

The MoodCompass Project

Early Warning System for Acute Risks to Socioeconomic,
Geopolitical, and Environmental Stability

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Overview

- Basic Premises
- Examples of successful forecasts of impactful events
- Precedence – similar research by others
- The MoodCompass Approach
- Q & A

Basic Premises

MoodCompass Premises

- Social mood and perception follow roughly cyclical patterns
- Being cyclical, they can be represented by sinusoidal (wave) equations
- Certain mood configurations are associated with certain types of events in the world
- If one could forecast next month's collective mood and perception, one could forecast the types of events likely to occur next month.

Successful Forecasts

of impactful global events

Past MoodCompass Findings

“This looks REALLY BAD!!! ... It should be unlike any stock market decline in recent history.”

MoodCompass Issue: *The Great Market Crash of 2008*, Published August 23, 2008.

-- **2008-09 market crash began Sept. 2008; Sept. 27, 2008 was the largest point drop in DOW history**

“Use caution when traveling to Asia or eating food imported from Asia until more is known about this event.”

On the Destructive Event indication centered in Northern Japan in March 2011

Public Broadcast of *Significant Natural Events for March 2011*, March 1 2011 on YouTube

-- **Japan earthquake/tsunami Mar 10, 2011; food contamination followed**

More Past Findings

Significant Increase in Violence centered in N. Africa and the Middle East

Public Broadcast *Violence and War Talk*, January 23, 2011 on YouTube

MoodCompass Issue: *Animosity and Rumors of War*, Published January 30, 2011.

-- The “Arab Spring” gains full public attention in February 2011.

Escalation in the Persian Gulf; likely due to blockade or shots fired in the Gulf itself; not due to Israeli strike on Iran

Public Broadcast of *Persian Gulf Escalation Alert* December 1, 2011 on YouTube

--Iranian exercises in the Gulf practicing blockade strategies began Dec. 24

Precedence

Future Changes Are Signaled in the Present

“Many significant societal events are preceded and/or followed by population-level changes in communication, consumption, and movement.”

-- U.S. Office of Inclusive Analysis
Open Source Indicators Program

Predictive Crime Fighting

“At universities and technology companies in the U.S. and abroad, scientists are working to develop computer programs that, in the most optimistic scenarios, could enable police to anticipate, and possibly prevent, many types of crime.

-- *Stopping Crime Before it Starts*

Los Angeles Times, August 2010

The MoodCompass Approach

Subjective Scoring + Objective Modeling

Subjective Scoring

- Social Mood and Perception is tracked in eight oscillating mood factors.
- Current mood and perception is obtained from various sources such as Google trends and news stories.
- Experienced team members subjectively rate the relative presence of these eight factors

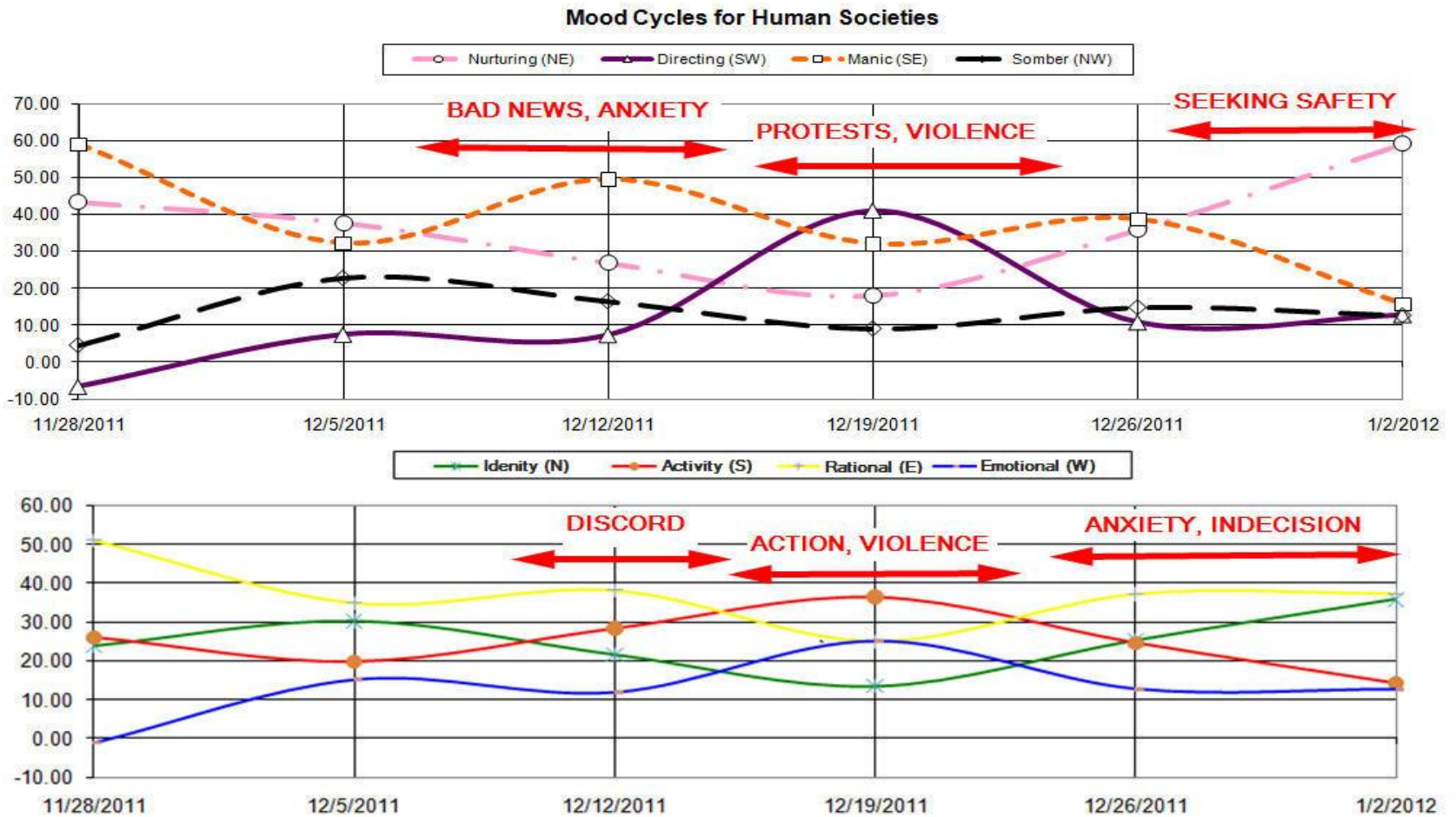
Time Series Analysis

- Raw scores are normalized and combined
- If sufficient data points are available, an estimate is made of the pattern using a sum of sine waves equation.
- The sine waves are extended out as appropriate.
- Equations are re-evaluated and adjusted on a regular basis.

Mood and Perception Projections

- Projected data is turned to graph form
- Mood and perception configurations are matched with known patterns corresponding with expected manifestations
- Charts are annotated for later analysis

Example of Projection Chart



Objective Modeling

- Using mathematical models, mood and perception data becomes market projections
- Market projections are evaluated for indications of instability or disruptive events
- Examples:
 - U.S. social mood => Stock market movement
 - U.S. government => U.S. Dollar strength / weakness
 - “The World” => Crude oil price changes

Example: Social Mood Projections => Stock Market Movement

Weekly Forecast Generated by Social Mood Model vs. Actual S&P
as of February 17, 2012

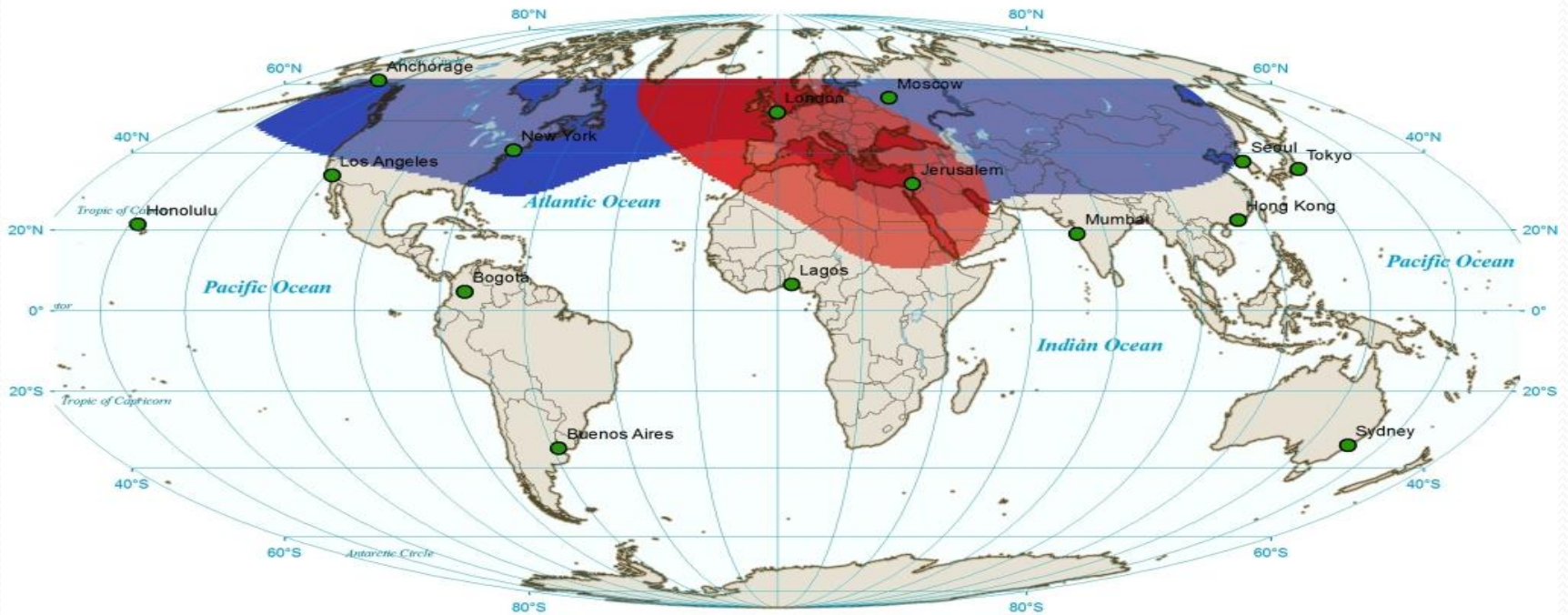


Spatial Analysis

- Projected data for various cities around the world are analyzed using Geographic Information Software (GIS)
- Peaks and valleys of various mood and perception factors are analyzed on a global scale
- Strong indications of high risk configurations are noted

Example of Spatial Analysis

Social Instability Factors - February 2011



Social Instability Factors

- Unrest / Violence
- Panic

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Robinson Projection
Central Meridian: 0.00

Integration

- All the pieces are then evaluated by the analysis team
 - Mood and Perception Projection charts
 - Modeled Market Projections
 - Maps produced through Spatial Analysis
- Brainstorming followed by critical analysis
- “Most likely scenario(s)” is arrived at

Desired Result:

Near future risks responded to with foresight and preparation

Questions?

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