

Emerging Threats 21: Risk Terrains and Global Threats

Leslie W. Kennedy

Joel M. Caplan

September 2009

Overview

We have undertaken a project in collaboration with the Rutgers Division of Global Affairs to study emerging threats in the 21st Century (ET21). This inquiry moves beyond what has been done previously in the study of global insecurity where the emphasis has been primarily on the governance responses that insecurity creates. ET21 also takes us a step beyond the narrative and descriptive processes that are used in defining spatial aggregations of problems. It is important to note that we are not just looking to document existing threats, but also to examine factors that might contribute to or be present in the context of emerging threats. The project addresses the challenges of forecasting emerging threats and insecurity through the study of the social and economic correlates of violence; the impact of changing factors that come from globalization; the mitigating influences of prevention, control, and response; and the forces that might lead to altering values related to threat suppression.

We draw our approach from the local ecological approaches to crime patterns that have been popular among criminologists in studies of violence. Our intention is to examine how these perspectives can be applied cross-nationally and determine the extent to which they are scalable, with local and national security concerns impacting on global insecurities.

We consider the important framework provided by a risk approach that includes threats, vulnerabilities and consequences set into a context of uncertainty and change. As noted, much of the globalization literature has focused on threats, and the consequences have been addressed in terms of governance responses. We intend to drill further down into the social fabric of societies to examine how certain vulnerabilities influence the impact of threats and how formal and informal community (and political) responses influence outcomes.

ET21 is concentrated on integrating these factors into a common framework, using the Terra-Standardized

Contextual (TSC) method, which produces an empirically based risk terrain to forecast the likelihood of insecurity at specific locations. An emphasis will be placed on forecasting violence—including genocide, terrorism, homicide and crime waves. ET21 will also study ways in which disease outbreaks, climate change, natural disasters, and changes in economic conditions have on insecurity. The goal is to identify a pattern that could lead to the development of risk assessment models for all kinds of emergent threats.

ET21's review of emergent threats is carried out in three parts. The first provides a focus on the elements of risk that might evoke threats. In this stage, we consider the steps that have already been taken by major international agencies to assess threats and strategically respond to them. The second stage offers the perspective that risks can be calculated using data drawn from different sources on a global scale. The collection of these data pose unique challenges, but also, with new forms of technology that are being developed, we envision a program that will permit innovative forms of data collection from many different sources, including public open source material, government agencies and user generated information. It is our intention to take these data and conduct spatial analysis on them in a way that supports a forecasting model of threats and their spatial patterns.

The third component turns attention from forecasting locations that are conducive to threats to the study of threats that have been actualized as events. In this part ET21, we are interested in conducting "event mapping", connecting up the crisis points in a spatial analysis that can lead to network analysis, study of concentration effects, and prevention strategies.

Research Tasks

ET21 research involves a number of related tasks:

1. Define how TSC threat assessment works and how it might be applied to international violence outcomes. (We will seek to explain the procedure as used in local crime analysis and show its application to global security).
2. Demonstrate how mapping applications improve on what has been done previously, and how GIS can be used as a forecasting tool.

3. Explain how studying global threats with an approach that draws heavily from criminological methods differs from the approaches used in most other international studies.
4. Show how a criminological approach to studying global emergent threats ties to the community risk assessment literature, with a particular focus on the methodology of threat assessments.
5. Review and assess the global data sources—their benefits and limitation. (This can address the challenges offered by non-existent data, but also can be used to illustrate how local studies could be connected together to create a global approach).
6. Give examples of some current web-based mapping applications. (For example, the Genocide mapping project seeks to add understanding of its extent and impact through a number of mapping techniques, photos, etc.: <http://www.ushmm.org/maps/>)
7. Explain how assessing global emergent threats ties to governance and decision-making. (There are examples currently in place that are sold as “global threat analysis”; see, for example, the Global Risk Portfolio at http://www.globalrisks.com/political_risk/more_information/ for a commercial version. There are others, including government sites, which provide different types of global security assessments that tie to decision-making. ET21 will analyze how they work and how our unique approach may improve on their forecasting).
8. Our focus is on violence to keep the project manageable, but a similar application of methods and technologies may have relevance to other global topics and issues, such as health or climate. (There are interesting surveillance programs already in place related to these topics that we will examine in Step 4),

The general applicability of our approach to the study of global security will be a larger outcome of the ET21 project.

“The project addresses the challenges of forecasting emerging threats and insecurity through the study of the social and economic correlates of violence; the impact of changing factors that come from globalization; the mitigating influences of prevention, control, and response; and the forces that might lead to altering values related to threat suppression.”