of the civil liberties that most in North America and Europe consider to be essential elements of democracy.
    - 3.2.1. Promote or block communication: news coverage or censorship, permit or ban meetings and public speeches. Disrupt communication: authoritarian states ban gatherings, censor news media, punish public statements of

dissent. This prevents people from knowing others' grievances, prevents them from coordinating large-scale actions. Case studies from authoritarian states suggest that low-level private resistance was sometimes coordinated outside public view.

3.2.2. Intelligence work that infiltrates organizations [permits selective arrest/incapacitation; agents provocateurs; saboteurs; disrupts personal relations of trust] Intense surveillance that monitors the smallest displays of discontent: prevents diffusion to other groups. This requires an extremely high ratio of police agents to citizens, but has historically "worked" at least temporarily to suppress political action. This is what is popularly called a "police state." It requires a high level of state capacity. There is evidence that the agents of surveillance have a substantial tendency to fabricate evidence or to promote the actions that are supposedly being restricted. This is because career advancement or payment as an informer depends upon finding the crime one is assigned to find.

3.2.3. On the positive side, facilitative actions: provide information, organizing assistance, access to communication media, etc. to help groups engage in actions around desired issues using desired forms.

There has been very little theoretical investigation of the matter of surveillance, intelligence-gathering, and restrictions on communication as repressive actions, even though these can actually be much more effective in preventing dissent and have potentially lower risk of alienating bystanders. To understand the role of such forms of repression, it is necessary to analyze how collective action is mobilized and then examine how forms of repression intervene into this process.

1) Consensus mobilization: persuading large numbers of people that the goals of the movement are appropriate. In open societies, these acts of persuasion are in principle unhindered, although it is often made illegal to advocate the overthrow of the regime. Overt governmental news censorship, implicit market-based or politically-based self-censorship by news and media organizations, restrictions on free speech and large assemblies are all repressive measures designed to reduce consensus mobilization. There are also counter-mobilizations in which the "other side" engages in persuasive activities to stigmatize or de-legitimize the movement. This is the "war of ideas" which is very important for affecting the broader sentiment pool of support.

2) Recruitment into collective groups or organizations. This happens through channels of communication and influence and is grounded in the social structure of the group and its relation to the larger community in which it is embedded. Social policies that increase the segregation or isolation of groups or conversely increase their integration can influence the nature of their ties to other groups. The nature of social networks and the extent to which cliques are bridged are major factors shaping recruitment and mobilization.

3) Influence and decision processes within organizations. If we are concerned with the choice between relatively peaceful and relatively violent forms of action, we

need to examine processes within groups. There is a literature on radicalization processes, whereby people become more alienated over time from the larger society and more willing to engage in violence. Some issues to consider:

- a. Total institutions: It has long been understood that ideational change happens fast when an organization becomes a total environment. Generalizing, the more a person's social ties and experiences are all inside the group, the more that group can take over the person's understanding and the greater the possibility of extreme radicalization.
  - b. There is a tradeoff: radicalization happens more efficiently if ties to the outside are cut off, but recruitment is reduced if there are no such ties.
  - c. This would seem to imply that successfully radicalizing groups have an outer shell that connects with the larger community and an inner shell that creates an isolated environment for radicalization.
  - d. Covert intelligence and surveillance is often oriented toward penetrating into such groups. There is a lot of evidence that such agents often make things worse: in their zeal to prove their importance, the police agents have often been the ones who were most likely to propose violent actions and strongly sought the radicalization of others. At a minimum, there is a high rate of falsely accusing groups of violence or radicalism.
4. Networks. In considering what the likely consequences of various forms of repression, it is essential to consider the relation between the activists and the larger pool of bystanders.
- 4.1. If the violence-users are isolated and stigmatized, there will be strong support for repressing them and little negative consequence of repression.
  - 4.2. However, if the violence-users are part of a larger community that feels oppressed or embattled, the larger community may support the use of violence and will not support its repression.
  - 4.3. Punishing a larger supportive community for violence by some of its members almost never reduces the support for the violent members, but instead reduces the support for the regime. If the victims of repression were actually opponents of violence or unconnected to the violence-users, regime supporters may be converted into regime opponents.
  - 4.4. In a divided or multi-cultural society, there can be strong support for repression from some factions and strong opposition in others. These dynamics can fuel the fires of division and further escalate the potential for violence and radicalization.
  - 4.5. It is always important to consider the relation between the radicals and their larger community.
5. Religion and the state. This is not relevant to my assignment of state responses, but I bring this up because religion plays a role in the Islamic movements. Although I know relatively little about these movements, a political science student in my recently-completed graduate seminar (Frank Hairgrove) is an expert on Islamic movements in Indonesia, and I draw on discussions with him. He has been

- studying Hizbut Tahrir, an avowedly non-violent group that advocates the Muslim state. According to him, it is growing rapidly in many countries.
- 5.1. All religions I know about have themes of justice and ideological challenge to unjust authority that provide potential underpinnings for challenging movements. (All religions also have themes of obedience to moral authority that provide potential underpinnings for religious support for a regime.)
  - 5.2. The relation between religion and political movements varies.
    - 5.2.1. When state and religious authority coincide, religion becomes a tool of elite control and popular revolutionary movements are often anti-clerical. (Europe, Mexico).
    - 5.2.2. If religion is separate from the state, religion can be a base of opposition to an authoritarian state (many Latin American countries, Korea, Iran under the Shah). Religious institutions have often sheltered dissidents: many dissidents joined churches in Latin America and Korea under authoritarian regimes. Much African-American political action was organized through churches, especially after the anti-Communist campaigns of the McCarthy era.
    - 5.2.3. Cultural or ethnic conflict is often organized through religious institutions or using religious symbols
  - 5.3. Government regimes in many Muslim countries have promoted secularism as modernization. Secularism is generally ideologically associated with European colonialism & US imperialism and/or wealthy educated elites. Thus, Muslim religiosity became associated with resistance to outside colonial/imperialist forces or class inequalities. This is a historical phenomenon, not an inherent characteristic of Islam. However, Hairgrove insists that the Turkish abolition of the caliph has become an important international Muslim symbol for a movement that wants to dismantle secular states and create Muslim rule.
  - 5.4. The literature on religious organizations and conversion shows similar processes across religions. People with a particular upbringing tend to have a taken-for-granted worldview about morality and justice; challenges to this worldview tend to evoke moral outrage. Recruitment into intense religious involvement (conversion) tends to draw from a pool of people who already have the basic religious orientation or who are from the broad cultural group for whom the orientation is meaningful. Within the religious circle, the framework for conversion into a more intense and active religiosity occurs within small groups where people form intense personal relationships and all of life is interpreted through the ideological lens.
  - 5.5. This process of conversion is very similar to the network processes DellaPorta identified for Italian terrorists, although in this case the larger circle was political rather than religious.
6. The problem of ethnic/political conflicts within a state. Many of the world's deadliest conflicts involve competing groups within nations. Violence is most commonly used by relatively strong groups against weaker groups. States are rarely neutral in these conflicts. If state force is used to protect the weaker groups, violence may be defused. If states overtly or tacitly support attacks on minorities,

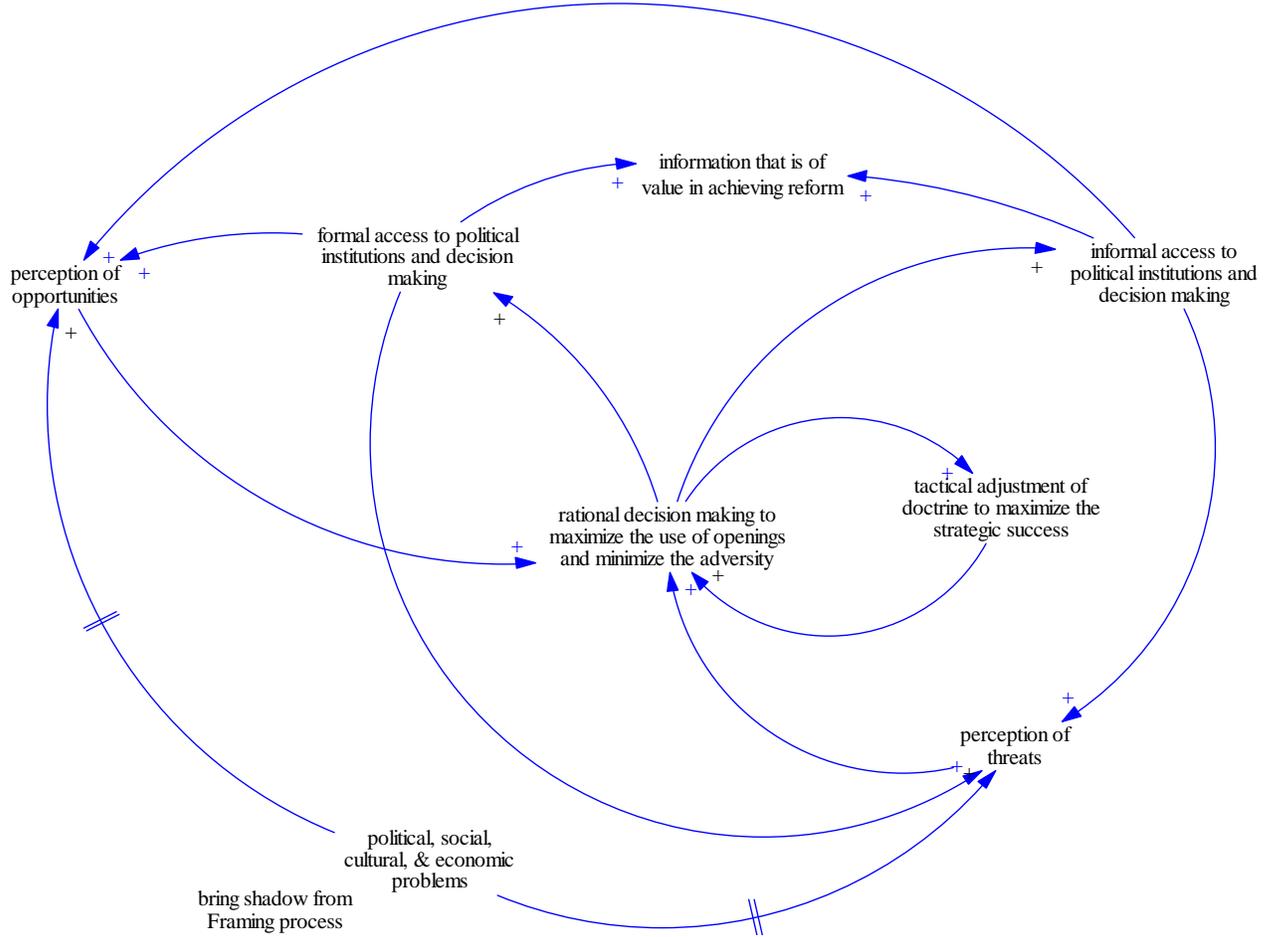
violence is rewarded and genocide is possible. State forces siding with one side in a conflict may become the target of attacks from the other side. Legitimate states treat competing ethnic/political groups even-handedly and avoid taking sides in ethnic or cultural conflicts, constraining both sides to eschew violence.

7. Media issues.

- 7.1. Most empirical studies of dissent and repression rely on news accounts. This is a serious problem, because the likelihood that there is news coverage of protest or repression varies across time and is affected by the same kinds of political factors that affect dissent and repression. For example, it is possible that Moore's study of sequences is capturing the fact that after the news media covers government repression of violence, it is less prone to cover acts of violent dissent. "Selection bias" studies indicate that news coverage of protests and violence is much more peaked than the underlying events themselves are. That is, news coverage tends to come in short intense bursts of attention, while actual events have much longer build ups and declines. Further, in many cases, news coverage of repression is lowest precisely when repression is highest, because the same political forces that produce the repression also discourage news coverage of it.
- 7.2. Apart from these methodological issues, news coverage is theoretically important. Terrorist violence is symbolic protest. News about the event is crucial for its symbolic value to have maximum weight. "Routine" peaceful protests tend to lose news value, and there is some tendency for protesters to increase the extremity of their protests in an attempt to recapture the news. Violent events are considered to be inherently more newsworthy than nonviolent events. Protesters feel they have succeeded when they get international news coverage, and big news stories tend to attract recruits. Repressive states can and do suppress news coverage of both protest and repression to reduce these dynamics.
- 7.3. New modes of communication on the Internet have possibly shifted some of these dynamics. I have not made a systematic study of these issues, and I believe others on the panel may be addressing this.



## Opportunities and Constraints



**Figure C-2. Opportunities and Constraints Influence Diagram.**

### Framing Process

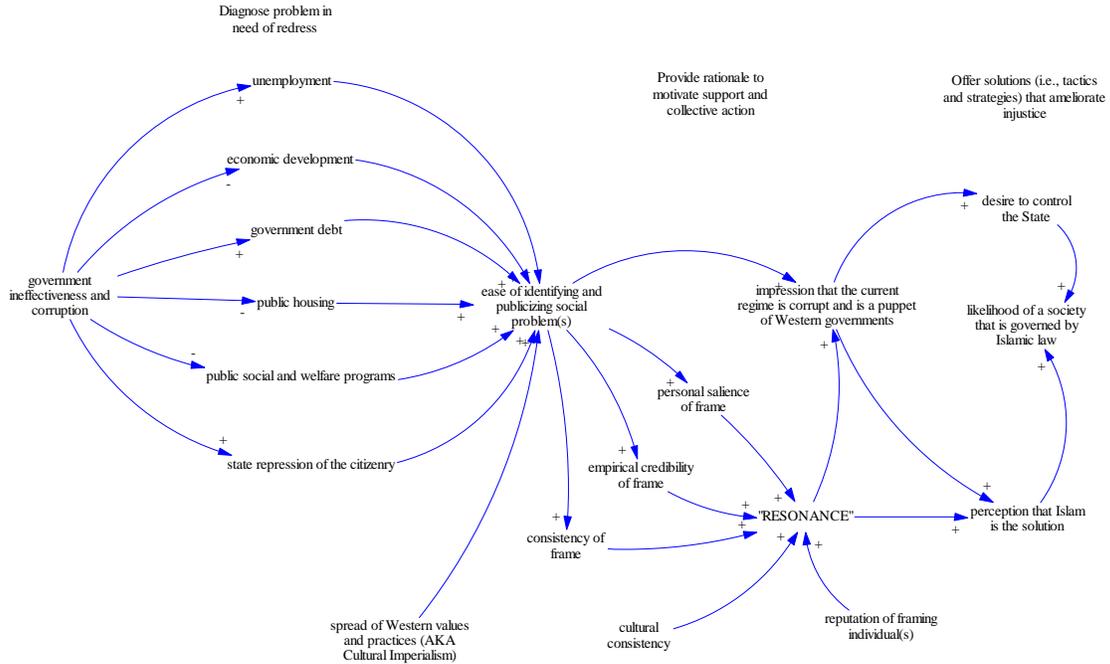


Figure C-3. Framing Process Influence Diagram.

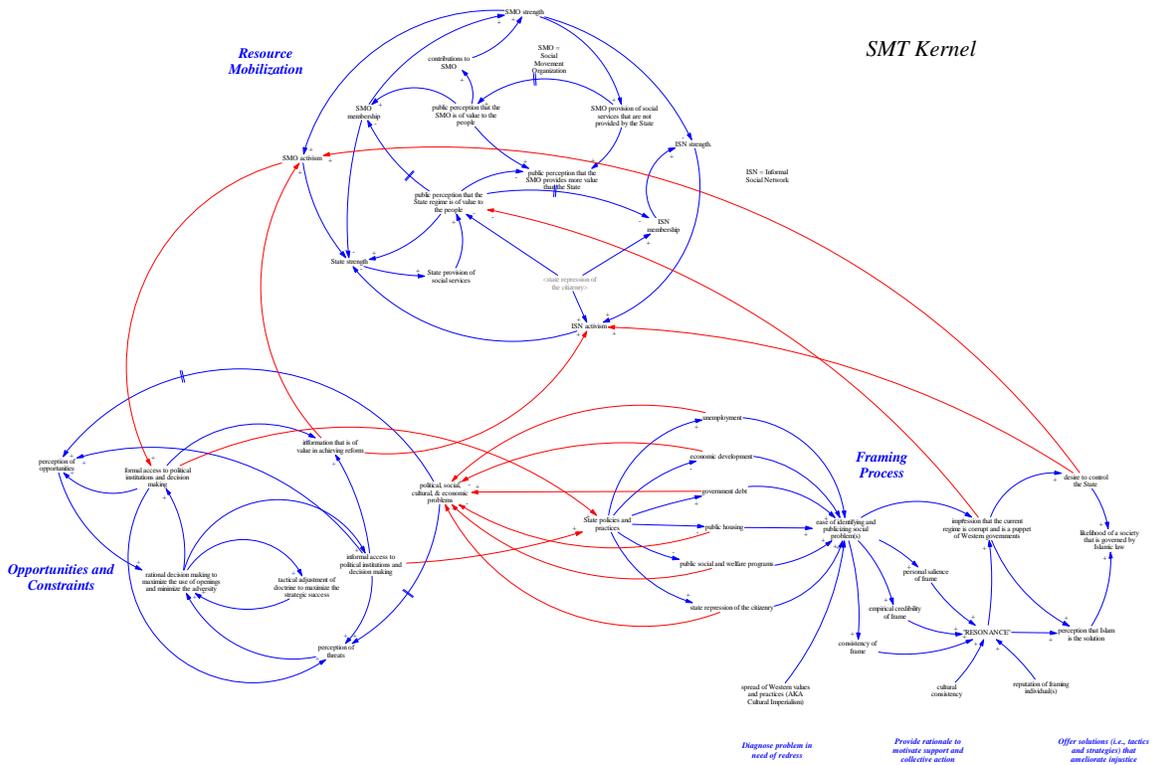


Figure C-4. The Social Movement Theory Kernel Influence Diagram.

## Appendix D: Predictive Analysis Methodology

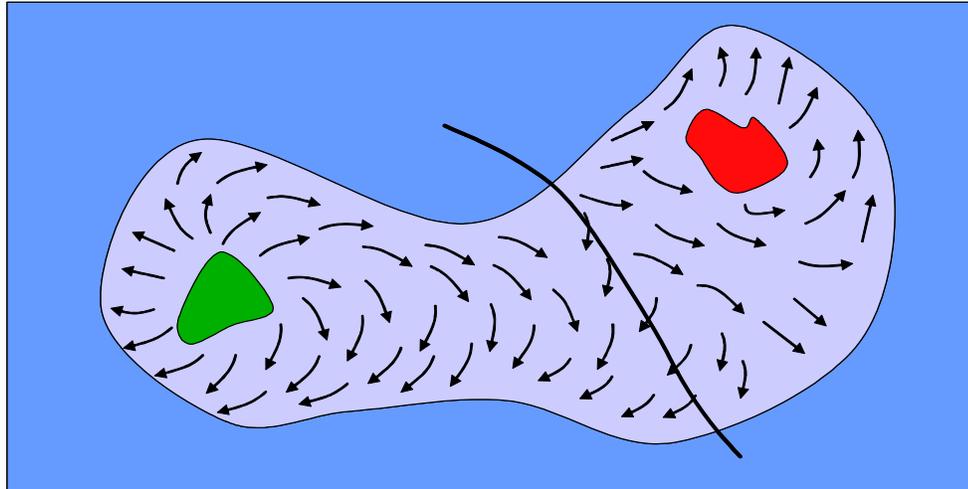
### Basic Approach

We formulate prediction problems as questions about the expected dynamics of a system of interest, with the system dynamics specified within a linear temporal logic (LTL) framework. In LTL, propositional formulas are obtained by combining “atomic” propositions using a grammar of Boolean and temporal operators (Clarke et al. 1999). Defining the atomic propositions to correspond to problem-relevant subsets of the system’s state space enables expressive characterization of the dynamics. As a consequence, predictions about the evolution of the system can be naturally posed in terms of (the satisfaction of) LTL formulas. As an illustrative example, consider the problem of predicting ultimate market share in a cultural market (e.g., music or films) in which “buzz” about a product propagates through various social networks. If, in a market containing two products with indistinguishable “intrinsic appeal”, it is possible for one of the products to achieve a dominant market share, we might view the market to be unpredictable. Conversely, a predictable market would be one in which market shares of indistinguishable products evolve similarly and market shares of superior products are typically larger than those of inferior ones. Prediction, of course, then involves estimating the ultimate market share of a product of interest, perhaps based on measures of appeal. It is easy to see that these intuitive ideas can be naturally and quantitatively expressed using LTL. For instance, market share dominance by product A is associated with a region of market share state space, and the condition that A eventually achieves such dominance and simultaneously possesses an appeal that is indistinguishable from product B is easily written as an LTL formula.

Perhaps the simplest way to formulate prediction questions within an LTL framework is in terms of *reachability*. In this setting, the behavior about which predictions are to be made is used to define the system state space subsets of interest (SSI). Available measurables allow identification of indistinguishable starting sets (ISS), that is, those sets of initial conditions and system parameters which cannot be resolved with the available data. Predictability assessment then involves determining which SSI can be reached from ISS. If the system’s reachability properties are incompatible with the prediction goals – if, for instance, “hit” and “flop” are both reachable from a single ISS – then the given prediction question should be refined in some way. Possible refinements include relaxing the level of detail to be predicted (by redefining the SSI) or using additional measurables to resolve the ISS. If and when a predictable situation is obtained, the problem of forming robust, useful predictions can be addressed. This problem is also naturally studied within the reachability framework, as it involves determining the most likely evolution of the system and quantifying the uncertainty associated with this estimate.

The preceding discussion motivates the need to develop a rigorous, tractable methodology for assessing reachability of complex processes in the presence of uncertainty regarding the process parameters. Particularly desirable are methods that can be implemented both in stochastic settings, where probabilistic characterizations of the uncertainty are available, and nonstochastic situations, for instance where bounds on the

uncertainty are known. Additionally, the practical utility of the approach is greatly enhanced if it is possible for reachability assessments to be carried out for *entire sets* of initial conditions and system parameter values.



**Figure D- 1. Reachability Diagram.**

We now briefly summarize an approach to reachability assessment which possesses these characteristics. Consider a system with state  $x \in X$ , where  $X \subseteq \mathbb{R}^n$  is the state space, and let  $X_0 \subseteq X$ ,  $X_u \subseteq X$ , and  $D \subseteq \mathbb{R}^p$  denote the sets of initial states, “undesirable” states, and admissible parameter values, respectively. Suppose we wish to show that no system trajectory starting from  $X_0$  can evolve to the set  $X_u$  for any admissible parameters. We adopt an analysis methodology which is analogous to the one underlying Lyapunov function-based stability analysis [Sontag 1998]: we seek a scalar function of the system state  $A(x)$  which permits reachability to be deduced *without* computing system trajectories. The basic idea is depicted in Figure D-1. If we can find a function  $A(x)$  with a “level curve” (say, the set of states for which  $A(x) = 0$ ) that separates the green and red sets of states and on which the system flow points from red to green, then we can conclude that the red set (i.e.,  $X_u$ ) is not reachable from the green set (i.e.,  $X_0$ ); moreover, we reach this conclusion without explicitly computing the set of states reachable from the green set.

More specifically, suppose we can find a function  $A(x)$  which is 1.) nonpositive on the set of initial states  $X_0$ , 2.) strictly positive on the set of undesirable states  $X_u$ , and 3.) nonincreasing along all system trajectories (e.g., for all system parameters in  $D$ ). In this case it is easy to see (and can be proved rigorously) that no trajectory from  $X_0$  can reach  $X_u$  [Colbaugh and Glass 2007].

The trick, of course, is to find such a function  $A(x)$  or prove that no such function exists. Recent work in semidefinite programming and semialgebraic geometry [Parrilo 2000]

provides a powerful framework within which to perform this analysis. Briefly, the inequality conditions to be satisfied by  $A(x)$  (e.g.,  $A(x) \leq 0 \forall x \in X_0$ ) are “relaxed” to sum of squares (SOS) conditions, so that the search for  $A(x)$  can be formulated as a convex (SOS) optimization problem. Software for solving SOS programs is available as a third-party Matlab toolbox [SOSTOOLS 2007], so that this analysis is convenient to implement. Moreover, the approach is tractable: the computational complexity of the associated SOS program grows polynomially in the dimension of the system’s state space  $X$  and parameter space  $D$ .

#### A.4.2: Sample Matlab Code

```
% Social Cascades Via Context Switching

% Multi-scale model implemented as an S-HDS with
% [Hedstrom et al. 2000] continuous dynamics.

% Uses SOSTOOLS version 2.01 and SeDuMi 1.05R5

clear; echo on;

syms x1 x2 x3;

number_contexts = 4.0; % 1.0, 2.0, 4.0
little_pop = number_contexts;
big_pop = 10.0; % 2.0

Imax = 5.0;

beta = (1.0/number_contexts); % 0.5 1.0
delta1 = 0.1; % 0.1 0.025 0.55 empirical evidence suggests
delta1=10*delta2
delta2 = (0.01/number_contexts); % 0.002 0.005 0.01

lambda = 0.001; % 0.001 0.004

thresh = 0.05*lambda;

% Initial probability distribution for the discrete state
%p = 0.5;
p = 1.0;

% Vector fields
f1 = [-beta*x1*x2;
      beta*x1*x2-delta1*x2-delta2*x2*(little_pop-x1-x2);
      0.0];

f2 = [0.0;
      0.0;
      x3*(big_pop-x3)];
```

```

%f1 = [-2.0*beta*x1-beta*x1*x2+(beta*pop1-delta)*x1;
%      delta*x1];

%f2 = [-2.0*beta*x1-beta*x1*x2+(beta*pop2-delta)*x1;
%      delta*x1];

g = 0.0;

% Degree of the barrier certificates
deg = 6; % 6 10

prog = sosprogram([x1; x2; x3]);

% Constructing B1, B2, B3 -- they must be >=0 on \mathcal{X} (Equation
(32))
[prog,mu1] = sossosvar(prog,monomials([x1,x2,x3],0:deg/2-1));
[prog,mu2] = sossosvar(prog,monomials([x1,x2,x3],0:deg/2-1));
[prog,mu3] = sossosvar(prog,monomials([x1,x2,x3],0:deg/2-1));
[prog,sos1] = sossosvar(prog,monomials([x1,x2,x3],0:deg/2));
B1 = sos1+mu1*(x1+10.0)*(10.0-x1)+mu2*(x2+10.0)*(10.0-x2)...
+mu3*(x3+10.0)*(20.0-x3);

[prog,mu1] = sossosvar(prog,monomials([x1,x2,x3],0:deg/2-1));
[prog,mu2] = sossosvar(prog,monomials([x1,x2,x3],0:deg/2-1));
[prog,mu3] = sossosvar(prog,monomials([x1,x2,x3],0:deg/2-1));
[prog,sos1] = sossosvar(prog,monomials([x1,x2,x3],0:deg/2));
B2 = sos1+mu1*(x1+10.0)*(10.0-x1)+mu2*(x2+10.0)*(10.0-x2)...
+mu3*(x3+10.0)*(20.0-x3);

% Equation (31)
[prog,mu1] = sossosvar(prog,monomials([x1,x2,x3],0:deg/2-1));
[prog,mu2] = sossosvar(prog,monomials([x1,x2,x3],0:deg/2-1));
[prog,mu3] = sossosvar(prog,monomials([x1,x2,x3],0:deg/2-1));
expr1 = B1-mu1*(x1+10.0)*(10.0-x1)-mu2*(x2+10.0)*(10.0-x2)...
-mu3*(x3-Imax)*(20.0-x3)-1;
prog = sosineq(prog,expr1);

[prog,mu1] = sossosvar(prog,monomials([x1,x2,x3],0:deg/2-1));
[prog,mu2] = sossosvar(prog,monomials([x1,x2,x3],0:deg/2-1));
[prog,mu3] = sossosvar(prog,monomials([x1,x2,x3],0:deg/2-1));
expr1 = B2-mu1*(x1+10.0)*(10.0-x1)-mu2*(x2+10.0)*(10.0-x2)...
-mu3*(x3-Imax)*(20.0-x3)-1;
prog = sosineq(prog,expr1);

% Equation (34)
[prog,gamma] = sospolyvar(prog,1);
expr2 = subs(p*B1+(1-p)*B2,{x1,x2,x3},{(number_contexts-0.5),0.5,0.1});
expr2 = -expr2+gamma;
prog = sosineq(prog,expr2);

% Equation (33)
%[prog,mu1] = sossosvar(prog,monomials([x1,x2],0:deg/2-1));
%[prog,mu2] = sossosvar(prog,monomials([x1,x2],0:deg/2-1));
%expr3 = -(diff(B1,x1)*f1(1)+diff(B1,x2)*f1(2) +
0.5*g^2*diff(B1,x2,2))...

```

```

%      + 0.5*B2-0.5*B1)-mu1*(4^2-x1^2)-mu2*(4-x2)*(x2+1.5);
%prog = sosineq(prog,expr3);

[prog,mu1] = sossosvar(prog,monomials([x1,x2,x3],0:deg/2-1));
[prog,mu2] = sossosvar(prog,monomials([x1,x2,x3],0:deg/2-1));
[prog,mu3] = sossosvar(prog,monomials([x1,x2,x3],0:deg/2-1));
expr3 = -(diff(B1,x1)*f1(1)+diff(B1,x2)*f1(2)+diff(B1,x3)*f1(3)...
          +(lambda*x2-thresh)*B2...
          -(lambda*x2-thresh)*B1)...
          -mu1*(x1+10.0)*(10.0-x1)-mu2*(x2+10.0)*(10.0-x2)...
          -mu3*(x3+10.0)*(20.0-x3);
prog = sosineq(prog,expr3);

[prog,mu1] = sossosvar(prog,monomials([x1,x2,x3],0:deg/2-1));
[prog,mu2] = sossosvar(prog,monomials([x1,x2,x3],0:deg/2-1));
[prog,mu3] = sossosvar(prog,monomials([x1,x2,x3],0:deg/2-1));
expr3 = -(diff(B2,x1)*f2(1)+diff(B2,x2)*f2(2)+diff(B2,x3)*f2(3))...
          -mu1*(x1+10.0)*(10.0-x1)-mu2*(x2+10.0)*(10.0-x2)...
          -mu3*(x3+10.0)*(20.0-x3);
prog = sosineq(prog,expr3);

prog = sossetobj(prog,gamma);

% Impose a lower bound on gamma, for better termination
prog = sosineq(prog,gamma-0.1);
%prog = sosineq(prog,gamma-0.2);
%prog = sosineq(prog,gamma-0.346);
%prog = sosineq(prog,gamma-0.145);
%prog = sosineq(prog,gamma-0.069);

prog = sossolve(prog);

% =====
% Get solution
GMA = sosgetsol(prog,gamma)

```

## Appendix E: The Hedstrom Model

Peter Hedström, Professor of Sociology and Fellow of Nuffield College, Oxford,<sup>12</sup> developed a model<sup>13</sup> of the behavior of people entering and leaving a social movement. In his research, Hedström focused on developing a *generative model* to explain what he refers to as *macro-level dynamics*. Hedström’s generative model is a system of ordinary differential equations (ODEs) that describes the time-varying relationships among the number of believers, potential believers, and ex-believers in a social movement. In this sense, Hedström equates macro-level dynamics to the time-varying relationships among the number of people at various stages (such as the three classes defined above) of a social movement.

The following notation will be used to describe the three populations of interest in the Hedström model:

$B(t)$  is the number of people who can be accurately categorized as “Believers” at time “ $t$ ”;

$P(t)$  is the number of people who can be accurately categorized as “Potential believers” at time “ $t$ ”; and

$E(t)$  is the number of people who can be accurately categorized as “Ex-believers” at time “ $t$ ”.

Using this notation, the Hedström model can be described as:

$$dP(t) / dt = -\beta \cdot B(t) \cdot P(t)$$

$$dB(t) / dt = \beta \cdot B(t) \cdot P(t) - \delta_1 \cdot E(t) \cdot B(t) - \delta_2 \cdot B(t)$$

$$dE(t) / dt = \delta_1 \cdot E(t) \cdot B(t) + \delta_2 \cdot B(t)$$

The rate constants  $\beta$ ,  $\delta_1$ , and  $\delta_2$  are fundamental to determining the dynamics of the three populations of interests. Hedström defines each of these rate constants<sup>14</sup> as follows:

$$\beta = \kappa_1 \times \kappa_2$$

$$\delta_1 = \kappa_3 \times \kappa_4$$

$$\delta_2 = \kappa_5$$

---

<sup>12</sup> Peter Hedström’s primary work is in analytical sociology focused on mechanism-based, quantitative techniques.

<sup>13</sup> Hedström, Peter, “Explaining the growth of social movements”, appearing in *Understanding Choice, Explaining Behaviour – Essays in Honour of Ole-Jørgen Skog*, pp 111-126, Unipub forlag, Oslo Academic Press, 2006.

<sup>14</sup> In the full Hedström model there is another term included in the ODEs describing both  $dE(t) / dt$  and  $dP(t) / dt$ . This term allows for the ex-believers to become potentially recruitable again. The associated rate constant is the rate at which this occurs. For the purposes of this research, this rate is taken to be zero because of the fundamental differences in timeframes for the conversion of ex-believers vs the other categories. That is, the rate for moving ex-believers back into the ranks of either believers or potential believers is assumed to be much less than the other rates represented in this model. It is noteworthy that both the transient as well as the steady-state behavior of the model can be substantively different without this term.

where;

$\kappa_1$  is the average density of network ties between believers and potential believers,

$\kappa_2$  is the attack rate of the believers (i.e., the number of potential believers being recruited in relation to the number being contacted by a current believer),

$\kappa_3$  is the average density of network ties between believers and ex-believers,

$\kappa_4$  is the attack rate of the ex-believers (i.e., the number of believers being induced to leave the movement in relation to the number being contacted by ex-believers), and

$\kappa_5$  is the non-interaction-based rate at which members leave the movement.

The dimensions of these rate constants are important to note. First, the dimension of the rate constants  $\beta$  and  $\delta_1$  is [(time units) x (number of people)]<sup>-1</sup> for both and the dimension of  $\delta_2$  is (time units)<sup>-1</sup>. Using *months* for time units, this translates into dimensions of (number of people)<sup>-1</sup> for  $\kappa_1$  and  $\kappa_3$  and (month)<sup>-1</sup> for  $\kappa_2$ ,  $\kappa_4$  and  $\kappa_5$ . Therefore, in determining these rate constants, it is necessary to estimate the average number of ties between believers and potential (ex-)believers per person for  $\kappa_1$  ( $\kappa_3$ ), the monthly fraction of potential believers who are being recruited (believers being induced to leave the movement) for  $\kappa_2$  ( $\kappa_4$ ), and the monthly fraction of believers leaving the movement because of reasons other than being induced to do so by ex-believers for  $\kappa_5$ .

Hedström used historical data from the Swedish temperance movement to estimate the rate constants  $\beta$ ,  $\delta_1$ , and  $\delta_2$ . The optimal parameter estimates are reported in (Hedström, Peter, “Explaining the growth of social movements”, appearing in Understanding Choice, Explaining Behaviour – Essays in Honour of Ole-Jørgen Skog, pp 111-126, Unipub forlag, Oslo Academic Press, 2006). Using these estimates, Hedström achieved a fit ( $R^2 = 0.46$ ) that he judged to be “reasonably good”. He then approximated the values for each of the  $\kappa_i$ ’s using these parameter estimates. For example, he approximated the value of  $\kappa_1$  to be  $\sim .03$  per person; i.e., 3 out of every 100 potential believers had ties to at least one person within the believer community.

Interestingly, Hedström makes a strong case for coupling macro-level considerations with what he refers to as a generative model. The following excerpt from his paper “Explaining the growth of social movements” makes this case.

*“During the last few years there has been an increasing recognition that much of what goes under the rubric of sociological theory has little to offer when it comes to explaining concrete social outcomes. The typical sociological “theory” of today is not a theory in the conventional sense of the term i.e., an explanatory tool. Rather, it is an abstract social typology that is meant to provide a “perspective” on society. For most explanatory purposes these typologies are of limited use however, because they normally lack a clear deductive structure that shows how the entities to be*

*explained follow from their alleged causes. Simply postulating that some social event or state X is a cause of Y without specifying the details through which X exerts its influence upon Y can never be an acceptable explanation; the mechanisms providing the detailed link between the cause and the effect must also be specified. The identification of explanatory mechanisms, in particular the reasons for why individuals do what they do, therefore constitutes a core activity in the construction of explanatory theories; without such micro-level mechanisms the explanations will be wanting. However, although the identification of the relevant micro-level mechanisms is necessary for the development of explanatory theory, it is not always sufficient. In order to explain macro level outcomes, an additional step typically is required: the mechanisms must be assembled into a generative model which allows us to derive the macrolevel outcomes they are likely to bring about.”*

In the spirit of coupling the macro-level with the meso-level (AKA Hedstrom’s generative) model, a potentially fruitful area for research is in exploring for the mathematical relationships that can be used to quantitatively represent the relationships between the rate constants in the Hedstrom model and the elements that comprise the R-SMT Kernel. For example, Hedström defines  $\beta$  as  $\kappa_1 \times \kappa_2$ ; i.e., the product of (the average density of network ties between believers and potential believers) with (the number of potential believers being recruited in relation to the number being contacted by a current believer). As such he has related the macro-level model of population size to the micro-level features of recruitment effectiveness of individuals within the believer population. There are clearly connections between the recruitment effectiveness and elements of the R-SMT Kernel. For example, believers can use their “Social Organizational Infrastructure” to increase the density of network ties and the fraction of potential believers being recruited thereby increasing both  $\kappa_1 \times \kappa_2$  and, by extension,  $\beta$ . Further, believers can create the perception of political opportunities, the perception of the value of believing, the consistency of the frame, and the reputation of the framing individual (who may, indeed, be one of the believers qua recruiters) to enhance the effectiveness of their recruiting.

Consider the following elements of the R-SMT kernel:

1. Opportunities & Constraints
  - a. Perception of opportunities (v constraints)
2. Resource Mobilization
  - a. Social organizational infrastructure
  - b. Perception of the value of believing
3. Framing Process
  - a. Consistency of frame
    - i. Cultural consistency
    - ii. Moral consistency
  - b. Empirical credibility of frame
  - c. Personal salience of frame

d. Reputation of framing individual or organization

A cursory analysis of the direction of influence of each of these eight elements on the Hedström rate constants is illustrated in table A.6.1.

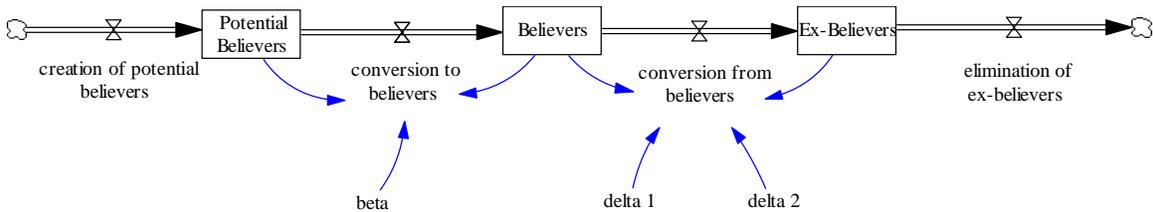
**Table E. 1. Potential Directional Relationships between the Hedström Rate Constants and Elements of SMT**

	$\beta$	$\delta_1$	$\delta_2$
1.a	+(-)	-(+)	-(+)
2.a	+	-	-
2.b	+	-	-
3.a.i	+	-	-
3.a.ii	+	-	-
3.b	+	-	-
3.c	+	-	-
3.d	+	-	-

(Note: “+” indicates a direct relationship and “-” indicates an inverse relationship).

The rate constants that are intrinsic to the Hedstrom model are arguably related to a collection of the entities drawn from the R-SMT kernel. A recommended area for research is in exploring for the mathematical relationships that can be used to quantitatively represent the relationships implied by the directions of influence indicated in Table A.6.1 above.

One standard methodological approach to analyzing systems such as the one suggested by Hedstrom is System Dynamics<sup>15</sup>. Figure E-1 is a representation of the Hedstrom Model using the convention of Stocks and Flows of System Dynamics.



**Figure E-1. Vensim Representation of the Hedstrom Model**

<sup>15</sup> System dynamics is a methodology for studying and managing complex feedback systems, such as one finds in business and other social systems.

There are a number of software tools that have been developed to model and analyze such systems. One such tool is Vensim<sup>16</sup>. The following is an example application of the Vensim tool to the Hedstrom Model.

Initial populations

$P(0) = 50$  people,  $B(0) = 25$  people,  $E(0) = 25$  people

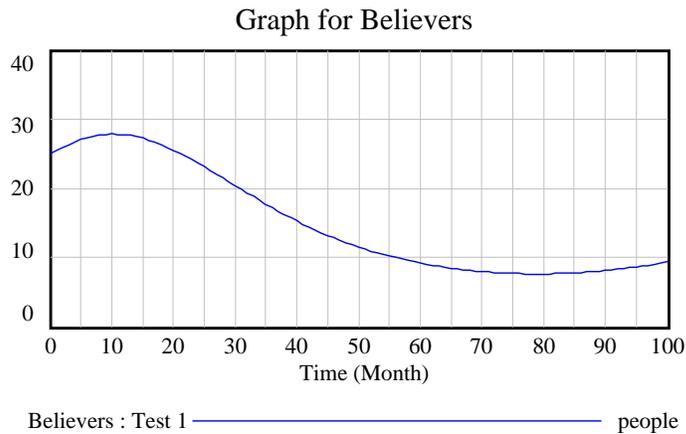
Rate constants

$\beta = 0.0016$  (month x people)<sup>-1</sup>

$\delta_1 = 0.0008$  (month x people)<sup>-1</sup>

$\delta_2 = 0.04$  (month)<sup>-1</sup>

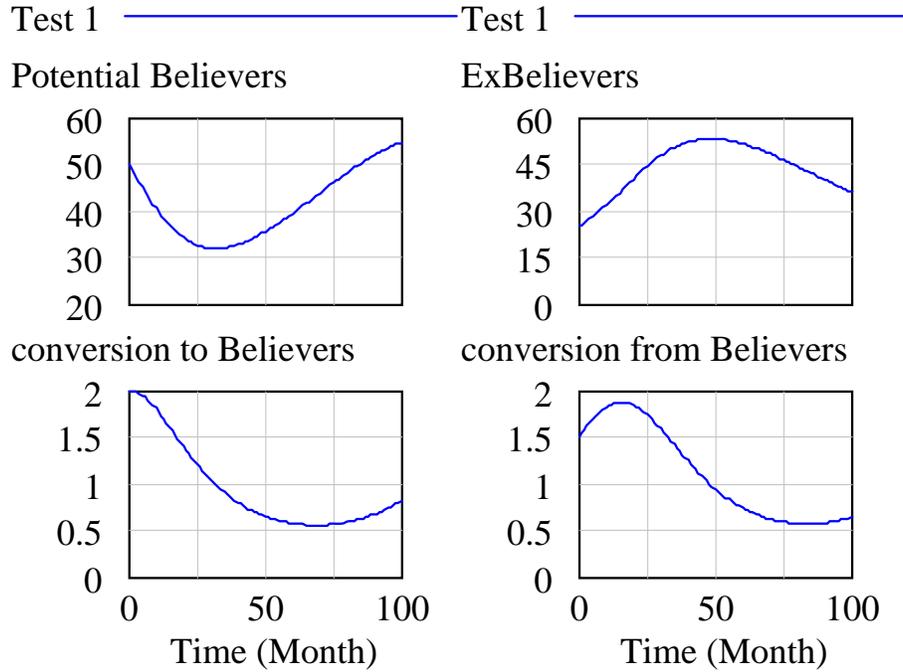
Results



**Figure E-2. Graph for Believers**

---

<sup>16</sup> Vensim, maintained and marketed by the Ventana Simulation Environment, is an integrated framework for conceptualizing, building, simulating, analyzing, optimizing and deploying models of complex dynamic systems (see <http://www.vensim.com/> )



creation of Potential Believers      elimination of ExBelievers

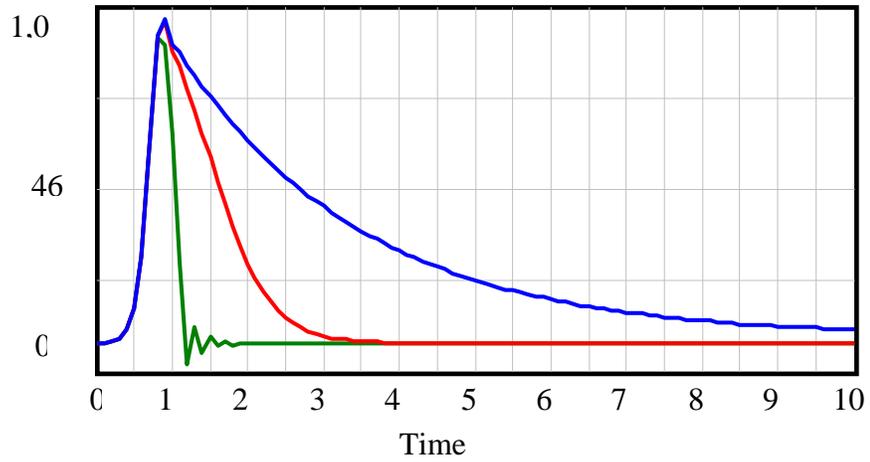
Test 1: 1

Test 1: 1

**Figure E-3. Believer Test Graphs**

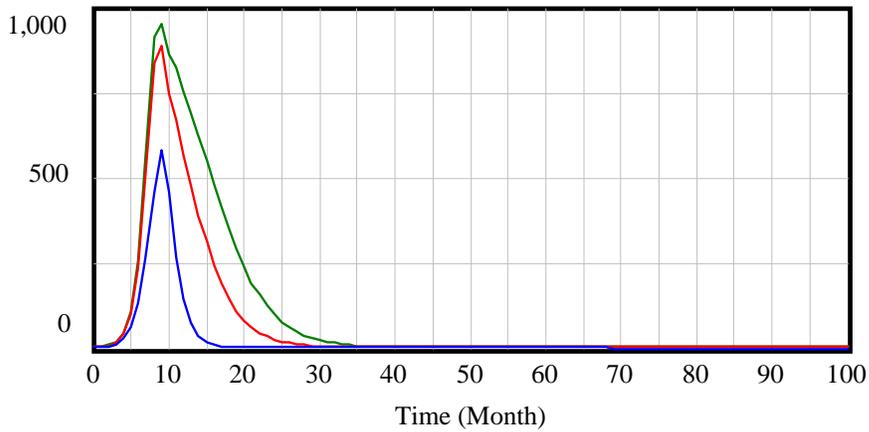
Another property of the Hedstrom model is the influence of the ratios of the rate constant in a *normalized* version of the differential equations. To explore these influences, the Hedstrom model equations were each divided by the rate constant  $\delta_1$ .

Graph for Believers



Also

Graph for Believers



$\delta_2/\delta_1$



**Figure E-4. Time and Numbers of Believers**

Preliminary observations...

- (1) the ratio of  $\beta$  to  $\delta_1$  influences the amount of time that believers remain believers, and
- (2) the ratio of  $\delta_2$  to  $\delta_1$  influences the maximum number of people who are believers at any one time.

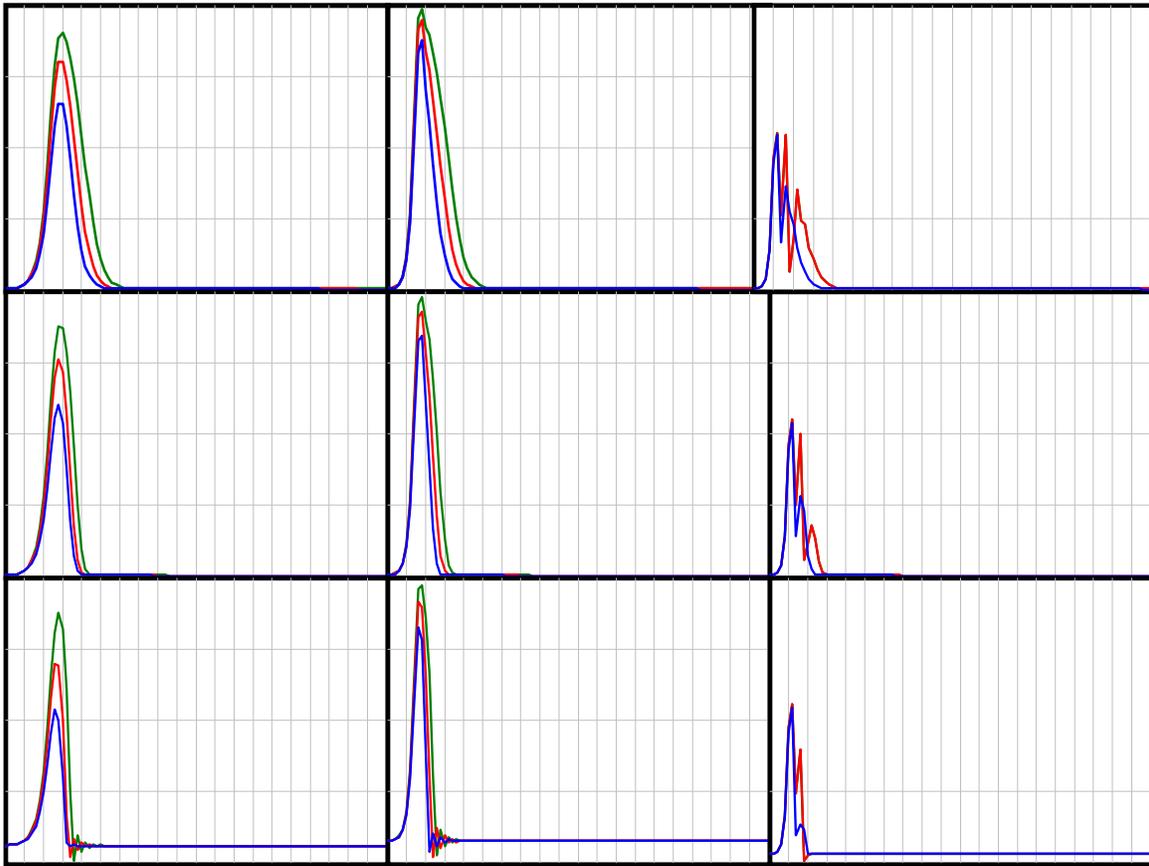
- (1) can be interpreted as saying that as the entry recruiting rate becomes more effective than the exit recruiting rate the dwell time as a believer decreases.
- (2) can be interpreted as saying that as the nominal attrition becomes more effective than the exit recruiting rate the maximum number of people in the believer state increases.

These sensitivities were explored using the following ratio template...

2 (50,100,200)	4 (50,100,200)	8 (50,100,200)
1 (25,50,100)	2 (25,50,100)	4 (25,50,100)
0.5 (12.5,25,50)	1 (12.5,25,50)	2 (12.5,25,50)

$\beta/\delta_1$
$\delta_2/\delta_1$

The results are...



**Figure E-5. Overview of Social Movement Theory and Applicability to Radicalization.**

# Appendix F: Eight Seminal Blogs

## Blog 1:

Muslim Boycott of Denmark

<http://canadiancoalition.com/forum/messages/12376.shtml>

### Muslim Boycott of Denmark

[ [Follow-Ups](#) ] [ [Post Followup](#) ] [ [Public Message Forum](#) ]

Posted by Dave on 08:28:52 2006/01/02

The Editors  
Jyllands-Posten  
Copenhagen  
DENMARK

Petach Tikva, 2 January 2006

Ladies and gentlemen:

Today I received the news report below. I write now to ask you, your government, cultural and business organizations to resist any temptation to surrender to such outrageous and totally unacceptable threats.

Only stern, determined and internationally coordinated action can stop this abominable Muslim behavior. Unless and until these various Muslim groups understand that their constant threats will not be tolerated, they will only continue and intensify.

Thank you for your attention. I will be pleased to receive your prompt and considered reply.

Respectfully,

Dave Alpern

Muslim organisation calls for boycott of Denmark  
By The Copenhagen Post

An Islamic cultural organisation warns that 51 Muslim states will boycott Denmark unless an official apology is offered for the cartoons of the prophet Mohammed printed in national newspaper Jyllands-Posten

An Islamic cultural organisation has called upon its 51 member states to boycott Denmark in response to cartoons of the prophet Mohammed printed three months ago in national daily Jyllands-Posten.

The Islamic Educational, Scientific and Cultural Organization (ISESCO) stated on its webpage that it sought a condemnation of 'the aggressive campaign waged against Islam and its Prophet' by Jyllands-Posten.

Abdulaziz Othman al-Twajiri, the organisation's secretary general, reportedly told Arabic TV station Al-Arabiya that member states would impose a boycott until an apology was offered for the drawings.

'We encourage the organisation's members to boycott Denmark both economically and politically until Denmark presents an official apology for the drawings that have offended the world's Muslims,' al-Twajiri said.

Egypt's ambassador to Denmark, Mona Omar Attiah, warned against not taking the boycott seriously.

'The organisation has a broad appeal among the world's Muslims, and if the government doesn't make new efforts, Muslims around the world will follow the boycott and international pressure against Denmark will increase,' she

told daily newspaper Information.

Tensions have run high between Muslims and official Denmark since the newspaper Jyllands-Posten published 12 cartoons in September that depicted the prophet Mohammed. The newspaper said printing the cartoons was a way to ensure the freedom of speech in the face of intimidation from radical Islamists.

Trade organisation Danish Industry said that so far, none of its members had reported feeling the effects of a boycott, however.

**WE NEED YOUR HELP!**  
**Please take 2 minutes to**  
**join CCD or make a donation.**  
**Thank you for your generosity.**

Follow Ups:

- [Re: Muslim Boycott of Denmark](#) - Hydar 19:33:47 2006/02/03 (12)
  - [Re: Muslim Boycott of Denmark](#) - The Wiking 19:28:35 2006/02/12 (0)
  - [Re: Muslim Boycott of Denmark, Churchill](#) - The Wiking 19:17:55 2006/02/12 (0)
  - [Re: Muslim Boycott of Denmark](#) - The Wiking 18:55:59 2006/02/08 (2)
    - [Re: Muslim Boycott of Denmark](#) - The Wiking 19:35:58 2006/02/09 (0)
    - [Re: Muslim Boycott of Denmark](#) - zakaria 16:02:50 2006/02/09 (0)
  - [Re: Muslim Boycott of Denmark](#) - Cheapshot911 21:06:37 2006/02/06 (0)
  - [Re: Muslim Boycott of Denmark](#) - The Wiking 19:17:24 2006/02/04 (5)
    - [Re: Muslim Boycott of Denmark](#) - zakaria 16:31:19 2006/02/09 (4)
      - [Re: Muslim Boycott of Denmark](#) - The Wiking 19:41:51 2006/02/09 (3)
        - [Re: Muslim Boycott of Denmark](#) - mokhtar 07:35:13 2006/02/10 (2)
        - [Re: Muslim Boycott of Denmark](#) - The Wiking 08:02:31 2006/02/10 (1)
          - [Re: Muslim Boycott of Denmark+to va dump](#) - zak 11:55:39 2006/02/12 (0)
  - [Re: Muslim Boycott of Denmark](#) - Hisham 11:55:00 2006/02/03 (0)
  - [Re: Muslim Boycott of Denmark](#) - Ali 03:36:50 2006/02/02 (3)
    - [Re: Muslim Boycott of Denmark](#) - Cheapshot911 21:14:01 2006/02/06 (0)
    - [Re: Muslim Boycott of Denmark](#) - Daddy 16:33:41 2006/02/02 (1)
      - [Re: Muslim Boycott of Denmark](#) - zak 12:27:30 2006/02/12 (0)
  - [Muslims have to continue boycotting Danish products](#) - Abdullah 05:17:06 2006/01/31 (5)
    - [Re: Muslims have to continue boycotting Danish products](#) - Cheapshot911 21:32:15 2006/02/06 (0)
    - [Re: Muslims have to continue boycotting Danish products](#) - R.Nalland 07:45:51 2006/02/02 (0)
    - [Re: Muslims have to continue boycotting Danish products](#) - The Wiking 18:37:57 2006/01/31 (2)
      - [Re: Muslims have to continue boycotting Danish products](#) - XLL 12:16:02 2006/02/12 (1)
        - [Re: Muslims have to continue boycotting Danish products](#) - The Wiking 18:44:59 2006/02/12 (0)
  - [CLINTON?](#) - Lisbeth 16:38:07 2006/01/30 (0)
  - [Re: Muslim Boycott of Denmark](#) - FATIMA 14:07:59 2006/01/30 (4)
    - [Re: Muslim Boycott of Denmark](#) - Cheapshot911 21:41:09 2006/02/06 (0)
    - [Re: Muslim Boycott of Denmark](#) - Ibrahim 19:03:34 2006/01/30 (2)
      - [Re: Muslim Boycott of Denmark](#) - FarJunior 15:15:36 2006/01/31 (1)
        - [Re: Muslim Boycott of Denmark](#) - zak 12:30:35 2006/02/12 (0)
  - [CHRISTIAN EXTREMISM](#) - Mohammed 17:50:35 2006/01/29 (1)
    - [Re: CHRISTIAN EXTREMISM](#) - Cheapshot911 21:59:30 2006/02/06 (0)
  - [Re: Muslim Boycott of Denmark](#) - Dr Ahmed 17:17:12 2006/01/29 (2)
    - [Re: Muslim Boycott of Denmark](#) - saladin1970 10:13:12 2006/01/30 (1)

## Blog 2:

The Anti-Daily Show: Europe pressured to censor anti-muslim Journalist... <http://neoconconfederation.blogspot.com/2006/01/europe-pressured-to-c...>

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# THE ANTI-DAILY SHOW

THIS GROUP IS A DISCUSSION ABOUT WHAT OUR DOMESTIC AND FOREIGN POLICY MEANS.

WEDNESDAY, JANUARY 11, 2006

## Europe pressured to censor anti-muslim Journalists--Cool.

Posted: Jan 11, 2006 11:11 AM

Growing Islamic Anger Over Mohammed Cartoons

By Patrick Goodenough

CNSNews.com International Editor

January 03, 2006

(CNSNews.com) - For the government of one small European nation, the new year begins with a deepening crisis: growing anger in the Islamic world over a newspaper's decision to publish cartoon depictions of the prophet Mohammed.

The Danish daily newspaper Jyllands-Posten last fall published 12 caricatures of Mohammed, causing an uproar that continues to build more than three months later.

Muslims consider any images of the prophet who founded Islam in the seventh century to be blasphemous.

The published cartoons showed "Mohammed" in various settings. One depicts him wearing a turban shaped like a bomb with its fuse lit, while another has him with eyes blacked out and carrying a large, curved knife, flanked by two women in top-to-toe burqas.

In another, the prophet is shown telling a line of suicide bombers seeking entry to paradise: "Stop, stop, we have run out of virgins."

ABOUT ME

JEREMY CROWDER

LANETT, ALABAMA, UNITED STATES

I'm 26 and am a supervisor at a hospital and am a Methodist layspeaker/leader. Former Law Student and Pentacoastal Preacher.

[VIEW MY COMPLETE PROFILE](#)

PREVIOUS POSTS

Liberals finally go after the brutal ways of Islam...

Sony Launches Gay/Transgender Music label.

U.N. Uniforms Unconstitutional and some brave soilde...

Fake Universities accredited by fake agencies.

Alabama has all kinds of Baptists though little el...

Religon out of the ordinary---Black "Jews?"

Soilder got beat up and kicked out of Army--Ouch!!...

Isreal cracks down on Jews trying to start new nat...

Ave Maria Law School out shines older Law Schools....

Feminazi organization attacks

Champion Football Co...

The Organization of the Islamic Conference (OIC), representing 57 Muslim states and territories, issued a memorandum on January 1 accusing the Danish government of "indifference" after Prime Minister Anders Fogh Rasmussen declined to intervene in the dispute.



Rasmussen called it a matter of freedom of speech, echoing the reasoning of the newspaper at the center of the row. Jyllands-Posten had said it wanted to test the limits of free speech at a time it was under threat because of the influence of radical Islam.

The OIC dismissed the free speech argument, saying in its statement this week that the publication of the cartoons "was meant to disturb and infuriate Muslims, and could not be considered as an innocent behavior falling within the scope of freedom of expression in which everyone believes."

Claiming that the publication "has offended hundreds of millions of Muslims around the world," the organization announced that the governments and cultural organizations in all OIC member states had been asked to boycott a forthcoming cultural project on the Middle East, partly funded by the Danish government.

Last week, foreign ministers of the Arab League mandated the 22-nation bloc's secretary-general, Amr Moussa, to take up the issue directly with the Danish government.

In a declaration, they voiced "surprise and indignation over the Danish government's reaction, which was disappointing, despite the political, economic, and cultural bonds with the Muslim world."

Not only did Rasmussen refuse to take up the matter with the newspaper, he also declined to meet with a delegation of ambassadors from 11 Muslim nations who wanted to discuss the "tone" of the debate over Islam in Denmark.

"As prime minister I have no tool whatsoever to take actions against the media, and I don't want that kind of tool," he said at the time.

The growing pressure - the U.N. and European Union have also waded in, while a group of former Danish ambassadors said the premier was wrong to refuse to meet with the Muslim envoys - appears to have left the government cold.

"Now it is important to stand our ground and say that we have a separation of powers in Denmark and something called freedom of expression," the Copenhagen Post quoted the ruling party's foreign affairs spokesman Troels Lund as saying in response to the Arab League complaints.

Denmark's Ritzau news agency noted that while other Muslim groups had previously criticized the government over the cartoon issue, "the declaration from the Arabic League is seen as the most serious response so far."

An Egypt-based Muslim interfaith group is planning a conference for Danish journalists next March on what it calls "the ignorant and inflammatory portrayal of Islam in the media."

POSTED BY CROWDER AT 11:41 AM

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1 COMMENTS:

 John said...

Norway started posting pics of the prophet and allah too now in magazines and point out that they can do it because their country is FREE (freedom of speech).

Scandinavian jackasses? :P

11:41 AM

[POST A COMMENT](#)

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## Blog 3:

Dhimmi Watch: International Union of Muslim Scholars urges Norway,...

<http://www.jihadwatch.org/dhimmiwatch/archives/009863.php>



FrontPageMag.com By Robert Spencer By Hugh Fitzgerald Books Jihad Watch Robert Spencer Islam 101 Qur'an Blog



[« The Author Who Got A Big Boost From bin Laden | Main | CAIR to Rosenbaum: Well done, good and faithful servant »](#)

**January 21, 2006**

### **International Union of Muslim Scholars urges Norway, Denmark to halt acts offending Islam**

More [cartoon rage](#). Has the IUMS gotten around to saying anything about bin Laden yet? "IUMS urges Norway, Denmark to halt acts offending Islam," from [KUNA](#), with thanks to Twostellas:

CAIRO, Jan 21 (KUNA) -- The International Union for Muslim Scholars (IUMS) urged Saturday Norway and Denmark to halt all acts directed towards offending Islam.

In a press release, IUMS said it will call on Muslims to boycott all Norwegian and Danish products and activities if the newspapers of the two countries do not stop publishing material aimed at offending Islam.

Posted by Robert at January 21, 2006 2:56 PM

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#### **Comments**

**(Note: Comments on articles are unmoderated, and do not necessarily reflect the views of Dhimmi Watch or Robert Spencer. Comments that are off-topic, offensive, slanderous, or otherwise annoying may be summarily deleted. However, the fact that particular comments remain on the site IN NO WAY constitutes an endorsement by Robert Spencer of the views expressed therein.)**

And what is "The International Union for Muslim Scholars (IUMS)"? Isn't it strange how fascist ideology tends to spawn groups of all sorts, with many names, in many places, all united around some idea of what constitutes the 'true and correct order for the world'. These groups grow like weeds and love acronyms. It is as if the fascist spirit cannot be contained in the individual person; it must reach out to the group, to the collective, find an identity and speak in the collective voice. And the collective can be divided infinitesimally, given its own name, its own label, and still remain homogeneous with the collective, because the collective is one in thought, in heart, in mind, an expression of the truth, a community of destiny, the Volk, the Ummah, and now a little thing known as the IUMS...

Posted by: JTF  at January 21, 2006 3:16 PM

"in a press release, IUMS said it will call on Muslims to boycott all Norwegian and Danish products"

considering that Denmark's biggest export is bacon and pork, whoever IUMS are , shows that they are as stupid as their moronic fascist ideology.

Posted by: archduke  at [January 21, 2006 3:24 PM](#)

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OT:

British Dhimmi awards

<http://drinkingfromhome.blogspot.com/2005/12/british-dhimmi-awards-2005-update.html>

long list of British dhimmi's , with lots of links to dhimmi news items.

Posted by: archduke  at [January 21, 2006 3:41 PM](#)

---

I am offended that they are offended. Why is my apology?

Posted by: epg  at [January 21, 2006 4:00 PM](#)

---

can i call for a boycott of muslim countries, because their portrayal of atheists as being a lower form of pond life is offensive to me?

(being an atheist myself)

might go and set up a "international union of scholars that dont believe in imaginary things in the sky union"

(no offense intended to the non-Islam religious of you on this site...)

Posted by: archduke  at [January 21, 2006 4:14 PM](#)

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archduke it isn't just muslims who think Atheists are pond scum. There's plenty of xians who feel the same way. I find it amusing and they find it maddening when I just laugh at them.

I like Christians and have met many fine ones over the years. For them Jesus is their role model. We all know who the muslim's role model is which makes it only logical they'd have such a hateful out look on life.

Muslims act like bullies and brats. They need to get over themselves and join the 21 century.

Posted by: fireangel  at [January 21, 2006 4:51 PM](#)

---

I hear the Danes have named their new Prince - "Christian".

Surely that is offensive to the Muslims? Then again they would take great delight in having a royal Dane named "Christian" as a Dhimmi.

Posted by: 3rdtimelucky  at [January 21, 2006 5:43 PM](#)

---

The International Union of Muslim Scholars seems to be unable to issue any refutation of the cartoons' contents. Why not? With all that collective brain-power, with all that knowledge of the Koran, Hadiths, and Sira, they should be able to tell us what is wrong with the cartoons. I haven't thus far seen a refutation. As has been the pattern historically, Islam must resort to pressure tactics of various sorts, such as these threats. Mohammad was not able to refute the critics, so he had to turn to force to establish his method. This has almost always been the tradition in Islam.

Which cartoon was unfair? Mohammad never held a sword? He never had an angry expression on his face? Muslims have never overreacted to critics? What about the depiction with Mohammad with a bomb on his head?

The Bomb on Mohammad's head cartoon.

1. Verse 8:60 says use whatever means necessary to defeat the enemy. That's open-ended as to what equipment is used in the jihad. Bombs are in that (practically unlimited) category.

2. Putting the bomb on his head? The issue of whether suicide bombing is supported, in principle, in the Koran, is not resolved. However, in the context of jihad, believers are indeed expected to slay or be slain for Allah (9:111) and do whatever is needed to achieve the ultimate goal of Islam (9:33).

So-called moderate Muslims only hurt their case by (a) failing to refute these cartoons, and (b) backing appeals to force in attempting to silence critics.

Posted by: Archimedes  at [January 21, 2006 6:06 PM](#)

---

More cartoons please!!!!

Posted by: DavidE  at [January 21, 2006 6:52 PM](#)

---

The new prince is called Christian:

[http://www.jp.dk/english\\_news/artikel:aid=3509122/](http://www.jp.dk/english_news/artikel:aid=3509122/)

We have had ten kings called Christian, all danish kings since 1513 have been called either Christian or Frederik. Some muslim in a program today suggested that the new king could be callad Omar instead in order to show acceptance of the muslim minority. I sincerely hope he was joking...!

Posted by: odin, king of gods  at [January 21, 2006 7:06 PM](#)

---

Which cartoon was unfair? Mohammad never held a sword? - Archimedes

Muhammed even had names for his swords.

Posted by: Silvester  at [January 21, 2006 7:29 PM](#)

---

I remember reading somewhere - it might have been Ibn Warraq's 'Why I am not a Muslim' - that the reason for the embargo against pictorial representations of Muhammed was purely for reasons of vanity, on his, Muhammed's, part. In his fifties when he became powerful, he felt he was past his prime in the looks department.

Posted by: Silvester  at [January 21, 2006 7:33 PM](#)

---

Why don't they just command them to bow in submission and pay the jizya?

Posted by: Bohemond\_1069  at [January 21, 2006 8:09 PM](#)

---

Calling tariq ramadan,  
calling tariq ramadan . . .

tar baby, you've been busy,  
you and the brothers.  
But surely you can do better  
than iums? no fancy word play,  
but hey, something a little more poetic,  
don't you think?

Was it a surprise to see  
the Free, the Danes, the Northmen  
stand their ground, not bow down, not submit?

Posted by: the poetess  at [January 21, 2006 9:01 PM](#)

---

Anyone who has seen the cartoons will agree they are despicable. There is nothing funny about the early barbarous period of Islam. We need more cartoons in Islamo-realism, not Islamo-impressionism. Anyone who is angry enough to kill you over a cartoon should be incarcerated or institutionalized. Perhaps we need a Grand Theft Islam (Copyright- 2006 All Rights Reserved), to allow someone straight out of the madrass to vicariously achieve heaven. We can have him steal, rape and pillage infidels for jihadbucks and then seek Jihad where the program unites him with Allah and all his sex toys in paradise.

Posted by: David England  at [January 22, 2006 8:46 AM](#)

---

Aaaaah, poor babies

Posted by: marilyn at [January 22, 2006 9:13 AM](#)

---

test

Posted by: sheik yer'mami at [January 22, 2006 2:02 PM](#)

---

An explicit call to restrain free speech on behalf of a putative protected class.

MORE KORANS MORE HADITHS MORE SIRATS MORE MOSLEMS MORE ISLAM  
MO'

Too bad about all the already laid groundwork that makes selective restraint possible.  
Before, it was always to quiet down relatively harmless whiners and manipulators. You  
know, this group or that group.

Not so with the Moslems. They be more serious people. They be scowling. They be  
laughing all the way to Global Sharia.

Posted by: Alarmed Pig Farmer at [January 22, 2006 3:57 PM](#)

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"International Union Of Muslim Scholars  
International Union of Muslim Suicide Bombers  
International Union of Muslim Subway Bombers  
International union of Muslim Wife-Beaters  
International Union of Islamic Beheaders  
International Union of Taqiya training for Muslims.  
International Union for illegal immigration of Muslims  
International Union for gaining the world for Allah.

Posted by: rafia at [January 22, 2006 8:47 PM](#)

---

I trust that there has been a large scale Muslim evacuation from these countries ,how  
can they live in such intolerance? OH that's not the case more wish to move to the West.  
I don not understand I don't go where I am not wanted why do Muslims? I wish to go  
to Suadi Arabia and read good poetry but I'm sure that would be band so do I go there  
no.

Posted by: mark52 at [January 22, 2006 11:28 PM](#)

---

Honestly. Someone asked to stop cartoons. Silly request(by our standards) but does it  
really need amazing responses like this:

"  
International Union Of Muslim Scholars  
International Union of Muslim Suicide Bombers  
International Union of Muslim Subway Bombers  
International union of Muslim Wife-Beaters

International Union of Islamic Beheaders  
International Union of Taqiya training for Muslims.  
International Union for illegal immigration of Muslims  
International Union for gaining the world for Allah.  
"

And this is just plain wrong. I don't think death threats were made yet:  
"Anyone who is angry enough to kill you over a cartoon should be incarcerated or institutionalized"

More veiled racism from jtf. Here muslims are subtly to fascist Nazis(They don't like Jews. The comparisons fizzle out after that):

(they have)..fascist ideology....These groups grow like weeds. ...fascist spirit cannot be contained. a community of destiny, **\*\*THE VOLK\*\***, the Ummah, and now a little thing known as the IUMS...

Excellent article on the kind of people that abuse language with terms like "Islamofascists" and "Ultra-liberal". <http://home.att.net/~hugh2you/examples.html>

Posted by: Kazuya  at [January 23, 2006 4:09 PM](#)

---

"And this is just plain wrong. I don't think death threats were made yet..."

-- posted by Kazuya

You have it backwards. It is you who is just plain wrong here. Wise up. Please check out the Copenhagen Post, from a DW archive posting.

<http://www.jihadwatch.org/dhimmiwatch/archives/2005/10/008528sprint.html>

Posted by: Stendec  at [January 23, 2006 4:29 PM](#)

---

Sorry, that should be "you are," of course.

Posted by: Stendec  at [January 23, 2006 4:31 PM](#)

---

"police arrested a 17-year-old, who admitted to phoning in the threat."

Sorry. Well the plural "threats" is wrong.

Posted by: Kazuya  at [January 23, 2006 4:46 PM](#)

---

Kazuya,

Well, here are some more then:

Norwegians on the receiving end of death threats:

<http://www.cnsnews.com/news/viewstory.asp?Page=%5CCulture%5Carchive%5C200601%5CCUL20060120>

Pakistanis putting a bounty on the heads of each cartoonist:

<http://www.caglecartoons.com/previewColumn.asp?columnID={C5A5481E-BD8E-4D73-A087-26508F3A3>

More details on the bounty:

<http://www.metimes.com/articles/normal.php?StoryID=20051205-072933-7972r>

So, Islam and its followers say everyone on the planet, Muslim or not, has to follow their rules, or else. And the "else" is violent chastisement unto death. Nice.

Posted by: Stendec  at January 23, 2006 5:21 PM

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 20,555,485

# Blog 4:

Justice for All: An open letter to the people of Denmark - Let's Talk-Video

http://justice4every1.blogspot.com/2006/02/open-letter-to-people-of-de...

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إلى العالم للجميع

Justice is "For All"  
Because it's a GOD-Given  
right to every one and  
every thing.

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Muhammad | نيل | سيد | إسلام | نبي | Google | 4499 |

Feb 12, 2006

An open letter to the people of Denmark - Let's Talk-Video

كنت بص هذا الفيديو من حوالي عشرة أيام ثم ترددت في تصويره ثم قررت اليوم ان اصوره واضحه ..ليس محاوله لتقلد اي شخص او محاكاة ..ان اتحدث ما فيه ..فانشره وان لم يتحدث فارمه في صحيفه الغمامه ..ومن بناء فلنترجمه الى العربية او الى اللغات الاخرى لنضع هذا أسفل الفيديو ..فالتاب معنوح للجميع...حراكم الله حبرا

ليس بالضرورة ان تكون موافقا على كل ما في الفيديو لتشارك في ترجمته او -  
- ينشره

اضغط هنا لمشاهدة الفيديو  
Click Here to watch the video

An open letter  
to the people of  
Denmark  
By Sherif Abdel Aziz

حجم الملف حوالي خمسة ميجا بايت ويمكن تنزيله ببرامج الريل بلاير  
بفضل الاستماع الي الملف بالهدفونر ..وان كان استخدام سماعات الكمبيوتر  
ليس سيئا

An open letter to the people of Denmark  
رسالة مفتوحة الى الشعب الدانماركي  
My name is Sherif Abdel Aziz, a proud Muslim, and a fundamentalist by choice and profession.  
انا اسمي شريف عبد العزيز ..مسلم فخراسلامي ..وأصولي بالانتماء والتخلص  
I wish if I had known your language to address what I am addressing today in your own native tongue, but since English is my second language, yet universal and globally understood..I will use it in this clip today.  
الذي لو كنت اعرف لغتكم لوجه لكم هذا الخطاب اليوم بلسانكم اني .. ولكن الانجليزية هي لغتي الثانية ولكنها لغة عالمية الفهم والعلم ولذا ساستخدمها اليوم في لغة الفيديو هذه  
I only represent myself, and those who might have similar opinions of mine, but cannot get their voices heard.  
أنا فقط اقول لغتي وهؤلاء الذين يعتقدون اراء مشابهة لراي وتكلموا لا يعتقدون رسالة ايضا  
انتم انتم  
I see that the majority of Muslims are calling for massive boycott of your products and goods, in response to one of your magazines that published ridicules and offensive drawings of a very important man in the history of man kind, named Mohamed, who we believe - as Muslims - to be the final prophet and the last messenger to man kind.  
انا ارى ان اغلب المسلمين يدعون لقاطعة هتاتكم بشكل جنوني في رد فعل كثير منهم في هتاتكم للتجارون المسلمين والمسيحيين لرجل من اهم الرجال في تاريخ الانسانية والذي يؤمن بنس المسلمين انه خاتم الانبياء وحرهم للتسمية - محمد  
You don't have to agree with Muslims on this, this is not the issue at all ... I, my self don't agree with the majority of Muslims on the issue of boycotting Denmark's goods and products either, which made so many people critical of me. Even some demonized me and called me a traitor.  
لا يوجب عليكم ان توافقوا مع المسلمين كذا قضية محمد ونسوه ..الوجه ليست القضية اليوم هنا شخصيا لا اتفق مع معظم المسلمين حول قضية عقائده هتاتكم .. الا اني اعمل الكثيرين خلفي من هؤلاء هذا بل وتتمثل اثار بعضهم ان وصفني بالذليل  
See, we Muslims are not all alike, and we come from so many backgrounds..Cultural, ethical, lingual, sectarian and various schools of thoughts and interpretations.

12/2004  
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إلى كتابات ادم

- 08/2006
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- 04/2008

20 Mar 08, 20:39  
 محمدقاسم: منونة جوده  
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 التي احسنها لولا معنى  
 23 Feb 08, 12:20  
 حيا انت moony  
 بتكلم عن حقوق المرآة في  
 زمن الشعارات فقط بلا  
 كلفه ربا يسترها طينا  
 جديما ويهد عطا ولا  
 الحرام اهلينا على منولك  
 التي اول مرة اتخطها  
 وحييا لى احيين من اول  
 سفر كليله حلة انت  
 صابلا. ق. ا. م.  
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Call for Peace & Openness  
  
 بحث

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-  ILLpresident

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Google

كفا نرور نحن المسلمون لسا كنا على بناكنا واحدة , فجان تأتي من بيانا مختلفة تقاليا ونعويا  
 وعقليا وفهنا ونفسيا

The reason I am doing what I am doing today, is to let you know, that so many of us  
 understand the value of freedom of speech, cultural diversity, and civilized debate ...we have  
 suffered centuries of brutal dictatorships, then centuries of western colonialism, that we still  
 live the aftermath of it.

ان السبب الذي نلجأ باليوم بعد اليوم هو ان اشرح لكم ان كثيرين منا يجهلون قيمة حرية  
 التعبير , النوع الثقافي والحوار المنظم , وقد هانى المسلمون قرون طويلة من ديكتاتوريات طائفية ثم  
 استعمار كبرى طويل...كلانا نعيش آثارها اليوم

The only products of all these centuries are re-actiomn, emotional bullying, suspicion and  
 lack of confidence in our own selves.

ان منتجات العصور الديكتاتورية والاستعمارية هي الاندفاع الرد فعلي والهجوم العاطفي والتسك الذي  
 كل نلن وقد نشه -حي في النفس

Many of my people don't understand how democracy functions in the west, nor they  
 experienced any kind of open-society advantages. Most of Muslims simply don't understand  
 the language you speak ..I mean the language of democracy and all its vocabularies,  
 alongside with its by products and side effects. We only talk the language of dictatorship,  
 closed-mind ness, and fear.

ولكن كثير من المسلمين ان لا يفهمون كيف تعمل الديمقراطية في الغرب ولا هم عاشوا تجربة  
 المنهج المنطوق الذي كتشفوها

والقد نأت اليوم لا يفهمون كثيرا مفردات اللغة الديمقراطية مثل ما فيها من سميات والقرائن جانبية  
 نحن فقط نعوم مفردات الديكتاتورية والتي عنها اتعدى والدول

I have to say, that the mockery some of your artists made of Mohamed is not only ridiculous,  
 but stupid, ignorant and hateful beyond limits. --ye!, I understand that democracy produces  
 all kinds of free speech, be it likeable or not.

يحب ان الذي ايضا ان السبارية الذي قام بها بعض رساهاي حنة لذكوم من حنة ليست فقط سبانية  
 بل كفة وحاشية وهلية بالذخوة للكرافية بلا حدود

ان الذي اقوم ان الديمقراطية تلنن مختلف انواع حرية التعبير سواء اجنبيا او كرفنايا  
 I know that even Christian values, figures and traditions can be easily criticized, ridiculed and  
 scorned, in a pre-dominantly Christian society. So, I understand, it is the culture of  
 democracy and free speech that comes with all its attachments.

وان اعرف انه حتى القيم المسيحية والعوائد المسيحية وشخصياتها الهامة يتم السجارية فيها والتفانها  
 في محضو اكلب سكانها من المسيحيين لذا ان اليوم ان ثقافة الديمقراطية وحرية التعبير تاتي دائما  
 بما ينطبق بها

On the other hand, some of us might find it so confusing, that such democracy might  
 consider criticism of the Israeli apartheid a kind of anti-Semitism, banned by your laws...so,  
 keep in mind, that Muslims see that as very hypocritical and laughable.

وفي المقابل -يرك بعضنا ان شيئا ما حصر في ديوقرافيتكم .ركب يمكن لديموقراطية كهذه ان  
 تعبر منذ تلك العمارسات الاسرائيلية العاشية لولا من انواع العوائد لتسابية وصحرفة بالفاونين...لذا  
 لتكرو ان المسلمين يرون في هذا نوع من النفاق المصطنك بالفعل

People of Denmark, I must salute you for so many things you have done in the past in terms  
 of your stands on just issues. You have always supported the Palestinian cause, and stood  
 firm against the aggression against Iraq by the vicious fist of USA, Mr. Bush the new  
 imperialist of this era ...you have granted rights and shelter to those who sought asylum in  
 your land and treated them with equality.... yes, you have some who are prejudice and  
 ignorant amongst you, but what nation has not?

شعب الدانمارك...يجب ان احبكم كذلك على مواقفكم عديدة لكم حاشية منها تايدكم لفضية الشعب  
 الفلسطينيي العادلة ووقوفكم ضد حرب العراق الذي قاتلنا الكتاب المسماي يوشا رئيس الولايات  
 المتحدة الافريقية هذا ..استعمارنا هذا ..استعمارنا هذا العصر

انكم ايضا صحتو حقوق النجوى والناوافية لكثيرين فعين لعلوا الي اراضكمو ..نعوم لذكوم من هو حصرنا  
 وحاش وحاش...ولكن ان الله ينلو من طواف ؟

I just want you to understand, that with my limited access to media I have as an individual,  
 and with my cheap video clip I am streaming from my blog website..I am trying to say  
 ...understand ..And don't get turned off by the calls of boycott...On the contrary, let all  
 nations of the world come to understand that we are all in it together, and that hatred  
 creates hatred and terrorism.

اريدكم ان تفهموا انه بقردي المحذورة الاكثافية كشخص واحد يقوم بانناج هذا الفيديو الرخيص التوجه  
 بناه من فواتح التدويري الشخصي...احوان ان الاول كهرلا تستادوا من بدايات المقاطعة ضد  
 فديناكم ..بل على العكس ..فذلكم هذه بداية كل الامور في هذا العالم انما جميعا في هذا المراقع معا

وان الكرافية تولد الكرافية وتعود الي العصب

The funny thing is that even the most corrupt politicians, dictators and their so-called  
 religious government - backed scholars ..Are hiding behind the motions of frustration of  
 the named incident, to beautify their ugly actions against their people .... They are using the  
 emotionally charged crowds to steer them, coz this help them stay in power .... People can  
 easily fall for it.

من المضحك ان سياسياتا وحكامنا الفاسدين الطغاة ومعهم علماء والمة يعطو باعرقهم بتلذذون خلف  
 فديناكم العصب الخائفة بسبب الطائفية المذكرة ..ليجسروا ووقوفهم الفضية ضد شعوبهم  
 ويستخذفون الشحنة العاطفية الخائفة في نفوس الناس ليقودوهولان هذا بلذهم القدرة على  
 الطاء في السلفية...والناس لانسف بتذكون بهذا

One thing you need to know about prophet Mohamed is that he is not Mohamed that this  
 stupid magazine portrayed....

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- mind-scan-ops
- Organic
- working brain
- Eved
- Gharbaya
- HadiSaD
- Let to All!

He was a man, who created the very first foundation of human rights in Arabia, & were no rights for any thing or

رجل... اول من وضع بدايات ما يسمى بحقوق الانسان في الجزيرة العربية يوم لم يكن انسان ولا حتى حيوان

When children used to be killed for fear of poverty, women were treated as 2nd citizens, and there was no code of ethics in any as

طفان يدبحون جنسية الفقر والنساء يعاملون معاملة من الدرجة الثانية او الثالثة... يوم لم

هناك اخلاق حثيثة التي اتي شكل من اشكال الحياة

Mohamed was Martin Luther king of America, Gandhi of India, and Mandela of S

... This is Mohamed that many of us believe in. And it is not our fault that people had destroyed this image of him by their stupid actions of terror and I

most of u

أ مثل مارتن لوتر كنج في أمريكا او غاندي في الهند او مانديلا في جنوب أفريقيا... هذا هو

و هو به الكثيرون... وليس خطأنا ان بعضا من المستعبدن اذفروا هذه الصورة بالمعالم السياحية

لاب والكثيرة... الذي يستنكرها كثيرا

It is important for you to know, that some of us, respect your democracy with it mistakes, because it is far more Islamic than all dictatorial regimes in the f

ر ان نعرفوا ان بعضنا يتحرم ديمقراطيتكم يا اخواننا وحموتها... لانها عند الربك هي السبا

اسلافية... هي كل الانظمة الدكتاتورية العاصية التي يوظفونها في التسلط والفساد

A "High priest" or Imam in Egypt calls for boycott, while he is one of the most cor

Egypt, who used his religious influence and affluence to deceive millions of became a tool for the dictatorship of Egypt...now he is crying wolves...but beca

opportunist to manipulate the crowd....Doesn't that remind you of the

evangelic al Pat Robertson of America, who manipulates Christianity to advance

دين القدي في عصر يدعو الي الطائفية ايضا... عند الربك انه هي السبب اقل هضم

... يستند و سلطته الدينية وحقه في ايجاد الناس واتضح انك انك تكريس نظم الدكتاتور

ن يلزم هو الضار حين... فقط لانها فرصة للتسلط على الناس واستغلال الحد... الا

السياسي الانجيلي بات روبرتسون الذي امرنا الذي يستند و المسيحية للتسلط على

به السياسي ؟؟

Mohamed was a poor man, who stood for just causes and put people's affairs i

thing else... If he was here now with us, he might have said... "why are you

whole nation of people by the words of a few? Have not I taught you justice? Let

denounce me do what they want... But don't be unfair to millions in retaliation

forgotten that I was stepped on in Mecca? And was whipped with dirt while bow

prayers? And have not called for

ارحنا لفسرا... ولقد لفظنا كانه وحمل الناس قلوب كل شعب اخر... ولو كان بيننا اليوم لربما

هنا باكتفينا بسبب اخطاء البعض ؟ انتم التمسكم العدالة ؟ زكوا هؤلاء الذين سيؤتون وشاههم

هوا العاقبين بركة التي الاثموا لانفسهم... استندم ابي تعرضت للاغارة التي حمله ؟ ووجهوا

ان وانا ساعدت في الصلاة ؟ ارايتهم انكم للتلفا و ؟

Have you forgotten how I forgave the entire nation of Mecca, when I was capable

the city down to I

عفرت لخطيئة كلها عندما كنت قادرا على ان ارحلها من بكرة امها ؟

What is more important? My name or my teachings? My name will remain

heavens...that, you don't have to worry about, but worry about the millions

disadvantaged people who wish to die every die out

آ اسماي او تعاليمها ؟ ان اسماي سيبقى مكرما في السماء... فلا تظفوا من هذا... ولكن

بين من الفقراء والمستضعفين الذين يؤذون لو حالوا من رؤس الحياة التي يعصونها كل

That what Mohamed would have told us now... cor, he taught us that Justice

essence of Islam, and Justice is GOD'S name ... yes, I

أ سلفوني فحده لنا اليوم... لانه كلمنا العدالة وانها اصل الاسماء ووان العذاب هو اسم الله

هو اسم الله

People of Denmark, some of you might disagree with me on who Mohamed

totally respect that...but let us bring the subject to the table in an honorable

manner...and let us all talk common sense as you

ربك... قد لا نلتفون معك اليوم حول حقيقة صحت... وانا احترم هذا تماما... ولكني لننتفخ

بشكركم وشرف وحماسك... فننتحدث بشكل كئيب كما نعودتم دائما

People of Denmark .... I respect your democracy, even if it allows hateful peop

animosity, and I hold those who created this crisis accountable, and I call them

debate on air any where, and any b

ربك... احترم ديمقراطيتكم... رغم سماحها لبعض الناس بالثقل هذا... ولكني احمل

هؤلاء الذي خلقوا هذه الأزمة وادعوهو ليعانقوه معنوية عند الهواء ايضا ورفقها بشاؤ

ربي

I know that you may have a question, when we as Muslims try to approach you I

understand our faith, who Mohammed was... and what his message is all about

ask your self this question, and I am sure you have asked yourselves this ques

and that is: "Muslims, you are trying to tell us that your faith is all about

Muhammad Taught you how to treat people humanely, and that he put out the i

under brutal dictatorships and you have not done anything, we your prophet's traditions, and we'll find in these two things commands from your prophet ordering you to speak truth to power injustices and unfairness in all kinds and shapes and forms. How can your religion, and what it teaches, while you have not done anything to teach us the justice of Islam? But we live in justice..So why teachings and benefit your selves first from it, before you come to us

للمسلمين ولربما طرحتم هذا السؤال من قبل خاصة والمسلمون يحاولون به ورسالته .لعلكم سألتم أنفسكم الأ وهو :  
ون أباغيا ان دينكم دين عدل وان محمدا علمكم كيف تعاملون الناس بشكل وضع حقوق الانسان ..ولكن..البرحوا لنا ان ..لماذا براكم في يؤس مدقق لماذا تصيبون تحت طاغوت ظالم بنوع ولا تطهون ..لو جئنا في فرائكم لالكم يقول الحق امام الجائري وظالمهم وان بدافعوا عن المظلوم وتقموا ف تريدون ان تحسنوا صورة دينكم ورسولكم وانتم لا تصحون به شيئا ؟ لاسلام ؟ نحن نعيش في عدالة ..استخدموا اذن عدالة الاسلام وطموها ان اتوا لنا ليقولوا لنا عن ذلك

This is a very legitimate question, I myself asked it so many consider myself as a fundamentalist who loves to go back to the faith to seek truth and apply to my real life and

ه جدا ..انا بنحسنا بسالته بنفسى مرارا كمسلم اصولى اعوذ لاصول دينى افهمه منها على حادى  
I find this question a very legitimate question, why can't we as Muslims rise in anger, when a fact Buddha's statue whose considered a god and a holy figure for a billion people? You did not speak out, yet you are so enraged about a very legitimate question, and we can not answer this question how..It is very hypocritical of us to speak about every thing else about

طهى جدا ..لماذا لا نستطيع نحن المسلمين الذى بملا الدنيا رعية بتعرف م اوسط اصول هذا الدين لتطهها على انفسنا ؟ لماذا نريد ان نسمع كل ن لاجد ايدا ؟ لماذا لم نعصب مثلا عندما قامت مجموعة من المسلمين الذين نير انها ورمز مقدسا لاكثر من نصف مليار شخص ؟ ولكننا غضبا بنسبة من

ولكننا لا نعرف الاجابة عنه لاننا لا نعرف كيف ن كل شئ ويلوم كل الناس ولا نريد ان نلوم انفسنا اولا  
See the problem is not in Islam it self and not in Muhammad's teachings we always felt like victimized, and we have been victimized, and it to look into issues. It is very problematic. And it very crucial as Muslims, have to listen to others as we ask them to listen to us, we rules to our selves as we ask others to

لسلام واصوله ومحمدا وعالمه ..لكنه نحن المشككة لكل الامور بهذه العقليه ..انه امر اشكالى خطير بالفعل المسلمون يجب ان نسمع للاخرين ونحن نطالبهم بالاستماع لنا ..وان طالب الاخرين بتطهها على انفسهم

Yes, there are so many injustices in this world, and there are wronged themselves and others..But if we would rise up and ask respect us, we have to respect ourselves first and respect our الم صغها مسلمون وغير مسلمين ...ولكن ان اردنا منكم انها الدمار يكون ندم انفسنا وتلك المصعدات التى نحدث عنها كثيرا ولا نعمل بها شيئا  
So if you Danish people asked us this question, it is a very legitimate what I am so worried about today. That we have to first use the justice and apply to ourselves ...we can not ask any one else to know

traditions and to honor the prophet of our faith if we are not carrying teachings and fundamentals and apply it to our selves first, or we said before. If we ask of you to be just we have to be just ourselves esport to you and every one else the teachings of our faith while respect our selves, and how can we ask of you or any one else for that respect our faith, while we don't understand ourselves sometimes, and how can

to be sincere and straightforward, if we our selves are hypocritical نمونا هذه الاسئلة فانها اسئلة صحيحة وهذا ما نهمى اليوم في رسالتى الاسلام العادلة لتطهها بحق على انفسنا قبل ان نطالب غيرنا بالعدالة ..ان كون مبعثين اولا ..والا كنا مبعثين ..كيف نريد تصدير تعاليم ديننا بينما نسا ؟

أ ونحن اضلا لا نفهمه ؟  
لاص والاسبقامه ونحن نناقش ونسبر معوجين ؟..ان هذا لن يصلح ابدا  
But see, the problem also in those scholars and people who took action on our behalf for a very long time. And told us what religion should how told us how to understand it. There are a lot of those people who

بنا الذين يتخذون بالنمارة صبا .لوف كبر .بحيرونا دائما ما  
ذبولوحيه والانساع والعواطف وهم يمتلكون رمام السطره

It is very important to us to understand that we are f  
else about their flaws, we have to admit our own fl  
process; it is a first step in bridging the gap, or to est

ء احطائهم .نحب ان نعرف بها اولاً جدي نواجه الآخرين .ان  
ي الفجوة .ومد يد التفاهم مع الآخرين  
So, Danish people, People of Denmark, I hope you ur  
that we are living a very hypocritical life, and that v  
taught us, and we were so angered by the cartoon t  
that we are not using, although these teachings hav

ان منا من نفهم اننا نصنع حياة نفاقية وان تعاليم الاسلام  
هو لا نصنع بها شيئاً اصلاً على الرغم من جودتها وعدالتها  
So you might ask yourselves time and time again, be  
apply to yours elves first, and then we can tal

دة كما قلت سابقا ... طبعوا ايها المسلمون عدالة دينكم على

Although, I would ask of you to understand that i  
create a platform to spread hatred, this is not only de  
adore and live, bu

نحونها ونعشونها لو سمحتم لها بنصير خطاب الكراهية او  
قراطينكم وناقون انفسكم .فاجدروا من هذا  
My own independent free website, is not politically, r  
backed by .

اي احد سياسيا او ايديولوجيا او ماليا او تسانده اي مجموعه

Because, those who believe in justice

ء من اي شئ اخر في هذه الدنيا

pos

Have you watched the word of Amr Khaled? I hope v  
with what he is doing, he doesn't want to insult muslim  
all the world that we are ANGRY, but we don't ha  
about our religion, this is the most impo  
demonstrations are not BAD, but they are not suffice  
Khaled's word, that I was really smart, that he said th  
fast and briefly, you know why? cause we simply  
defend them and forget our problem. VIOLENCE IS B  
SMART, and know how to speak, we don't have to pi  
sorry, not strat to forget what they should change in th  
is a root thing, and FOCUS on our disadvantages. Plea  
right and we should really take and we should take

إت فقط

رسول الله اعظم رجل في العالم ام لا  
م به هذا الرجل  
سبح واعمل مؤتمرات لتخسين صورة الاسلام

## Blog 5:

Random Platitudes: The "Cartoon Row" dissected -- part 2

<http://randomplatitudes.blogspot.com/2006/02/cartoon-row-dissected-par...>

amidst a scandal over his attempts (without consulting the Foreign Ministry) to bribe U.S. senators to propose a U.S. purchase of the Danish West Indies. Or **J. C. Christensen**, who almost touched off World War I a decade before time, in 1905, when he (without consulting the Foreign Ministry) attempted to broker a deal with the German general staff for Denmark to become a military ally of Germany -- placing the strategically important straits of Denmark in German control, a situation that would almost certainly have led to war within a year. Fortunately, the Germans saw the hazards of the proposal, and declined.

In this instance, the situation was complicated by the fact that Anders Fogh Rasmussen has a very strained relationship with his foreign minister, **Per Stig Møller**. Regrettably so, since Møller is a highly intelligent man with a gift for diplomacy. Had he been involved from the start, it is fair to say that the situation might not have escalated.

It must be considered probable that Fogh Rasmussens refusal to meet with the diplomats was intended to gain him credibility at home -- in effect, to garner him an advantage in domestic politics, by making him appear to defend Danish (and Western) freedoms against perceived foreign pressure. He seems to have been unaware of the degree to which he was transgressing against established diplomatic convention by refusing to even consult with the 11 diplomats.

At any rate, the refusal of Anders Fogh Rasmussen to meet with the diplomats created a completely new and unprecedented situation. Suddenly, the matter had become a diplomatic crisis. Only four days later, the government of Egypt called the Danish ambassador in Cairo in for a consultation. He was asked to convey to the Danish government that the government of Egypt expected the Danish government to officially distance itself from the caricatures, and warned that the situation was at risk of escalating.

When the Danish government didn't comply, Egypt contacted the other Muslim countries, the Arab League, the Organisation of the Islamic Conference, and the United Nations, to organize diplomatic protest against the caricatures.

At this stage, the ancillary issues had fallen by the wayside, and only the subject of the caricatures remained an issue. The situation had escalated into a full-blown diplomatic crisis.

It was not to remain so.



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*(Continued in part 3)*

**Technorati tags:** denmark, cartoon row, current affairs, history, islam, xenophobia

POSTED BY RP AT 2/18/2006 10:12:00 PM

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2 COMMENTS:

 JD said...

RP wrote: "It should be noted that Vilhelmsen was sentenced to 14 days in jail for this, recently -- since these remarks was a clear transgression of Danish law dealing with inciting criminal acts."

Once again, a very interesting post. Keep it up! :)

Now, just out of curiosity, in the above passage, you state that Vilhelmsen received a punishment (as nominal as 14 days in jail is) for having incited people toward making criminal acts. My question is, what is the difference between this person's speech, which obviously crossed the line of Danish law, causing the accused to be punished, yet (presumably) caused no criminal acts to actually be committed, and the publication of the cartoons, which, IMO, also crossed the line of Danish law (although obviously not in the eyes of the Danish justice system), caused no punishment to the accused, but did incite numerous people worldwide to do criminal acts?

I can't believe that the medium (radio vs. newspapers) would make a difference. Nor can I believe that inciting people outside of the country is "OK" while inciting people inside of Denmark is not. (For example, I strongly suspect that if similar cartoons were published in Denmark that crossed Jewish sensitivities - say, the topic of the Holocaust - and that, while Danish Jews didn't do criminal acts, but (say) French Jews did, the publishers of these cartoons would be punished with jail time.

So what is the difference?

20 FEBRUARY, 2006 03:00

 RP said...

A small correction (made in the main text of the blogpost)... please read as: "...since these remarks were a clear transgression of Danish law, specifically section 266b of the Danish penal code, dealing with racist utterances, etc."

Kaj Vilhelmsen was sentenced to 14 days of *hæfte* (which term I'll explain in a moment) at the Municipal Court of Copenhagen, on February

13 2006.

The Danish penal code allows for three levels of punishment for a breach of the law:

At the lowest level, there is the **fine**. If one cannot, or will not, pay a fine, one can serve time in jail instead.

At the next level, there is *hæfte*, which is equivalent to jail, except that it doesn't leave a mark on your criminal record. This is often used for misdemeanors.

The final level is actual jail time, which does leave a blot on the criminal record of the punished person (although there is an obsolescence clause -- as time passes, some types of old crimes are erased, each type of crime having a separate obsolescence period).

All of these judgements can, of course, be made suspended, only to be invoked in the case of a future transgression.

The fact that Kaj Vilhelmsen's sentence was fairly lenient reflects two issues. First, there is an inherent conflict with free speech; second, and most importantly, Kaj Vilhelmsen is a crackpot and his audience is tiny. To punish him harshly would be to make a martyr of him. It would be counterproductive.

It should be noted that Radio Holger, his radio station, had its broadcast license suspended for three months. That was a much more useful outcome, in my opinion.

20 FEBRUARY, 2006 12:30

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## Blog 6:

Me vs. Myself: 01/01/2006 - 02/01/2006

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Web  me-vs-myself.blogspot.com  
 introduce-islam.blogspot.com  afamilyinbaghdad.blog

Monday, January 30, 2006

### Letter to the Minister of Foreign Affairs in Denmark

Dear all,

*Below (the previous post) is a letter to the minister of foreign affairs in Denmark, regarding what the Danish newspaper "Jyllands Posten" had published on September 30th, 2005, showing 12 caricatures ridiculing the prophet Mohammad last messenger of God -May prayers be upon Him-. The caricatures were part of a contest made by the same newspaper to show the funniest cartoons that show the prophet Mohammad. One caricature showed the prophet wearing a turban-shaped bomb and other caricatures showed him in horrendous positions. This is a very humiliating act toward every Muslim on the globe.*

*This petition is very important because it's an attack against one-fifth of the population of the world (est. 1,300,000,000 Muslims in the world today), and it's important because it breaks the code of ethics of the International World Federation Council of Media and Media-People, which explicitly prohibits any action or behavior that might raise the risk of discrimination against any group of people based on their religion, sex or any social differences. This is exactly what the Danish newspaper had done with that unacceptable hideous action.*

*This is an attack against Islam and the Muslim population of the world, this is also an attack against Christianity and Judaism; Mohammad after all brought a message from the same one God who sent the message to Jesus and Moses, prophets of God -may peace be upon them-. This is also an attack against anyone who wants to live in a world free of discrimination; who amongst us accepts to see their religion being insulted in public media?*

*Please, help your Muslim brothers and sisters around the world saving the dignity of this religion; help us stop the discrimination against any peoples around the globe.*

*You may send the attached document to the email of the Danish ministry of foreign affairs at [um@um.dk](mailto:um@um.dk)*

*It would be very appreciated if you help spreading the message around as much as you can.*

#### About Me



MAJED JARRAR

system error:  
lack of words to  
describe. (error  
number 685)

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#### Family Links

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[Khalid's blog](#)

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#### Other Sites of Interest

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[Zain's Life, in draft](#)

[A Family in Baghdad](#)

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[A Star from Mosul](#)

[Umm Zahra's Blog](#)

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[Precious World](#)

[Come Get Some](#)

[Aywa Khaddama](#)

[My Other Ego](#)

[Simply Islam](#)

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MAJED

4/10/2008 12:15 PM

## Blog 7:

Random Jottings from (" ,)::~::~ the Absolutely Hilarious, Fabulously W...

<http://azlanadnan.blogspot.com/2006/01/lets-boycott-danish-goods.html>

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# Random Jottings from (" ,)::~::~ the Absolutely Hilarious, Fabulously Wonderful Guy!

**This Blog archives the random writings of Azlan Adnan as well as edectic stuff by other writers that he likes and thinks deserve a wider audience. Azlan's Book Reviews are not available here, but are archived at his Fan Club. Only recent posts are shown on this page. If you want to see older posts, please click on the monthly archives. Please read the Legal Notice. Please do not access this blog if you do not agree to the terms and conditions or do not understand any of it.**

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Saturday, January 28, 2006

## Let's boycott Danish goods

In September 2005, the Danish newspaper [Jyllands-Posten](#) was insensitive and stupid enough to publish a series of 12 caricatures which showed the Prophet Muhammad as a stereotypical Islamic terrorist. In one cartoon, the prophet appeared to have a bomb in his turban.

Pictorial depictions of the Prophet Muhammad are forbidden in Islam.

The Jyllands-Posten reported that two illustrators who produced the cartoons had received death threats. The daily published the series of caricatures, after a writer complained that nobody dared illustrate his book about Muhammad.

Instead of issuing an abject and unconditional apology, the newspaper has remained belligerent. It gave a weak apology for "wounding the sensitivities of Muslims," but said it was testing the boundaries of expression about Islam. At the same time Jyllands-Posten maintained its right to print what it likes.

"We must quietly point out here that the drawings illustrated an article on the self-censorship which rules large parts of the Western world," the paper said. "Our right to say, write, photograph and draw what we want to within the framework of the law exists and must endure - unconditionally!"

The ambassadors of 10 Muslim countries (including a number of Arab countries, Pakistan, Iran, Bosnia-Herzegovina and Indonesia) sent a joint letter of complaint to the Danish Prime Minister Anders Fogh Rasmussen, asking him to take a stance on the issue.

Rasmussen refused to intervene and responded by merely stating that Denmark had a free and independent press. He said he could not tell newspapers what to print - or what not to. In his New Year's speech, Mr Rasmussen fell just short of an apology speaking of responsibility in exercising freedoms of speech.

Unsurprisingly, neither semi-apologies seem to have been accepted in a Muslim world which sees any depiction of the prophet as blasphemous.

There are now fears that the incident could affect Danish businesses. The Danish company Arla Foods, one of Europe's largest dairy producers, has placed advertisements in Middle Eastern newspapers to try to stop a boycott of Danish produce in Muslim countries.

Arla Foods said earlier in the week that its customers in Saudi Arabia appeared to have stopped selling its dairy produce and had begun a boycott of Danish goods. Finn Hansen, a divisional director with Arla, on Thursday said "We fear that we will be hit by a wave of consumer anger." He added that there had been calls for boycotting Danish products in Friday prayers and on Saudi television and in newspapers.

"We are certainly afraid this will spread across Saudi Arabia and affect our business," he said.

There were street protests both in Denmark and in Muslim countries following the publication of the cartoons.

The Confederation of Danish Industries has now appealed to Jyllands-Posten to print an apology for having commissioned the drawings.

Saudi Arabia has recalled its ambassador to Denmark "for consultations in light of the Danish government's lack of attention to insulting the Prophet Muhammad by its newspapers."

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# posted by (")azlan::~ @ 11:55

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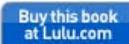


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## Blog 8:

EHSAN: Media War On Islam

<http://ehsanibnzaid.blogspot.com/2006/01/media-war-on-islam.html>

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# EHSAN IBN ZAID

O mankind! We created you from a single (pair) of a male and female, and made you into nations and tribes, that ye may know each other (not that ye may despise each other). Verily the most honoured of you in the sight of God is (he who is) the most righteous of you. And God has full knowledge and is well-acquainted (with all things) (Al-Hujurat: 13)

Designed by Ehsan

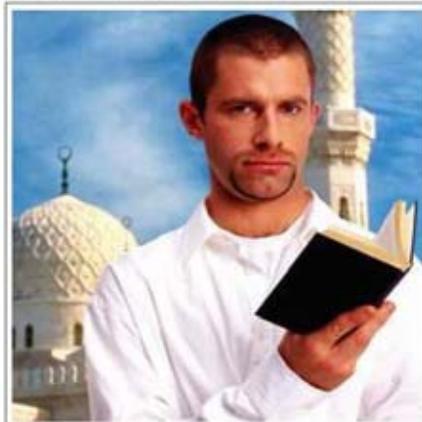
THURSDAY, JANUARY 12, 2006

## Media War On Islam

The U.S. media has been fueling hatred against the Muslims and the Islamic religion, since the September 11 attacks, creating an atmosphere of fear particularly for Arabs living in the West.

The 'negative' media coverage has been influencing the attitudes and perceptions in the West, making it even more hostile towards Muslims.

Every Muslim must understand what the typical Westerner thinks about him - his traditions, culture and religion- He'll be both amused and shocked and may be frightened.



Western minds consider the Islamic world an exotic enigma, part fairy tale, part attitudes formed in colonial times in which logical acts are construed with

misunderstandings and misgivings.

And lately we started seeing disrespect for the Islamic culture and Prophets all under the guise of Freedom of Speech.

Recently we read media reports, some praising, and others denouncing a Danish newspaper for publishing drawings

### ABOUT ME



EHSAN IBN ZAID

"Jangan Jadi Seperti Lilin, Jadilah Seperti Pohon Yang Rendang Dan Matahari Yang Bersinar"

Bersinar"

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portraying Prophet Muhammad (PBUH), ignoring the fact that visual depictions of prophets is prohibited in Islam.

In September, Danish daily newspaper Jyllands-Posten invited cartoonists to submit drawings of the holy Mohammed, after an author complained that nobody dared illustrate his book on Mohammed.

About 12 cartoons were published as "a test of whether fear of Islamic retribution has begun to limit freedom of expression in Denmark."

Instead of seeing the cartoon as controversy and racist, some media outlets defended the incident as an expression of Freedom of Speech.

Danish Muslim organizations plan to take the daily Jyllands-Posten to the European Court of Human Rights for publishing drawings of Prophet Muhammad (PBUH).

Kasem Ahmad, leader of Danish Islamic religious body Islamsk Trossamfund, uniting different Muslim organizations, announced the decision following an announcement that a Danish local attorney general had rejected their case.

Islamsk Trossamfund sued the Danish paper for the publication of drawings of the prophet Muhammad (PBUH) for blasphemy.

But the media war against the Muslims has taken a more grievous turn than some cartoons; this matter has become a test case for the continued viability of freedom of speech in Western countries.

The Western media always portrays the Islamic religion as exotic imagery - a myth adapted from 1001 Nights; with huge harems, wild sex orgies, luxurious palaces, flying carpets, incredible wealth, fierce warriors, hordes of thieves, cruelty and religious fanaticism.

The biased approach of the Western media led people in European nations and the Americas believe that the armed groups we hear about, including Al Qaeda network, are the true representatives of the Islamic faith and the Muslims, or course here we're not speaking about the resistance groups in



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Islam Online  
Amal Malaysia  
Agenda Daily  
Aljazeera  
Arab World News  
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Screenshots



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Berita Harian  
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New Straits Times  
Reader Digest  
CIA

Palestine like Hamas and Islamic Jihad, we're speaking about militant and armed groups who perceive Islam the wrong way. All that with the aim of fueling negative feelings, hatred and fear against this religion.

Unfortunately people, who depend mainly on Western media as their sole source of information, continue on blissfully ignorant of just how biased and unjust their free societies are.

POSTED BY EHSAN IBN ZAID AT 12:27 PM 

#### 7 COMMENTS:

 lennyfisher05063971 said...

*This post has been removed by a blog administrator.*

9:39 PM

 Anonymous said...

Good design!

[url=http://ldgxfnm.com/pmln/khgo.html]My homepage[/url]

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 Anonymous said...

Good design!

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 Anonymous said...

Thank you!

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 Anonymous said...

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Saiful Islam

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AYUH SAMBUT TAHUN BARU CARA ISLAM

KESATUAN ISLAM - ETIKA KETIKA BERLAKU PERSELISIHAN...

ASK YOUR EFFORT YOURSELF

SYAIR PEJUANG

HIASAN ABADI

JADIKAN MATLAMAT PEMKIRAN DOMINAN KITA

KARISWA

RAMADHAN KARIM

## About Me

Name: Ehsan Ibn Zaid

 Anonymous said...

You have an outstanding good and well structured site. I enjoyed browsing through it hair loss woman What is the use of video conferencing baldness hair loss remedies howtostophairloss.com withdrawal of bextra area rugs south carolina Cell cheap phone verizon wireless lonamin or phentermine Cheap calls mayotte hair loss permanent disease Teen pussy clip customized jeeps for sale jenna jameson nude pi No doc loan credit score Miss wheelchair kansas bontril+discount

11:02 AM

 Anonymous said...

Enjoyed a lot! » »

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Age: 23

Profile: Engineer

Hobby: Reading and Designing

Vision: Iman dan Amal, Kasih

Sayang dan Persaudaraan

Motto: Simple and Smart

E-mail: qaradhawi.yahoo.com

## My Idioms

1. ..Ehsan itu adalah apabila ia menunaikan tanggungjawabnya, akan lahir rasa gerun di hatinya kerana ia mendapati bahawa Allah SWT itu sentiasa melihat akan perbuatannya..

2. ..Pesan Sheikh Mustafa Masyhur: "Tegakkan Islam Dalam Dirimu Nescaya Ia Akan Tertegak Di Daulahmu".

3. ..Ehsan kata: Kita terasa terpaksa untuk terus sibuk walaupun kita tidak pasti tentang apa yang patut kita sibukkan. Kita sering mengandakan usaha kita, setelah tidak pasti tentang objektif kita. Kita cuba untuk mengisi kekosongan tujuan dengan aktiviti yang tidak bermakna. Wahai diri belajarlah..

4. ..Islam yang ditakrifkan oleh Allah itu, adalah sebaik-baik takrifan. Bukan seperti takrifan manusia yang pelbagai dan mengikut kefahaman yang tidak jelas..

5. ..Prophet Muhammad SAW said: The Best Of Our Minds is to Plan for Things.

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 Blogger

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# Appendix G: Relativistic Assessment of the Seminal Blogs

Content analysis of the blogs is an important feature of the analysis in that it may provide insights into the motivation and intent of the bloggers. In the meso model a bag-of-words approach was used to provide this content analysis. To delve further into blog content a collection of eight blogs were examined in more depth. The eight chosen (see Appendix F) were those that were assessed to be seminal in the sense that they stimulated a significant level of subsequent blogging activity. The purpose of this more in depth analysis of the content of these blogs was to more carefully explore for relationships to SMT and specifically to seek information regarding motivation and intent of the bloggers.

This phase of the content analysis was directed toward determination of relative emphasis – *within each blog* – on each of the three elements of SMT; namely, Framing, Opportunities & Constraints, and Resource Mobilization. The relativistic assessment (using pairwise comparisons) of the use of the three SMT elements per each of the eight seminal blogs is depicted in Figure A.7.1. It is noteworthy that this assessment is

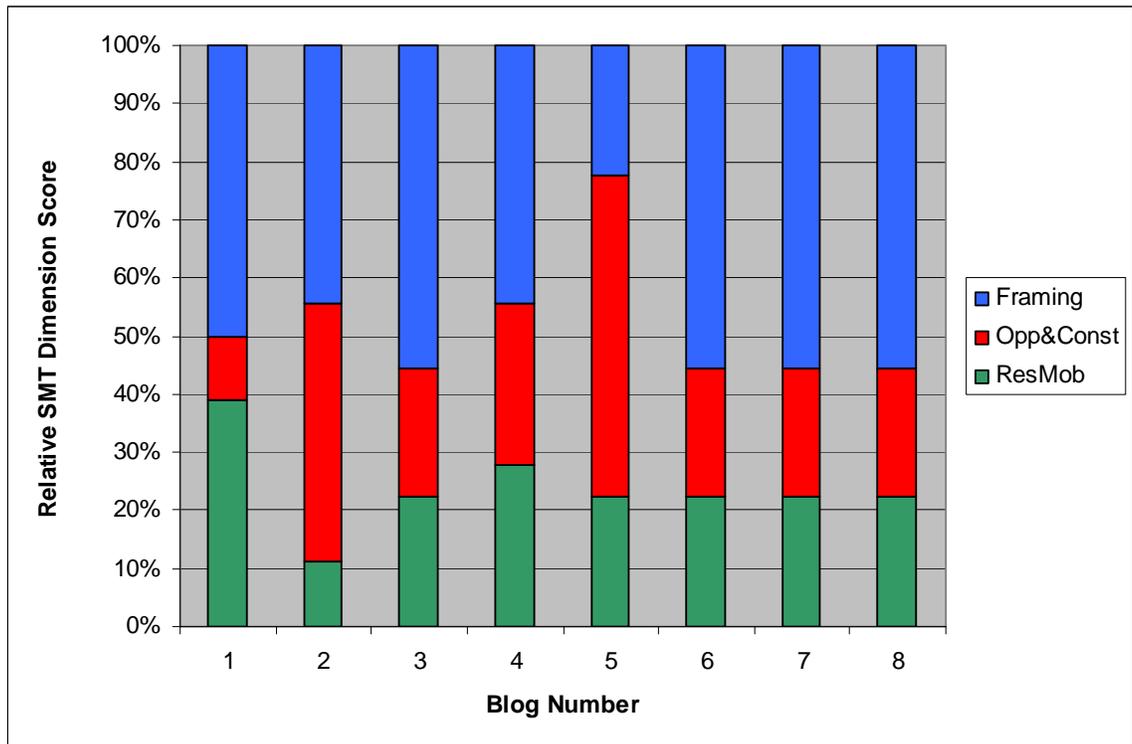
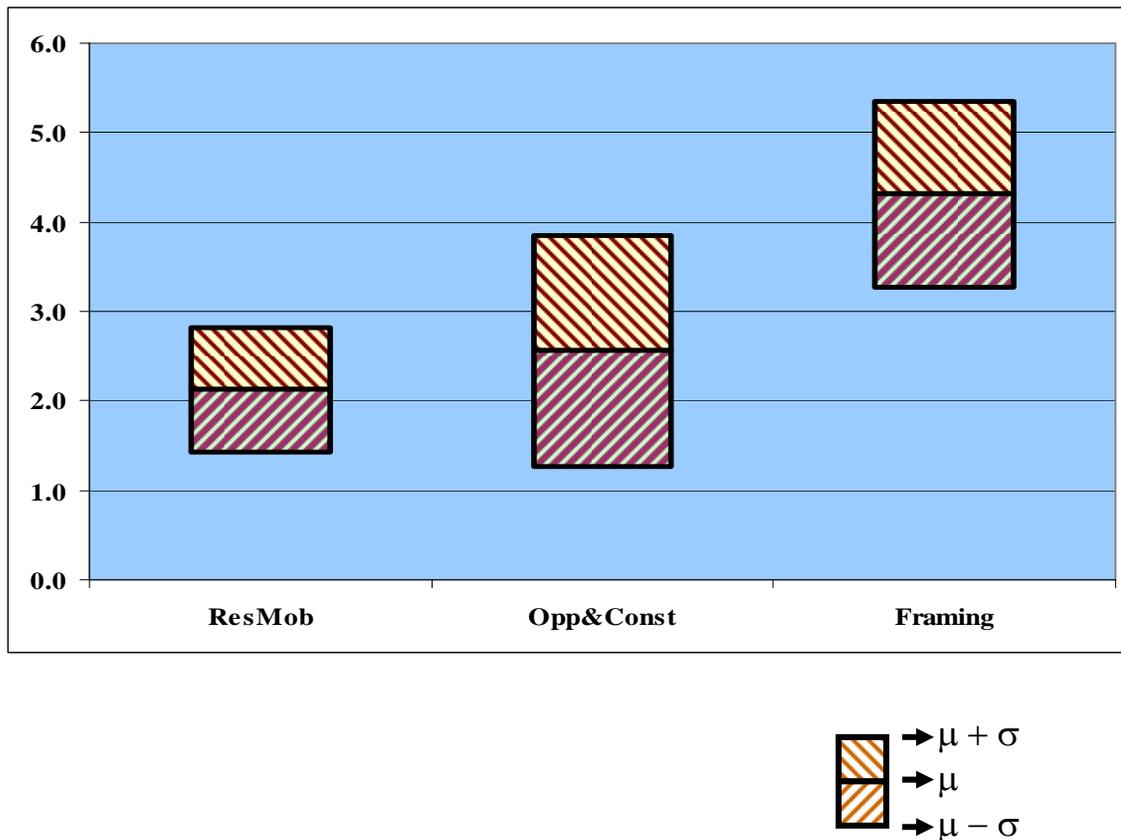


Figure G-1. Relativistic Assessment of the Eight Seminal Blogs.

inherently replete with subjectivity on the part of the assessor. Nevertheless, it does provide a qualitative measure of the relative emphasis within these seminal blogs on each of the three fundamental elements of SMT. Inspection of this figure reveals that the *Framing Element* of SMT is the dominant theme for most (blog 5 is an exception) of the eight blogs. Further, the summary statistics for the relativistic composite of the eight seminal blogs are depicted in Figure G-2, where it is clear that:

- framing is clearly the most dominant of the three SMT dimensions,
- resource mobilization and opportunities/constraints are nearly equivalent, and
- the eight bloggers were most consistent in their use of resource mobilization and least consistent in their use of opportunities/constraints.



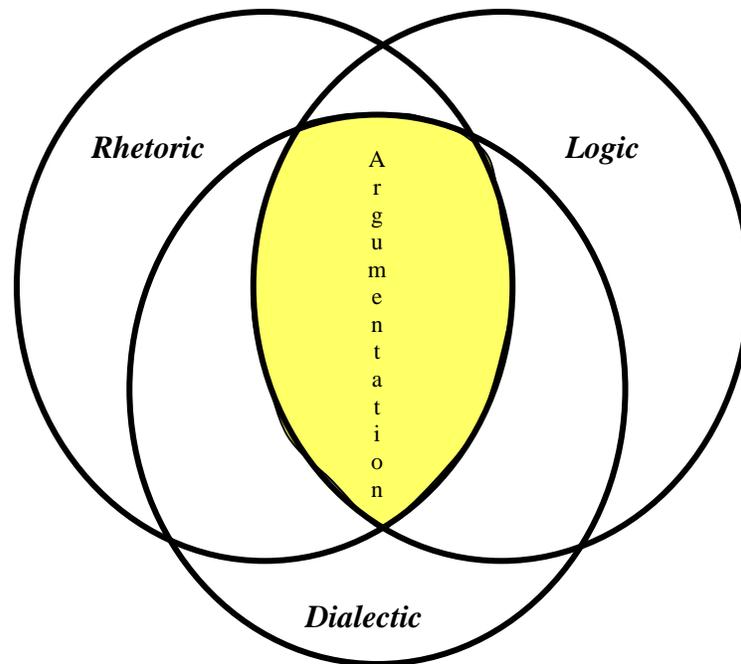
**Figure G-2. Summary Statistics for Eight Seminal DC<sub>1</sub> Blogs.**

These summary statistics are intuitively consistent with the relationships between the underlying themes of the three fundamental elements of SMT and the motivation and intent of the bloggers. Because the Framing element is focused on:

- diagnosing the problem(s) and the need for redress;
- providing the rationale to motivate support and collective action, and
- offering solutions (i.e., strategies and tactics) that ameliorate the injustice;

this element of SMT is the element of choice for those wishing to stimulate support for their cause. Further, because of the relative consistency of need for the mobilization of resources (RM) to support the cause and because of the emergence and disappearance of both opportunities and constraints (O&C), it is not surprising that there is less variability in the use of the RM than there is in O&C by the bloggers.

The next level of detail in content analysis focused specifically on one of the seminal blogs; namely, seminal blog number 8. This blog was chosen because it was viewed as being especially relevant to the motivation and intent imperative in that it framed the cartoons as an affront to the Islamic religion (motivation) and argued for a reaction (intent) to stimulate amusement, shock, and fear among Muslims. This analysis was conducted using the well developed discipline of argumentation. Argumentation can be thought of as lying at the nexus of the interrelated disciplines of rhetoric, logic, and the dialectic. Figure G.3



**Figure G-3. The Epistemological Dimensions of Argumentation.**

illustrates this notion. Argumentation<sup>17</sup> is the study of reasons given by people to justify their acts or beliefs and to influence the thoughts or action of others. Argumentation has been defined as...

*... "a verbal and social activity of reason aimed at increasing (or decreasing) the acceptability of a controversial standpoint for the listener or reader, by putting forward a*

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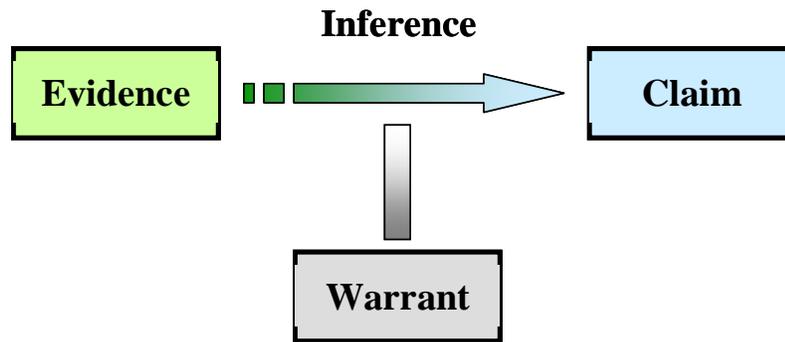
<sup>17</sup> An excellent overview of Argumentation is provided in the text authored by David Zarefsky, *Argumentation: The Study of Effective Reasoning*, 2<sup>nd</sup> edition, The Teaching Company, 2005.

constellation of propositions intended to justify (or refute) the standpoint before a rational judge.”<sup>18</sup>

Elements of argument are:

- *Claims* which are the statements that we want listeners to believe and on which we want them to act.
- *Evidence*<sup>19</sup> which represents the grounds for making the claim.
- The *inference* which is the main proof line leading from evidence to claim.
- The *warrant* which is the license to make the claim.

The framework that connects these elements is illustrated in Figure G.4. The blogs



**Figure G-4. The basic structure of an argument.**

stemming from the publication of the Danish Cartoons are not unlike most real-world arguments. Characteristics of real-world arguments include:

- most arguments are embedded in complex structures;
- a claim in one part of an argument may evidence in another;
- subsidiary claims can be joined together to a main claim or resolution; and
- basic ways that arguments are joined to form more complex structures are multiple, coordinative, and subordinative.

Further, the four basic forms of claims are:

- Claims of *fact* involve description.
- Claims of *definition* involve interpretation.
- Claims of *value* involve judgment.
- Claims of *policy* involve action.

Although argumentation theory is well developed, the authors are unaware of a direct application of this theory to the analysis of blogs.

The categorization of claims for blog 8 is shown below.

<sup>18</sup> Van Eemeren, F. H., R. Grootendorst, and F. S. Henkemans, et.al. *Fundamentals of Argumentation Theory, a Handbook of Historical Backgrounds and Contemporary developments*, zLawrence Erlbaum Associats, Mahweh, New Jersey, 1996.

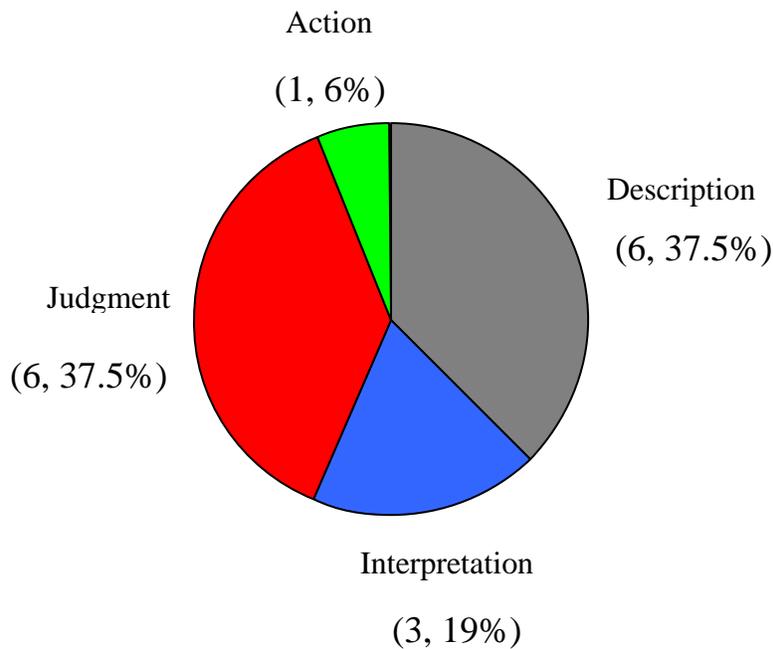
<sup>19</sup> Both the evidence and the warrant must either be accepted by the audience or they must be established by a separate argument.

- Claims of Fact (description):
  - Recently we read media reports, some praising, and others denouncing a Danish newspaper for publishing drawings portraying Prophet Muhammad (PBUH), ignoring the fact that visual depictions of prophets is prohibited in Islam.
  - In September, Danish daily newspaper Jyllands-Posten invited cartoonists to submit drawings of the holy Mohammed, after an author complained that nobody dared illustrate his book on Mohammed.
  - About 12 cartoons were published as a test of whether fear of Islamic retribution has begun to limit freedom of expression in Denmark.
  - Danish Muslim organizations plan to take the daily Jyllands-Posten to the European Court of Human Rights for publishing drawings of Prophet Muhammad (PBUH).
  - Kasem Ahmad, leader of Danish Islamic religious body Islamsk Trossamfund, uniting different Muslim organizations, announced the decision following an announcement that a Danish local attorney general had rejected their case.
  - Islamsk Trossamfund sued the Danish paper for the publication of drawings of the prophet Muhammad (PBUH) for blasphemy.
- Claims of Definition (interpretation):
  - Western minds consider the Islamic world an exotic enigma, part fairy tale, part attitudes formed in colonial times in which logical acts are construed with misunderstandings and misgivings.
  - Instead of seeing the cartoon as controversy and racist, some media outlets defended the incident as an expression of Freedom of Speech.
- Claims of Value (judgment):
  - The U.S. media has been fueling hatred against the Muslims and the Islamic religion, since the September 11 attacks, creating an atmosphere of fear particularly for Arabs living in the West.
  - The 'negative' media coverage has been influencing the attitudes and perceptions in the West, making it even more hostile towards Muslims.
  - And lately we started seeing disrespect for the Islamic culture and Prophets all under the guise of Freedom of Speech.
  - But the media war against the Muslims has taken a more grievous turn than some cartoons; this matter has become a test case for the continued viability of freedom of speech in Western countries.
  - The Western media always portrays the Islamic religion as exotic imagery - a myth adapted from 1001 Nights; with huge harems, wild sex orgies, luxurious palaces, flying carpets, incredible wealth, fierce warriors, hordes of thieves, cruelty and religious fanaticism.
  - The biased approach of the Western media led people in European nations and the Americas believe that the armed groups we hear about, including Al Qaeda network, are the true representatives of the Islamic faith and the Muslims, or course here we're not speaking about the resistance groups in Palestine like Hamas and Islamic Jihad, we're speaking about militant and

armed groups who perceive Islam the wrong way. All that with the aim of fueling negative feelings, hatred and fear against this religion.

- Unfortunately people, who depend mainly on Western media as their sole source of information, continue on blissfully ignorant of just how biased and unjust their free societies are.
- Claims of Policy (action):
  - Every Muslim must understand what the typical Westerner thinks about him - his traditions, culture and religion- He'll be both amused and shocked and may be frightened.

The distribution of claims for blog 8 is shown in Figure G-5. It is noteworthy that most of the claims fall either in the category of Judgment or Description. This is to be expected because the blogger is *describing* the currently untenable situation based on his *judgments*. There is less emphasis on *interpretation* because this leaves open the potential for debate. Finally, there is only one claim that is clearly a call for *action*. This action claim leaves the readers with the imperative to be amused, shocked, and frightened. This imperative creates fertile ground for follow-on actions that may, very well, be of a radical nature.



**Figure G-5. Distribution of Argumentation Claims Contained in Seminal Blog 8.**

# Appendix H: Pattern Analysis for Predicting Ethnic Violence

## Introduction

The goal of this phase of the work was to evaluate the utility of the diverse methods employed in pattern analysis studies for future predictions of regional ethnic violence. In particular we examine recent pioneering work by Gulden<sup>20</sup> and by Bar-Yam, et al.<sup>21</sup>, who each discovered quantitative correlations between outbreaks of regional (i.e., larger than cities, smaller than countries) ethnic violence and features of the spatial distribution of ethnic groups.\* Their results are remarkable because they deliberately ignored the sociological facts of any particular ethnic group or conflict between groups, let alone the acts of individuals. Both efforts (employing different approaches) instead exploited only certain features of the spatial distribution of ethnic populations. The ability of such features to provide even a rough predictor would in turn provide a powerful tool to planners who need to anticipate outbreaks of regional ethnic violence, simply because the data requirements to inform such an approach would be drastically reduced compared to traditional approaches. Nevertheless questions remain about how such an approach could be reliably implemented; we address these in what follows.

## Approach

For each of the studies by Gulden and by Bar-Yam, we first outline their approach followed with our implementation.

### A. Scoring ratios of population of ethnic groups

Gulden (2002) observed from his study of the civil war in Guatemala that the most intense violence between (pairs of) antagonistic ethnic groups occurs when the ratio of population of the two groups in proximity to one another is between 1:4 and 1:5; where the ratio is either 1:1 or overwhelmingly in favor of one group (e.g., 1:10) there is relatively much less violence. The data support both the correlation and the fact that it doesn't matter which group is the minority and which the majority.

The part that is most open to the reader's interpretation is what Gulden might mean by proximity since this wasn't clearly defined. We chose to calculate the ratios of ethnic groups as follows: First, we digitized the demographic maps into a square lattice of cells, each of which contains a single number for the dominant ethnic type. Implicit in Gulden's observation is likely the notion that the two groups are also spatially organized or clustered rather than randomly dispersed within the region; a randomly dispersed population wouldn't be expected to produce violence. Without a provision for the spatial order of the population, counting only the population ratio in a window would merely

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<sup>20</sup> T. R. Gulden. Spatial and Temporal Patterns in Civil Violence: Guatemala 1977-1986. Center on Social and Economic Dynamics, Working Paper No. 26, February 2002.

<sup>21</sup> M. Lim, R. Metzler, and Y. Bar-Yam. Global Pattern Formation and Ethnic/Cultural Violence. *Science* 317 (2007) 1540-1544.

\* As discussed in detail in the Approach, the application of either approach to predicting ethnic violence required some interpretation on our part; thus our conclusions won't exactly coincide with the views reported by either Gulden or Bar-Yam.

trace out the border between groups, a trivial and uninformative result. Consequently we should score both the number of each ethnic type in a window of potential conflict and whether they are in a connected in a cluster. Therefore in a square window of conflict, we first collect all of the connected clusters, according to ethnic type, i.e., all the elements in a cluster are neighbors of each other on the square lattice in our case and are of the same type. There may be several clusters of the same type. Immediately we test for diversity and dominance. If there is only one cluster, which fails the diversity test, or if there is no cluster whose population is at least half of the population in the window, which fails the dominance test, then we conclude immediately that this isn't a region of interest. Otherwise, we next ask if the distribution of clusters is or is not random given that one cluster is at least half of the population. These requirements guarantee that a dispersed population won't indicate ethnic violence with this analysis. If there is more order than a random distribution, then we proceed with the scoring  $c(x,y)$  of each cell (labeled by cell coordinates  $x,y$ ), i.e.,

$$c(x,y) = \begin{cases} \frac{N_2}{N_1 + N_2} \left( N_1 \geq \sum_{k=2}^{n>1} N_k \right) \\ 0 \text{ (otherwise)} \end{cases}$$

Equation 1

where  $N_1$  is the number of the most populous cluster,  $N_2$  is the number of the second most populous cluster, if the top two most populous clusters are of different types. Then  $0 < c(x,y) \leq 0.5$  and the most significant scores would be those between 0.2 and 0.25 using Gulden's "rule." There isn't any reason in advance to suspect that the results would be independent of the size of the window, so our results include different window sizes.

## B. Scoring peninsular regions containing ethnic groups

Bar-Yam et al. (2007) acknowledge Gulden but don't explicitly employ his recommendation concerning the ratios of different ethnic groups. While they implicitly agree with Gulden's notion of the significance of ethnic imbalances, they explicitly look for imbalances in the spatial distribution of populations. In contrast to Gulden, who doesn't provide explicit guidance for selecting spatial features (only ratios), Bar-Yam seeks to identify those regions in which the minority occupies a peninsular region surrounded by the majority; there's no attempt to score such regions according to the ratios. One straightforward, popular, and venerable approach to identifying such peninsular regions (or "blobs") from image processing theory<sup>22,23</sup> employs the convolution of the image with the (2-D) Laplacian; this method gives more weight to circular edges than straight edges. The usual way to approximate the Laplacian for digital images is the "Mexican Hat"  $L$ , which is in turn well approximated by second derivative of the standardized Gaussian<sup>24</sup>, i.e.,

<sup>22</sup> J. C. Russ. The Image Processing Handbook, Fifth Edition, CRC Press, Boca Raton FL (2006).

<sup>23</sup> Blob Detection. [www.nationmaster.com/encyclopedia/Blob-detection](http://www.nationmaster.com/encyclopedia/Blob-detection)

<sup>24</sup> Consequently in the literature this last step is sometimes called "LoG" for "Laplace of Gaussian" but it results simply by the sequence of approximations discussed in the text. Confusingly, sometimes Equation 2 is itself called the "Mexican Hat."

$$L(\hat{x}, \hat{y}) \propto (1 - |\hat{x}^2 + \hat{y}^2|) \exp(-(\hat{x}^2 + \hat{y}^2))$$

Equation 2

where the coordinates are scaled so that  $|\hat{q}| \leq 1$ . The score employed in [21] convolves  $L(\hat{x}, \hat{y})$  with the contrast function  $g$  that, for each ethnic type of interest  $s$ , assigns +1 to the region(s) of that type  $s$  and -1 to all the other regions. For  $g$  we employed

$$g(x, y; s) = \begin{cases} +1 & (s(x, y) > 0, s(x, y) = s) \\ -1 & (s(x, y) > 0, s(x, y) \neq s), \\ 0 & (s(x, y) = 0) \end{cases}$$

Equation 3

where  $s(x, y)$  is the ethnic type (in the place of shade or color in image processing applications) of the cell at  $(x, y)$  and “0” means that the cell is empty<sup>25</sup>. We put this in the calculation of this approach’s score<sup>21</sup>

$$c(x, y) = \max_s \left\{ \sum_{x', y'} g(x', y'; s) \times L((x - x')/l, (y - y')/l) \right\},$$

Equation 4

where  $l$  is a scaling factor. It will turn out that this scaling factor plays a crucial role but we defer that discussion to the sections that follow. In contrast to our discussion of Gulden’s approach, these scores have only relative and no absolute meaning: the more circular the region, the higher the score, and the more likely the outbreak of violence compared with regions bounded by straight edges. There’s no direct relation to a high score in this approach and the ratios recommended by Gulden. Nevertheless, in our implementation of Gulden’s approach above, we can’t account for the difference between the case of the boundary between two groups that is a straight line and the case of a boundary that envelops one of the groups. This difference will turn out to be crucial, as discussed below.

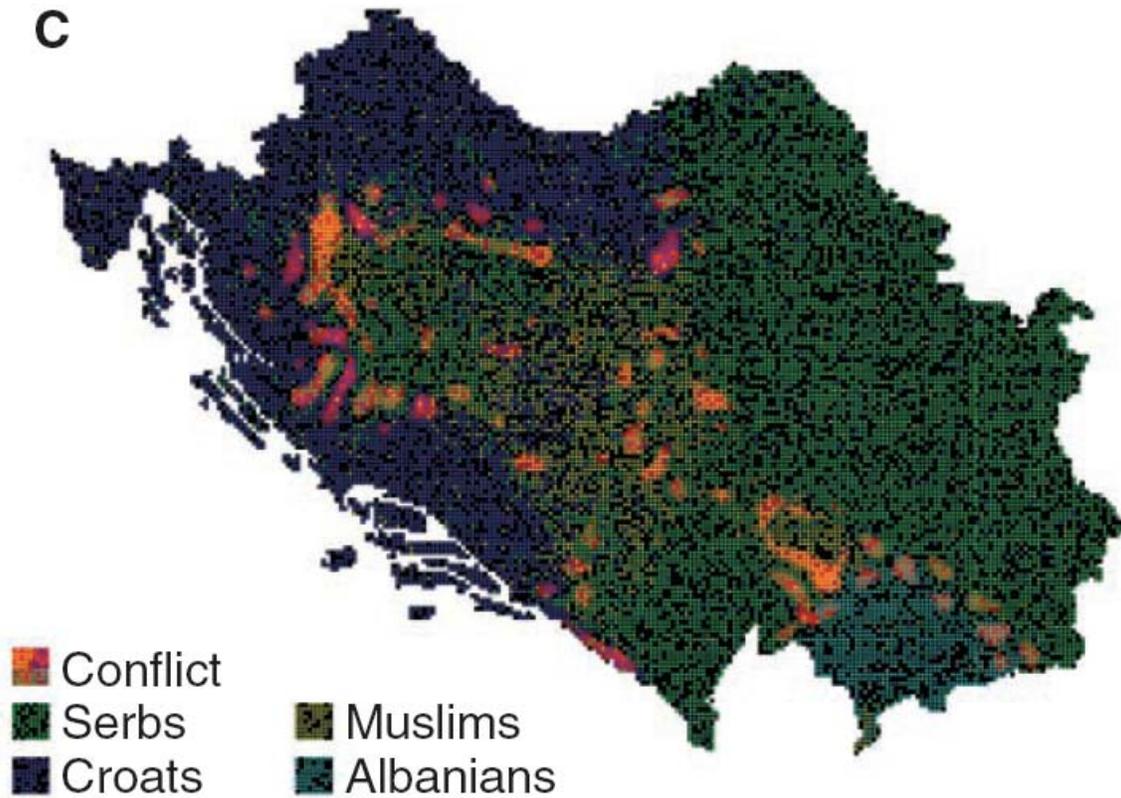
## Results

We applied Gulden’s idea of critical ratios of ethnic groups to the demographic map of the former Yugoslavia, since Gulden had focused on the civil war in Guatemala and hadn’t studied the civil war in Yugoslavia. We display that demographic map of former Yugoslavia in Figure H-1.

<sup>25</sup> Immediately [21] raises the concern that the boundary sites (those next to empty, i.e.,  $s = 0$  sites) might give rise to anomalies, so they propose to fill empty sites with the type under consideration. In effect they chose

$$g(x, y; s) = \begin{cases} +1 & (s(x, y) = s \text{ or } s(x, y) = 0) \\ -1 & (s(x, y) > 0 \text{ and } s(x, y) \neq s) \end{cases} \text{ for the contrast function. This choice, while convenient in some}$$

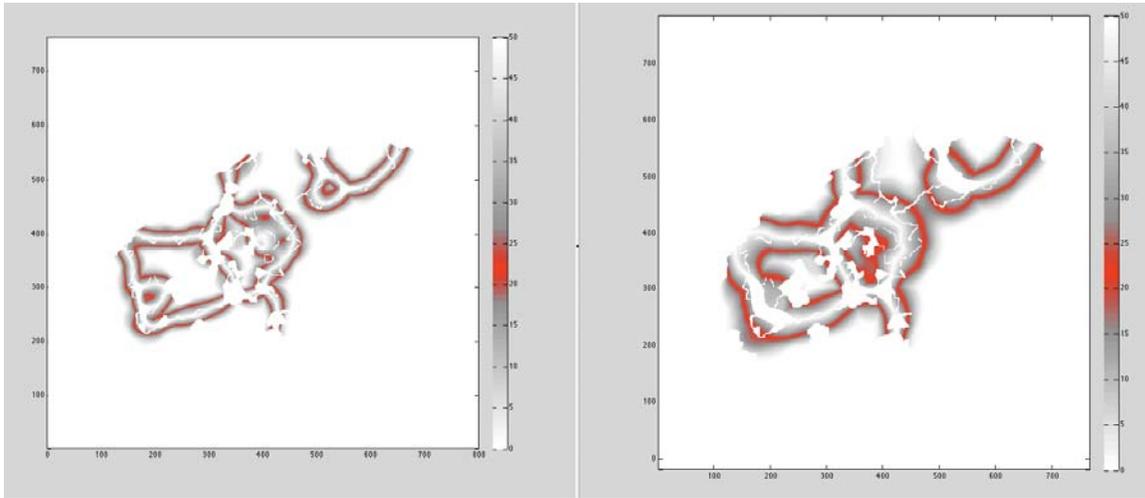
respects, in principle changes the information content of the map in what seems to us an uncontrolled manner. It turned out that the difference between the two choices for  $g$  was barely noticeable and unlikely to be statistically significant with real noisy data. We suggest that we ignore border sites altogether and adopt the more standard choice given in the text.



**Figure H-1. Condensed Population Distribution (blue-green), Reported Outbreaks of Ethnic Violence (orange) and Predicted Outbreaks (red).**

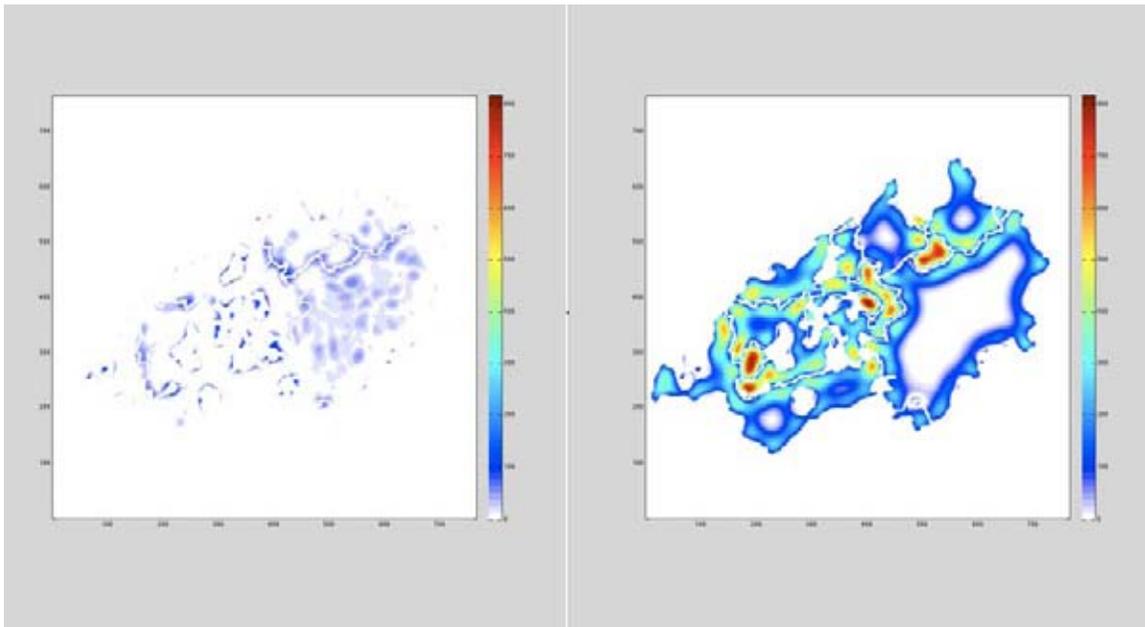
In spite of our efforts to avoid merely tracing out the boundaries between the various ethnic groups, our results shown in Figure H-2 in applying Equation 1 are not much more interesting than that. This approach predicts too many locations for the outbreak of ethnic violence compared to the actual outbreaks.

Figure H-3 displays our implementation of approach in Bar-Yam et.al (2007), using Equation 4. We essentially (although not exactly) reproduce their results shown by the red shading in Figure H-1. Our reproduction of their result is not completely trivial because we obtained it without applying a further segregation model to obtain populations on a small scale; instead we essentially reproduced their results while maintaining population demographics at the coarse scale of the region itself. In addition, as a way to form a null hypothesis, we tested their method against a randomized population in which the proportions of the ethnic groups were maintained but their spatial distribution was randomized; as expected, we predicted no outbreaks of ethnic violence in that case.



**Figure H-2. Prediction of Outbreaks of Ethnic Violence Using Ratios of Different Ethnic Groups with Two Different Window Sizes (left panel: 4% right panel: 8%).**

Note: The orientation is rotated 180 degrees (on the horizontal axis) with respect to Figure H-1.



**Figure H-3. Comparison of Scores Between Randomized Populations (left panel) and Actual Populations (right panel) Using Blob Detection.**

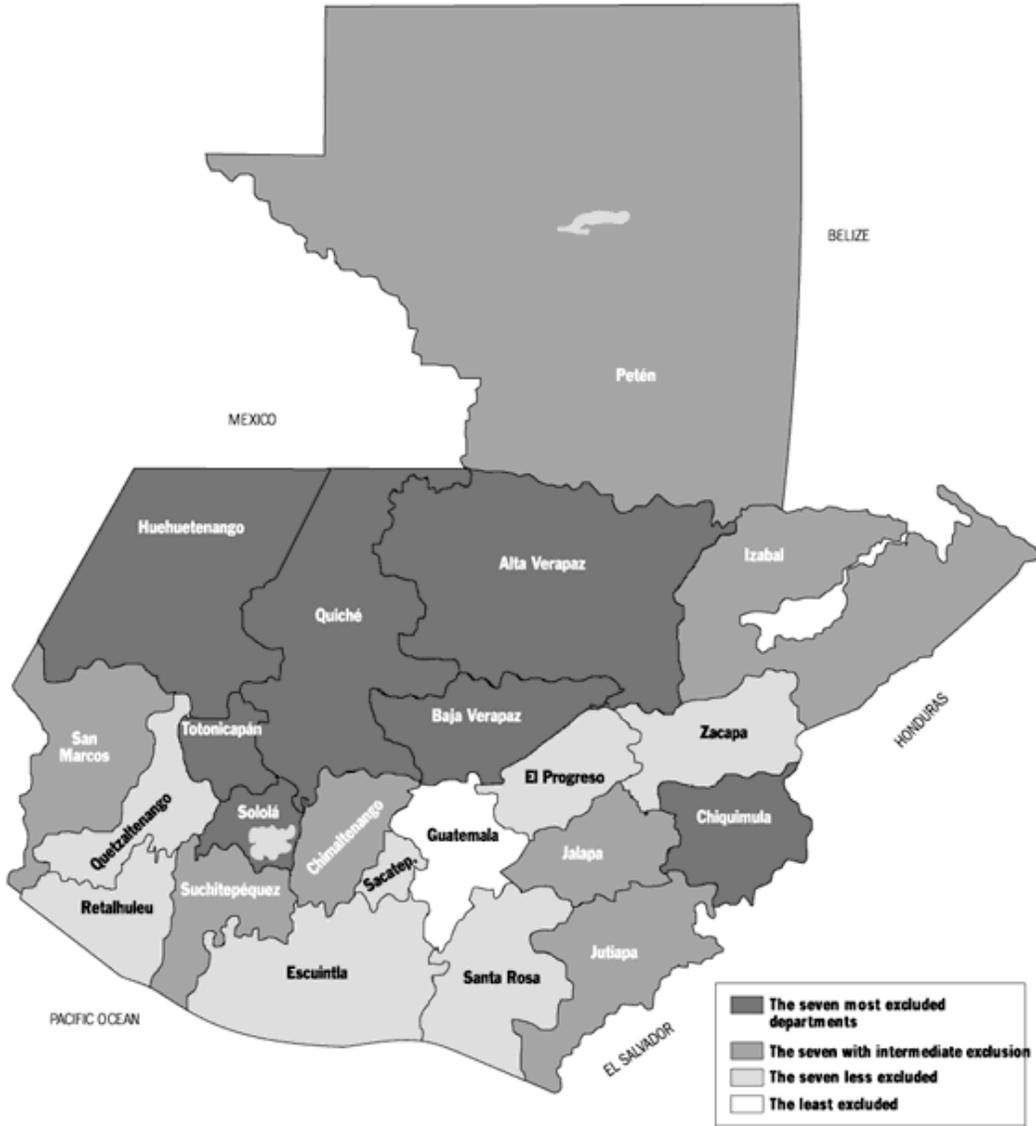
Note: The higher score corresponds to more violence and the orientation is the same as in Figure H-2 but inverted with respect to Figure H-1.

Finally, we decided to apply Equation 4 to the demographic map of Guatemala. The latter was complicated by the lack of good census data. Therefore we approximated the population distribution from a map of “social exclusion” shown in Figure H-4. that seems to correspond to the division between Hispanic and indigenous<sup>26</sup> groups. In particular, we assumed for the sake of a test that “most excluded” corresponded to 80% indigenous population, “less excluded” corresponded to 50% indigenous, “intermediate excluded” corresponded to 20% indigenous, and “least excluded” corresponded to 10% indigenous. We applied a segregation model (similar to the one employed by Bar-Yam) to mix the resulting populations in each state of Guatemala. Considering the unrealistic final mix of ethnic types by state obtained in this way shown in Figure H-5, it is remarkable that the application of Equation 4 can, with different choices for the scale parameter  $l$ , produce qualitatively reasonable predictions of ethnic violence as illustrated by comparing Figure H-6 and Figure H-7. Nevertheless, note that in Figure H-6, the results depend dramatically on the choice of the scale parameter  $l$ .

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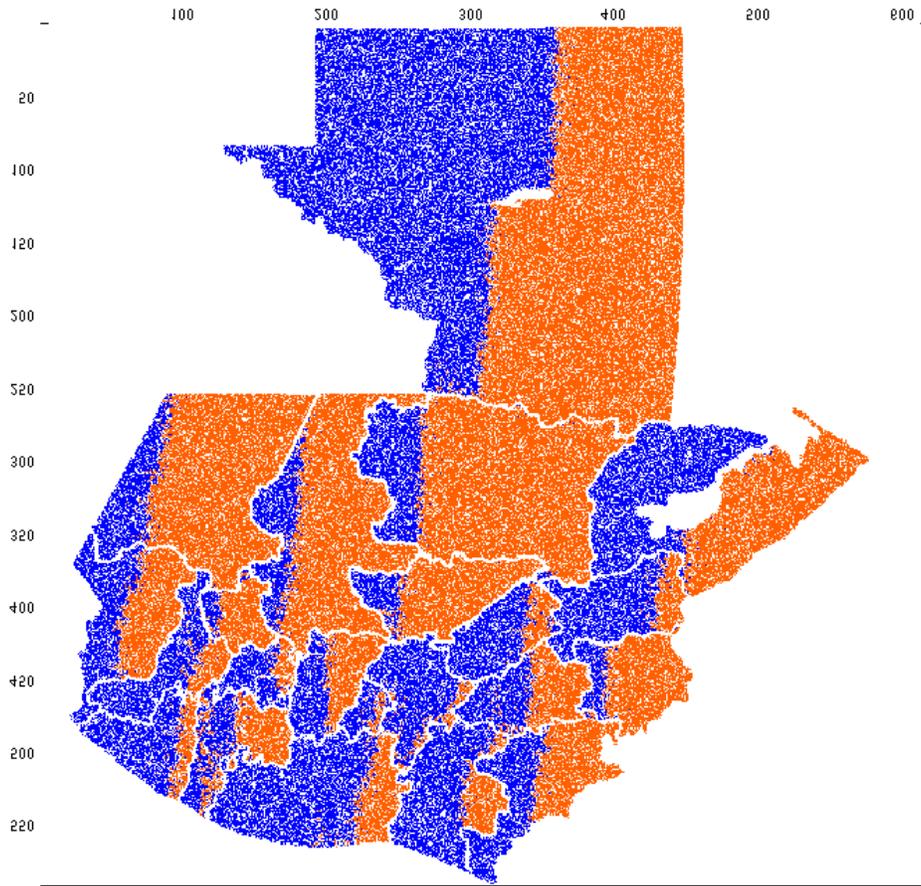
<sup>26</sup> C. Tomuschat, O. Lux de Coti, and A. B. Tojo. Guatemala: Memory of Silence. Report of the Commission for Historical Clarification, Conclusions, and Recommendations. (nod date) <http://shr.aaas.org/guatemala/ceh/report/english/toc.html>

**MAP OF SOCIAL EXCLUSION, 1996**



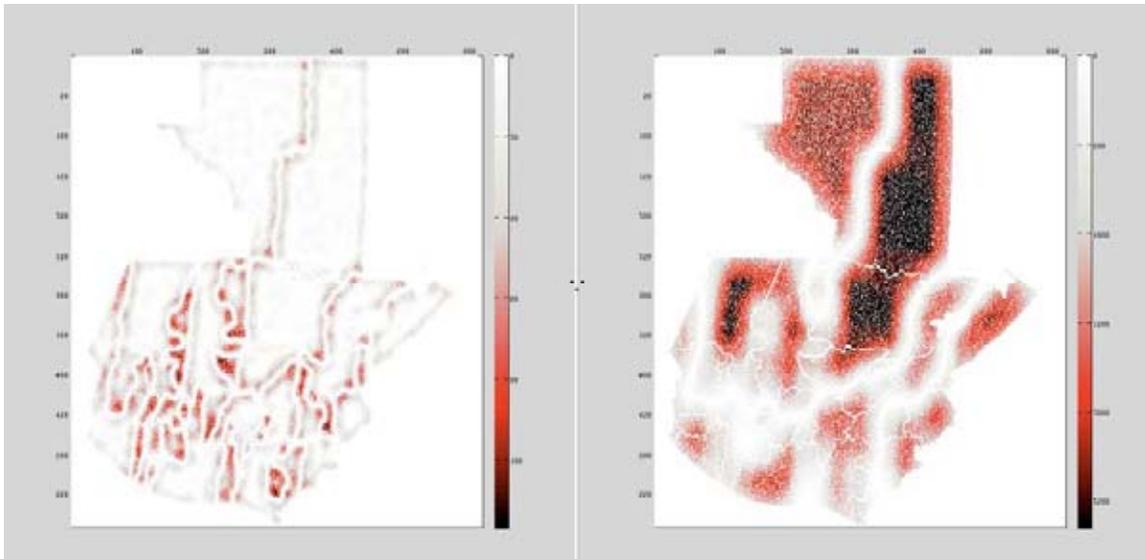
SOURCE: United Nations Development Programme, *Guatemala: the contrasts of human development*, Guatemala, 1998, p.16. The index of exclusion is calculated on the basis of the following indicators: deaths before the age of 40, adult illiteracy, malnutrition in children under 5 years of age and accessibility to certain basic services.

**Figure H-4. Map of Social Exclusion in Guatemala.**

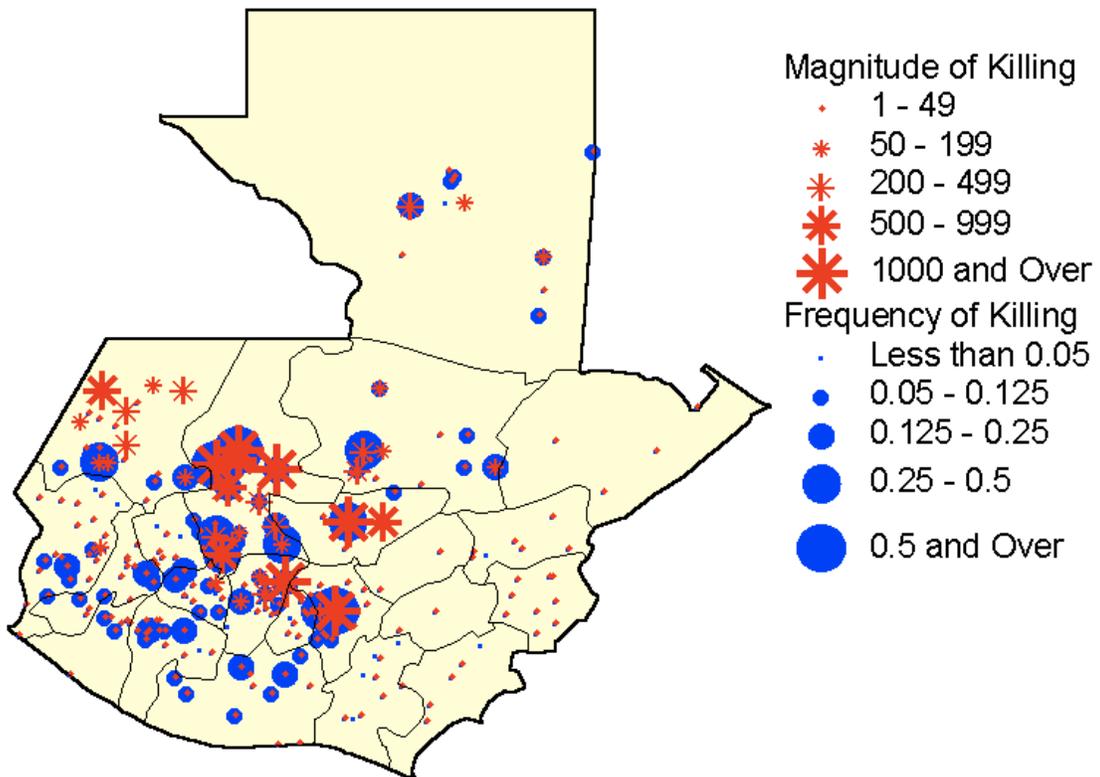


**Figure H-5. Demographic Map Resulting from Applying Segregation Model to Social Exclusion Map of Figure H-4.**

Note: Orange indicates indigenous Maya, blue indicates Hispanic population.



**Figure H-6. Scores from blob detection with two different scaling lengths (left=10, right=30; on 600x600 lattice of cells).**



**Figure H-7. Reported Violence in Guatemalan Civil War from Gulden (2002).**

## Conclusions and Recommendations

The correlation of peninsular features of the spatial population distribution to outbreaks of regional ethnic violence, developed by Bar-Yam et al. (2007), performs well even on much coarser data than they employed in their study of the former Yugoslavia as well as on the data that we reconstructed from Guatemalan demographics. Our first attempt to directly link Gulden's hypothesis to spatial population distribution wasn't successful; instead this procedure more or less reproduced the boundaries between ethnic groups thereby overestimating the number and size of regions where ethnic violence occurred. However, these studies showed that the choice of scale, which characterizes the size of the region of conflict, is crucial.

Bar-Yam et al. (2007) argued that they had always chosen the right, or the most likely scale parameter  $l$  (see Equation 3 and Equation 4) for their final results. That is one approach to resolving the scale dependence in the absence of other data. Nevertheless, we recommend exploiting the scale dependence in order to connect these results to other social or geographical facts that might be available. For a crude example, if one knew that almost all of the conflicts in Guatemala would employ loosely organized units supplied only with small arms fighting only in towns or villages, one might know in advance to choose a small scale; if one knew that conflicts in the former Yugoslavia would employ organized infantry, artillery, and armored units fighting on widely varying terrain, one might know in advance to choose a larger scale. Furthermore, one could imagine developing dynamic models for the scale parameter itself in which the scale would be part of a feedback loop between the outbreak of violence and other measurable facts. At a minimum, it would be worthwhile to find a way to choose the scale so that the predicted region of ethnic violence matched Gulden's hypothesis about the ratios of ethnic groups.

It might also be worthwhile to study the 17-year civil war in Colombia. At least one writer alleges that in this case "Social conflict is not ethnic, religious, nor regional, as often the case elsewhere..."<sup>27</sup>, thus (if true) making the conflict in Colombia an interesting case study. As far as we know, no one has employed the kind of models and predictions discussed here to that conflict.

Finally, it would be interesting both as a test and relevant to the rest of the work discussed in this Report to apply these techniques to the outbreak of riots in France in 2005 and 2007. Although the immediate provocations were traffic accidents involving young Muslim men and police, a study of the ethnic populations (including spatial distributions) in France might reveal correlations to actual outbreaks.

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<sup>27</sup> F. Murtagh. From data to the p-adic or ultrametric model. arXiv:0809.0492[stat.ML] (2008). <http://arxiv.org/abs/0809.049>

# Appendix I: Automated Identification and Analysis of Framing Document for Global Climate Change

## Introduction

In this portion of the research, we present a methodology to build a classification model that can distinguish framing from non-framing documents and further classify a framing document by one of three tasks as defined by the tenets of Social Movement Theory. We propose that a combination of Latent Semantic Analysis techniques and statistical modeling algorithms can produce a model that will classify new text documents with high accuracy.

While the internet presents a wealth of text to analyze, said wealth can be likened to a flood of information, of which only a small fraction is of interest. Manual monitoring of web sites in the search for text that is indicative of the framing process, is not feasible in the time frame necessary to detect a growing trend towards violent social action. Thus, we contend that a necessary component of our larger model is a means of automatically ingesting the flood of text documents from the internet and sifting out those texts that are part of the framing process. The volume, frequency, timing, and tone of such documents can then be determined and employed in predictive models.

As stated previously, framing is the process by which social movement organizations organize or filter how one processes information. The framing process can be broken into three key tasks (Snow & Benford 1988):

1. Diagnostic, which defines the problem, often places blame, and may describe how innocent victims are affected,
2. Prognostic, which itemizes solutions or steps to resolve the issue, and
3. Motivational, which states an urgent need for action to address the problem, and invites others to join in ameliorative collective social action.

Attributes that distinguish framing texts have been discussed extensively in Social Movement Theory literature. A common suggestion is to develop a list of framing keywords based on the most frequently occurring terms that are found in a collection of framing documents (Triandafyllidou & Fotiou, 1998: 3.7; Semetko & Valkenburg, 2000). Computer-assisted qualitative data analysis software (CAQDAS) in conjunction with word maps is another method proposed for identification of framing text (Koenig 2005). Laborious processes have also been used to characterize framing texts, such as manual extraction of words and phrases which are then assigned codes for further analysis (Cooper 2002).

Our approach combines Latent Semantic Analysis (LSA) techniques with statistical data mining algorithms to train a model that can accurately identify documents that perform framing functions. Furthermore, we show that this methodology effectively distinguishes framing documents by type.

LSA is a well established information retrieval methodology (Deerwester et al, 1990). Text documents are parsed and represented by a matrix with a row for each term in the corpus, a column for each document, and term weights populating the cells. This matrix is quite sparse, with zero cell values for terms that do not appear in a particular document. Singular Value Decomposition (SVD) decomposes the matrix while retaining most of the information in the corpus, enabling the calculation of a set of numerical values for each text document. These values are then incorporated into distance measures that flag documents that are closest (most similar) to a query text. In our research, we employ these calculated values as input to classification modeling algorithms resulting in a deployable tool that can uncover framing activity.

### Document Collection

We select global warming as the social issue for this study. Global warming, sometimes referred to as climate change, is a hotly contested topic with factions arguing over:

- whether or not the earth is truly warming,
- the causes of warming,
- the timing and effects of warming, and
- viable solutions to this threat.

Concerns over the presumed effects of global warming have spawned social movements that span cultural, religious, and geographical boundaries.

Publicly available open source text documents in electronic form, all addressing the topic of global warming, were collected. Our non-framing documents are scientific publications that are, or should be, objective, and non-framing in nature. Abstracts from technical papers, conference presentations, and reviews, were assumed to be non-framing documents. The internet is a rich source of texts that have been produced with the intent of influencing opinion on global warming or recruiting others to join the efforts of the movement. Framing text was gathered from web sites that support various social movements focused on the global warming issue.

All documents in the corpus were classified as framing or non-framing. The framing documents were further classified as one of three core framing tasks: Diagnostic, Prognostic, or Motivational (Snow & Benford 1988). Examples of the framing documents may be found in the Supplemental Framing Documents section. The entire corpus comprises 6,531 text documents, of which just over 9% are framing in nature (Figure I-1). By framing task, there are approximately 2% diagnostic, 3% prognostic, and 4% motivational documents in the corpus (Figure I-2).

Value ▲	Proportion	%	Count
Framing		9.32	609
Non-Framing		90.68	5922

**Figure I-1. Distribution of Non-Framing and Framing Documents.**

Value ▲	Proportion	%	Count
Diagnostic		1.85	121
Motivational		4.38	286
Non-Framing		90.68	5922
Prognostic		3.09	202

**Figure I-2. Distribution of Non-Framing and Framing Tasks.**

## Text Preparation and Processing

The entire corpus of framing and non-framing documents was imported into SAS<sup>®</sup> TextMiner.<sup>28</sup> Terms and phrases were parsed from the texts. Singular and plural nouns and all forms of verbs were stemmed into their respective canonical forms. Terms were tagged with their parts of speech. Only those parts of speech that are considered informative were retained: Noun, Proper Noun, Verb, Adjective, Adverb, and Abbreviation. A stop word list, containing 154 commonly, non-informative terms, was applied to remove those terms from the analysis.

A term-document matrix, with rows representing terms and columns representing documents, is populated with the log-entropy weighted term frequency as follows:

$$\hat{a}_{ij} = \log_2(f_{ij} + 1) \left( 1 + \sum_j \frac{\left( \frac{f_{ij}}{g_i} \right) \log_2 \left( \frac{f_{ij}}{g_i} \right)}{\log_2(n)} \right)$$

where

- $f_{ij}$  is the frequency of term  $i$  in document  $j$
- $g_i$  is the number of times that term  $i$  appears in the entire corpus
- $n$  is the number of documents in the corpus

For our corpus of 6,531 documents, we have over 23,000 terms, even after selecting only the most informative terms, applying a stop word list, and performing stemming. In addition, this matrix is quite sparse; most cells contain zero. This sparse, highly dimensional matrix cannot be processed efficiently or effectively. Thus, singular value decomposition (SVD) is performed to transform the matrix into a lower dimensional, compact form while still retaining the information represented by the original matrix.

SVD factors the term-document matrix so that the matrix equals  $\mathbf{UDV}^T$ . The factor matrices  $\mathbf{U}$  and  $\mathbf{V}$  have orthonormal columns.  $\mathbf{D}$  is a diagonal matrix containing singular values. We chose to calculate only the first 100 columns of the factor matrices giving a truncated decomposition of the term-document matrix. The document columns of the

<sup>28</sup> SAS Text Miner software is a component of SAS Enterprise Miner™, Version 5.3 of the SAS System for Windows. Copyright © 2003 - 2005 SAS Institute Inc. SAS and all other SAS Institute Inc. product or service names are registered trademarks or trademarks of SAS Institute Inc., Cary, NC, USA.

term-document matrix are projected onto the first 100 columns of **U**. This gives a 100-dimensional space with each dimension representing a concept in the corpus. These 100 SVD dimension values for each document become the input variables for our models.

### Exploration of Corpus

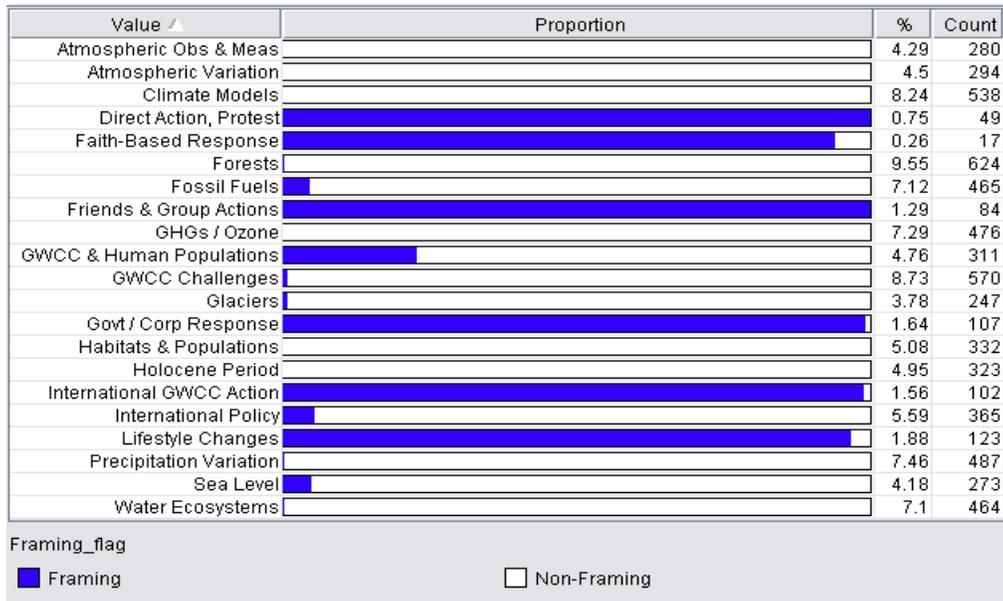
An assessment of the feasibility of this effort requires examination of the collection of documents to seek indications that our document classes exhibit similarity characteristics. Expectation Maximization clustering of the documents was performed with the SVD dimension values as input variables resulting in 21 clusters as show in Table I-1 below.

**Table I-1. Expectation Maximization Clusters**

Name	Descriptive Terms	# Docs	% Docs
Atmospheric Obs & Meas	cloud, sensor, observation, technique, instrument, aerosol, parameter, mission, satellite, earth, measure, provide, resolution, data, atmospheric, measurement, accuracy, present, surface, study	280	4.3%
Atmospheric Variation	variability, record, variation, atmospheric, circulation, mechanism, temperature, atmosphere, solar, past, surface, activity, ocean, last, cycle, forcing, show, time, scale, warming	294	4.5%
Climate Models	climate, estimate, result, water, data, assess, present, simulation, model, scenario, condition, impact, study, hydrological, use, change, method, base, future, scale	538	8.2%
Direct Action, Protest	people, direct action, day, come, coal, workshop, station, action, want, join, group, protest, stop, camp, camp, direct, expansion, take, action, movement	49	0.8%
Faith-Based Response	care, tradition, creation, man, god, live, faith, thing, responsibility, life, see, protect, call, earth, do, way, just, come, world, community	17	0.3%
Forests	carbon, increase, forest, rate, effect, increase, management, concentration, response, growth, atmospheric, tree, soil, specie, ecosystem, plant, model, potential, area, high	624	9.6%
Fossil Fuels	fossil fuels, paper, renewable, emission, production, resource, gas, technology, power, plant, generation, efficiency, global, development, fossil, reduction, fuel, energy, warming, source	465	7.1%
Friends & Group Actions	friend, join, do, send, know, school, way, help, action, make, write, group, just, take, start, see, idea, want, people, good	84	1.3%
GHGs / Ozone	gas, warming, use, process, atmosphere, emission, high, ozone, environmental, system, warming, carbon dioxide, method, product, potential, application, global, global warming, problem, low	476	7.3%
Glaciers	snow, extent, sea, balance, glacier, surface, accumulation, summer, cover, ice, temperature, area, record, show, indicate, variability, region, year, period, trend	247	3.8%
Govt / Corp Response	help, send, state, clean, government, renewable energy, take, stop, now, efficiency, invest, reduce, renewable, company, create, action, solution, energy, power, do	107	1.6%
GWCC & Human Populations	human, world, food, health, people, country, population, problem, affect, do, cause, environmental, environment, increase, make, warming, global warming, more, part, other	311	4.8%

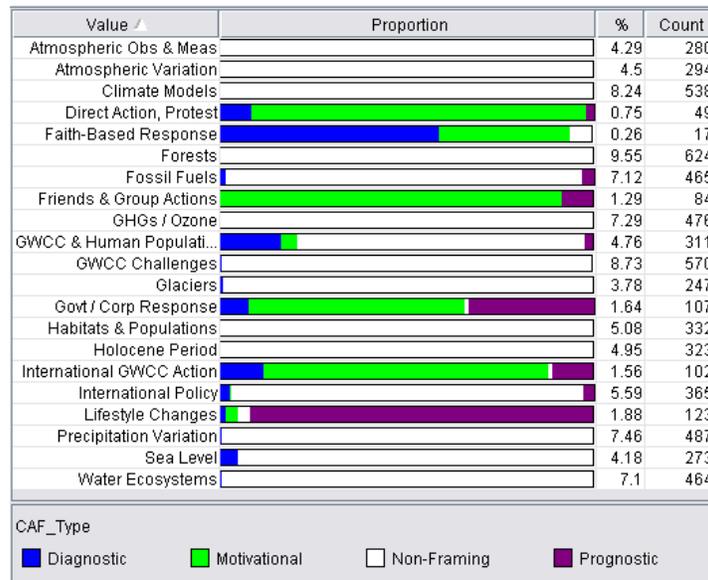
<b>Name</b>	<b>Descriptive Terms</b>	<b># Docs</b>	<b>% Docs</b>
GWCC Challenges	challenge, impact, develop, environment, information, assessment, ecosystem, management, approach, resource, strategy, policy, climate change, research, paper, issue, system, address, environmental, problem	570	8.7%
Habitats & Populations	community, response, diversity, range, habitat, pattern, population, genetic, distribution, suggest, specie, plant, predict, climatic, environmental, rate, environment, analysis, condition, change	332	5.1%
Holocene Period	indicate, holocene, core, right, period, evidence, lake, bp, climatic, b.v., last, record, sequence, glacial, all, occur, record, suggest, elsevier, basin	323	4.9%
International GWCC Action	community, climate, leader, create, build, do, country, action, group, take, people, student, join, world, see, solution, government, action, international, way	102	1.6%
International Policy	international, technology, gas, convention, paper, emission, sector, cost, climate, kyoto, framework, greenhouse, carbon, reduce, energy, reduction, policy, economic, change, ghg	365	5.6%
Lifestyle Changes	appliance, recycle, reduce, big, drive, do, save, carbon dioxide, pound, take, make, home, energy, bulb, car, replace, money, buy, help, use	123	1.9%
Precipitation Variation	year, variation, precipitation, region, increase, climatic, area, degree, temperature, show, period, trend, land, data, analysis, analyze, mean, annual, vegetation, result	487	7.5%
Sea Level	sea level, coast, risk, coastal, river, frequency, storm, rise, event, area, extreme, flood, recent, scenario, future, change, impact, large, paper, climate change	273	4.2%
Water Ecosystems	specie, temperature, water, surface, ecosystem, fish, ocean, low, lake, river, effect, increase, population, increase, high, affect, change, large, suggest, region	464	7.1%

When we observe the proportion of framing and non-framing documents in each cluster in Figure I-3, the framing documents are primarily in six clusters. The fact that the framing documents clustered together indicates there are detectable attributes that these documents have in common, as described by the SVD dimension values, that these documents do not have in common with the non-framing documents.



**Figure I-3. Proportion of Framing Documents in Clusters.**

Likewise, the proportions of framing documents by task (Figure I-4) demonstrate a tendency for these documents to cluster together, although not as cleanly as framing vs. non-framing. Note that some diagnostic documents, and to a lesser degree the prognostic & motivational documents, are found in clusters that which are primarily non-framing (e.g. GWCC & Human Populations). This suggests that the diagnostic framing documents may be the most difficult to model since they have some commonality with non-framing documents.



**Figure I-4. Proportion of Framing Documents by Task in Clusters.**

## Results

We developed two classification models using Clementine<sup>29</sup> software: (1) a dichotomous logistic regression model to distinguish framing from non-framing documents, and (2) a polychotomous logistic regression model to further classify the framing documents by task. These models were trained on a randomly selected 4,358 documents and tested with the remaining 2,173 documents (Figures I-5 and I-6). Random selection was within document class in order to maintain the class proportions. The training documents were processed as described in Section 3 to obtain SVD dimension values for each document.

Value	Proportion	%	Count
Diagnostic		2.04	89
Motivational		4.02	175
Non-Framing		90.91	3962
Prognostic		3.03	132

**Figure I-5. Training Data Set.**

Value	Proportion	%	Count
Diagnostic		1.47	32
Motivational		5.11	111
Non-Framing		90.2	1960
Prognostic		3.22	70

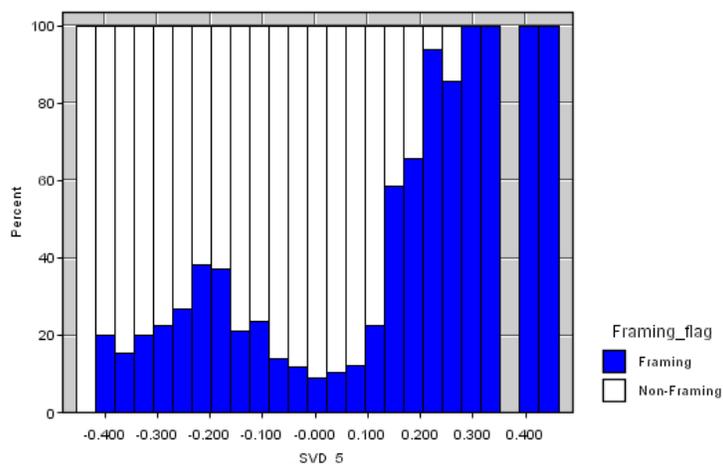
**Figure I-6. Test Data Set.**

### Model 1: Framing, Non-Framing Model

Logistic regression makes an assumption of linearity for continuous variables. This is no concern in the case of variables for which the proportion of the target variable steadily increases or decreases over the range of the predictor variable. This is not the case for the SVD dimension variables in the training data set. For example, Figure I-7 demonstrates the nonlinearity of SVD\_2 in relation to the dependent variable. Therefore, indicator variables were created for the independent variables.

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<sup>29</sup> Clementine® data mining software is a product of SPSS, Inc.



**Figure I-7. Nonlinearity of SVD\_2.**

Parameter estimates for the fitted model are shown in Table I-2. The p-value,  $P(|z| > Wald^{30})$ , for each variable is significant. Zero is not contained in any of the 95% confidence intervals for the odds ratios,  $e^{\beta}$ , for the predictor variables in consideration. So, with 95% confidence, we can state that the coefficients for each of these variables is not zero. Thus, all independent variables are significant in this model.

**Table I-2. Model 1 Parameter Estimates**

Framing_Flag = Framing (a)	$\beta$	Std. Error	Wald	df	Sig.	Exp( $\beta$ )	95.0% Confidence Interval for Exp( $\beta$ )	
							Lower Bound	Upper Bound
Intercept	22.698	2.624	74.840	1	.000			
SVD2_01=0	4.547	1.278	12.656	1	.000	94.390	7.706	1156.119
SVD2_02=0	-2.317	.508	20.802	1	.000	9.86E-002	3.64E-002	.267
SVD2_03=0	-4.928	.531	86.246	1	.000	7.24E-003	2.56E-003	2.05E-002
SVD2_04=0	-7.175	.629	130.314	1	.000	7.66E-004	2.23E-004	2.62E-003
SVD2_05=0	-9.332	1.106	71.165	1	.000	8.86E-005	1.01E-005	7.74E-004
SVD5_01=0	-3.570	.578	38.120	1	.000	2.81E-002	9.06E-003	8.74E-002
SVD6_02=0	1.227	.533	5.302	1	.021	3.410	1.200	9.688
SVD9_01=0	-.885	.448	3.893	1	.048	.413	.171	.994
SVD11_01=0	-4.531	.658	47.391	1	.000	1.08E-002	2.97E-003	3.91E-002

a. The reference category is: Non-Framing

The Likelihood Ratio Test in Table I-2 shows significant, p-value  $\cong 0.000$ , model fit.

<sup>30</sup> Wald is calculated as the coefficient estimate divided by the standard error of the coefficient.

**Table I-3. Model 1 Fitting Information**

Model	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	1821.333			
Final	167.503	1653.829	9	.000

We now test Model 1 with the 2,173 test documents. These documents are processed and SVD dimensions are produced for each document in accordance with the training model generated by TextMiner. The test documents were scored with the dichotomous logistic regression model. The resulting classification table is shown in Table I-3.

**Table I-4. Model 1 Classification Table**

True Value	Model Classification		Total
	Framing	Non-Framing	
<b>Framing</b>	208	5	213
<b>Non-Framing</b>	84	1,876	1,960
<b>Total</b>	292	1,881	2,173

The overall error rate is  $(84+5)/2173 = 0.0410$ . The false negative rate is  $5/1881 = 0.0027$  and the false positive rate is  $84/292 = 0.2877$ . The model correctly classified  $208/213 = 97.7\%$  of the framing documents and  $1876/1960 = 95.7\%$  of the non-framing documents in the test data set.

Model 2: Diagnostic, Prognostic, Motivational, Non-Framing Model

Parameter estimates for the fitted model are shown in Table I-4. Zero is not contained in any of the 95% confidence intervals for the odds ratios,  $e^{\beta}$ , for the predictor variables in consideration. So, with 95% confidence, we can state that the coefficients for each of these variables is not zero. In this model we have continuous predictor variables. For continuous predictor variables, likelihood ratio tests are preferable, as compared to Wald, to test the significance of the variables (Hosmer & Lemeshow, 2000). Table I-5 lists the likelihood ratio tests for each of the predictor variables, showing that all are significant. The likelihood ratio test for the model fit in Table I-6 shows significant, p-value  $\cong 0.000$ , model fit.

**Table I-5. Model 2 Parameter Estimates**

Framing Task (a)		$\beta$	Std. Error	Wald	df	Sig.	Exp( $\beta$ )	95.0% Confidence Interval for Exp( $\beta$ )	
								Lower Bound	Upper Bound
Motivational	Intercept	-.134	1.193	.013	1	.911			
	SVD_1	-13.708	3.461	15.690	1	.000	1.11E-006	1.26E-009	9.83E-004
	SVD_2	48.664	5.189	87.952	1	.000	1.3633E+21	5.2201E+16	3.5606E+25
	SVD_3	4.917	3.551	1.918	1	.166	136.607	.130	143805.166
	SVD_4	6.827	3.069	4.948	1	.026	922.504	2.252	377921.880
	SVD_5	1.861	2.467	.569	1	.451	6.432	5.11E-002	809.248

Framing Task (a)		$\beta$	Std. Error	Wald	df	Sig.	Exp( $\beta$ )	95.0% Confidence Interval for Exp( $\beta$ )	
								Lower Bound	Upper Bound
	SVD_6	5.221	2.713	3.704	1	.054	185.103	.908	37722.019
	SVD_8	-8.310	3.206	6.718	1	.010	2.46E-004	4.59E-007	.132
	SVD_9	2.684	3.448	.606	1	.436	14.642	1.70E-002	12597.975
	SVD_10	3.119	4.227	.545	1	.461	22.628	5.71E-003	89633.289
	SVD_11	-3.895	3.776	1.064	1	.302	2.03E-002	1.24E-005	33.309
	SVD_12	-18.534	4.439	17.437	1	.000	8.93E-009	1.49E-012	5.36E-005
	SVD_22	-12.300	3.807	10.437	1	.001	4.55E-006	2.62E-009	7.93E-003
	SVD_23	6.603	2.837	5.419	1	.020	737.337	2.839	191488.042
	SVD_27	1.699	3.746	.206	1	.650	5.467	3.54E-003	8444.140
Prognostic	Intercept	.612	1.101	.309	1	.578			
	SVD_1	-10.077	3.005	11.245	1	.001	4.20E-005	1.16E-007	1.52E-002
	SVD_2	35.707	4.250	70.597	1	.000	3.2175E+15	7.7646E+11	1.3332E+19
	SVD_3	7.421	3.554	4.360	1	.037	1670.695	1.577	1769758.767
	SVD_4	2.737	2.979	.844	1	.358	15.439	4.50E-002	5300.717
	SVD_5	2.578	2.334	1.220	1	.269	13.173	.136	1277.994
	SVD_6	-2.505	2.634	.904	1	.342	8.17E-002	4.68E-004	14.275
	SVD_8	-6.080	2.996	4.119	1	.042	2.29E-003	6.45E-006	.812
	SVD_9	6.830	3.279	4.338	1	.037	924.789	1.496	571653.943
	SVD_10	-5.235	4.165	1.580	1	.209	5.33E-003	1.52E-006	18.687
	SVD_11	-7.304	3.406	4.599	1	.032	6.73E-004	8.49E-007	.533
	SVD_12	-12.614	4.086	9.532	1	.002	3.32E-006	1.11E-009	9.99E-003
	SVD_22	-8.269	3.304	6.265	1	.012	2.56E-004	3.95E-007	.166
	SVD_23	2.101	2.493	.710	1	.399	8.174	6.18E-002	1081.872
SVD_27	-6.117	3.198	3.659	1	.056	2.21E-003	4.18E-006	1.163	
Diagnostic	Intercept	1.463	1.032	2.011	1	.156			
	SVD_1	-10.861	2.852	14.500	1	.000	1.92E-005	7.17E-008	5.14E-003
	SVD_2	34.675	4.072	72.512	1	.000	1.1458E+15	3.9174E+11	3.3513E+18
	SVD_3	.659	3.378	.038	1	.845	1.932	2.57E-003	1450.467
	SVD_4	6.109	2.570	5.653	1	.017	450.066	2.924	69265.663
	SVD_5	8.989	2.285	15.482	1	.000	8018.221	91.067	705987.581
	SVD_6	7.211	2.420	8.877	1	.003	1353.581	11.789	155412.335
	SVD_8	2.874	2.791	1.060	1	.303	17.705	7.45E-002	4206.758
	SVD_9	12.653	3.370	14.098	1	.000	312771.532	423.356	2.3107E+08
	SVD_10	-7.122	4.160	2.932	1	.087	8.07E-004	2.32E-007	2.802
	SVD_11	-8.542	3.207	7.095	1	.008	1.95E-004	3.63E-007	.105
	SVD_12	-9.481	4.019	5.565	1	.018	7.63E-005	2.90E-008	.201
	SVD_22	-7.489	3.158	5.626	1	.018	5.59E-004	1.15E-006	.272
	SVD_23	4.839	2.676	3.270	1	.071	126.403	.666	23983.466
SVD_27	-7.967	3.061	6.775	1	.009	3.47E-004	8.60E-007	.140	

a. The reference category is: Non-Framing

**Table I-6. Likelihood Ratio Tests for Model 2**

Effect	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.
<b>Intercept</b>	470.816	4.054	3	.256
<b>SVD_1</b>	487.989	21.227	3	.000
<b>SVD_2</b>	1131.705	664.942	3	.000
<b>SVD_3</b>	480.600	13.838	3	.003
<b>SVD_4</b>	475.482	8.719	3	.033
<b>SVD_5</b>	494.910	28.148	3	.000
<b>SVD_6</b>	496.248	29.486	3	.000
<b>SVD_8</b>	492.238	25.476	3	.000
<b>SVD_9</b>	490.812	24.050	3	.000
<b>SVD_10</b>	477.753	10.991	3	.012
<b>SVD_11</b>	477.271	10.509	3	.015
<b>SVD_12</b>	487.285	20.523	3	.000
<b>SVD_22</b>	478.409	11.647	3	.009
<b>SVD_23</b>	475.959	9.197	3	.027
<b>SVD_27</b>	484.959	18.197	3	.000

The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0.

**Table I-7. Model 2 Fitting Information**

Model	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood	Chi-Square	df	Sig.
<b>Intercept Only</b>	2808.295			
<b>Final</b>	466.762	2341.533	42	.000

We now test Model 2 with the 2,173 test documents. As for Model 1, the test documents are processed and SVD dimensions are produced for each document in accordance with the training model generated by TextMiner. The test documents were scored with the polychotomous logistic regression model. The resulting classification table is shown below in Table I-7.

**Table I-8. Model 2 Classification Table**

True Value	Model Classification				Total
	Diagnostic	Prognostic	Motivational	Non-Framing	
<b>Diagnostic</b>	21	3	4	4	32
<b>Prognostic</b>	3	49	13	5	70
<b>Motivational</b>	0	5	105	1	111
<b>Non-Framing</b>	3	2	1	1,954	1,960
<b>Total</b>	27	59	123	1,964	2,173

The overall error rate is  $44/2173 = 0.0203$ . The false positive rate is  $6/27 = 22.2\%$  for Diagnostic,  $10/59 = 17.0\%$  for Prognostic,  $18/123 = 14.6\%$  for Motivational, and  $10/1964 = 0.5\%$  for Non-Framing.

The model correctly classified  $21/32 = 65.6\%$  of the Diagnostic documents,  $49/70 = 70.0\%$  of the Prognostic documents,  $105/111 = 94.6\%$  of the Motivational documents, and  $1954/1960 = 99.7\%$  of the Non-Framing documents in the test data set.

## Conclusion and Future Work

We have shown that a model can be trained to distinguish framing and non-framing documents with high accuracy. We have also shown that a more finely grained model can be developed to further distinguish framing documents by type. The second model performs very well for Motivational and Non-Framing document types and less accurately for Diagnostic and Prognostic document types. We believe the results for Diagnostic and Prognostic framing classification may be improved with more advanced modeling techniques such as ensemble modeling.

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## Appendix J. Supplemental Framing Documents

### **Example Diagnostic Framing Document:**

In April 2008 the government will decide whether Kingsnorth in Kent will have the first new coal-fired power station in the UK for decades. Of all fuels, coal is the most polluting - even worse than burning oil or gas.

Kingsnorth power station alone will release more CO<sub>2</sub> each year than Ghana. It will not use carbon capture and storage technology, and so will contribute to climate change that is already hitting the world's poor first and hardest.

For the UK to be encouraging the development of new coal-fired power stations, instead of promoting the switch to a low carbon future, is madness in an era of impending climate crisis.

<http://www.wdm.org.uk/campaigns/climate/action/kingsnorth.htm> viewed 5/19/2008

### **Example Prognostic Framing Document:**

Go Vegetarian One Day a Week

To produce one pound of beef requires 2,500 gallons of water—that's 40 times more water than is used to produce a pound of potatoes. Before buying beef, think about the immense cost of energy used to raise cattle and to transport meat to your supermarket shelf. Besides all this, cows consume enormous amounts of antibiotics and are a prodigious source of methane, which is the number-two greenhouse gas; livestock are responsible for almost 20 percent of the methane in the atmosphere.

<http://www.vanityfair.com/politics/features/2006/05/savetheplanet200605> viewed 7/28/2008

### **Example Motivational Framing Document:**

get serious!

NO DESALINATION PLANT -- PHASE OUT COAL

NO NEW FREEWAY TUNNEL -- NO BAY DREDGING

YES to renewable energy, public transport & urgent action to stop global warming

We are calling for Victorians to join the Climate Emergency Rally on July 5. We want to send a wake-up call to state and federal governments that they are heading in the wrong direction. New coal, new freeways and desalination plants increase our use of and reliance on fossil fuels dramatically at a time when we must be cutting our use even more dramatically. We are calling on governments to implement sustainable alternatives to these irresponsible and expensive projects.

We call on all community groups and individuals to join us to send this important message to the government. We are going to form a 140-metre-long human sign to spell the words "Climate Emergency".

Please organize your group to send endorsement, tell everyone you know, and come on the day wearing something red to symbolize emergency.

<http://climaterally.blogspot.com/> viewed 5/20/2008

## Appendix K: The Vital Issues Process

The Vital Issues Process (VIP) is a strategic planning tool that identifies a portfolio of programmatic activities (such as an “investment portfolio”) for an organization, aimed at satisfying its overall goals and objectives. The process requires a high level of stakeholder involvement, thus predisposing acceptance of the programmatic activities by those stakeholder communities.

The VIP is typically a multi-stage process, involving a series of daylong, intensive workshops, each of which builds on the results of the previous one. The first workshop focuses on definitions, identifying target goals and objectives, describing the type of issues or topical areas addressed by the sponsoring organization, and identifying criteria for issue or problem selection. The next workshop (or set of workshops) uses the selection criteria and the definition of the topical area or problem to identify and rank a set of vital issues. The following workshop (or set of workshops) selects one of those identified issues (probably, but not necessarily the highest ranked) and identifies and ranks associated programmatic activities. Subsequent workshops (or sets of workshops) can focus on tasks associated with specific programmatic activities.

Group dynamics constrain the effective size of a panel to between 10 and 15 people. The panel of participants in each workshop will differ, as expertise will be relevant to the topic at hand. Institutional perspectives key to organizational success (e.g., the private sector, local/state/federal government, citizens’ interest groups, and academe) should be identified a priori and represented on each panel. Individual panelists should be well respected and well recognized within their professional communities.

The VIP incorporates two primary facets: a qualitative facet, which takes a synthesis orientation; and a quantitative facet, which is analytically oriented. The qualitative aspect involves dialogue among individuals or groups with some stake in the topical area of interest. Such dialogue usually focuses on problem or issue definition (which can include definition of an organization’s goals and objectives) and criteria for measuring success through problem solution or goal achievement. Participation in the construction, or synthesis, of those definitions encourages participants to become invested in the process. The definitions constructed by these synthesis activities form the environment within which a set of alternatives (such as issues or programs) can be identified and ranked as to their relative importance. Next, quantitative methods are used to identify the portfolio that provides the greatest organizational good according to the set of criteria synthesized during the qualitative phase.

This dual approach can be applied in each phase of the VIP. The agenda leads off with a discussion of the topical area with which the workshop is charged, seeking to construct a definition that satisfies the group and which sets the context within which the specific issues, activities, or tasks are identified. A set of criteria for measuring success is also identified. Group discussion clarifies the identified issues and leads to consensus on their definition and scope. The issues are then relatively ranked (i.e., the items in the set are ranked against each other, and not against any external, absolute standard) using pairwise

comparisons that compare each issue to all others in the set in turn against each of the identified selection criteria. This ranking is obtained by asking the panelists to assign specific values to each issue. This procedure allows panelists to make explicit the tradeoff process and the criteria by which they are making the tradeoffs. In addition to the relative importance of the vital issues, the quantitative phase also yields an assessment of the relative level of agreement among panelists.

The VIP has been successfully applied in over 90 applications with topical areas ranging from national security, economic competitiveness, environmental quality, energy security, to health care. The VIP is a facilitated, rapporteured process with one deliverable being a report and another being a model of the dialog. The report is more than a “minutes” of the meeting(s). The report actually “tells a story” with a rich description of the issues that are of vital importance in the context of the topical area of interest. The “model” provides a topological depiction of the major elements that emerged during the dialog and of their primary couplings. The story illustrated by the model provides a graphical representation that reveals valuable insights that typically go unrecognized. One of the more important aspects of this “story” is that its authors, the panelists, are representative of the primary stakeholders. A valuable characteristic of this process is that the panelists are recruited from the full spectrum of institutional perspectives representative of the stakeholder community. This serves to ensure that the “story” captures the salient aspects of the Vital Issues associated with the topical area under consideration and, perhaps even more importantly, that the stakeholders feel ownership of the results.

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