

# Analyzing Concerns of People using Weblog Articles and Real World Temporal Data

Tomohiro Fukuhara  
Toshihiro Murayama  
Toyoaki Nishida

Research Institute of Science and  
Technology for Society (RISTEX)

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## Overview

### ■ Purpose

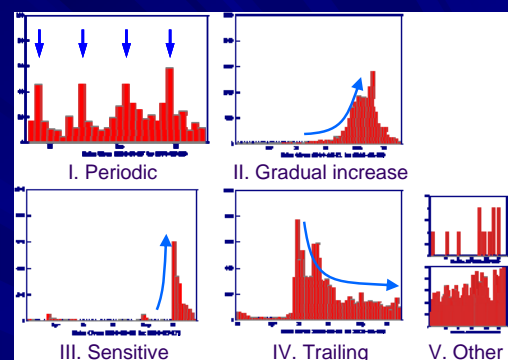
- To understand concerns of people from Weblog articles.

### ■ Questions

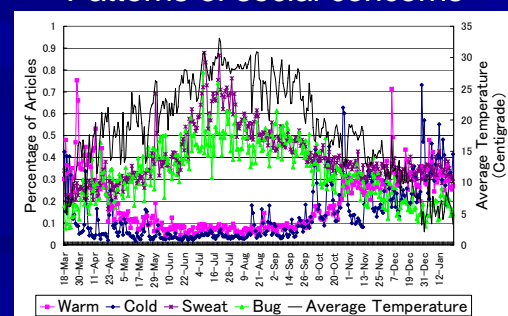
1. What kind of concerns do people have?
2. What kind of factors affects concerns of people?
3. What kind of concerns does a person have?

### ■ Analysis results

1. Patterns of social concerns
2. Relations between concerns and real world temporal data
3. Concerns of a person



Patterns of social concerns



Relation between temperature and concerns

# Social problems and concerns

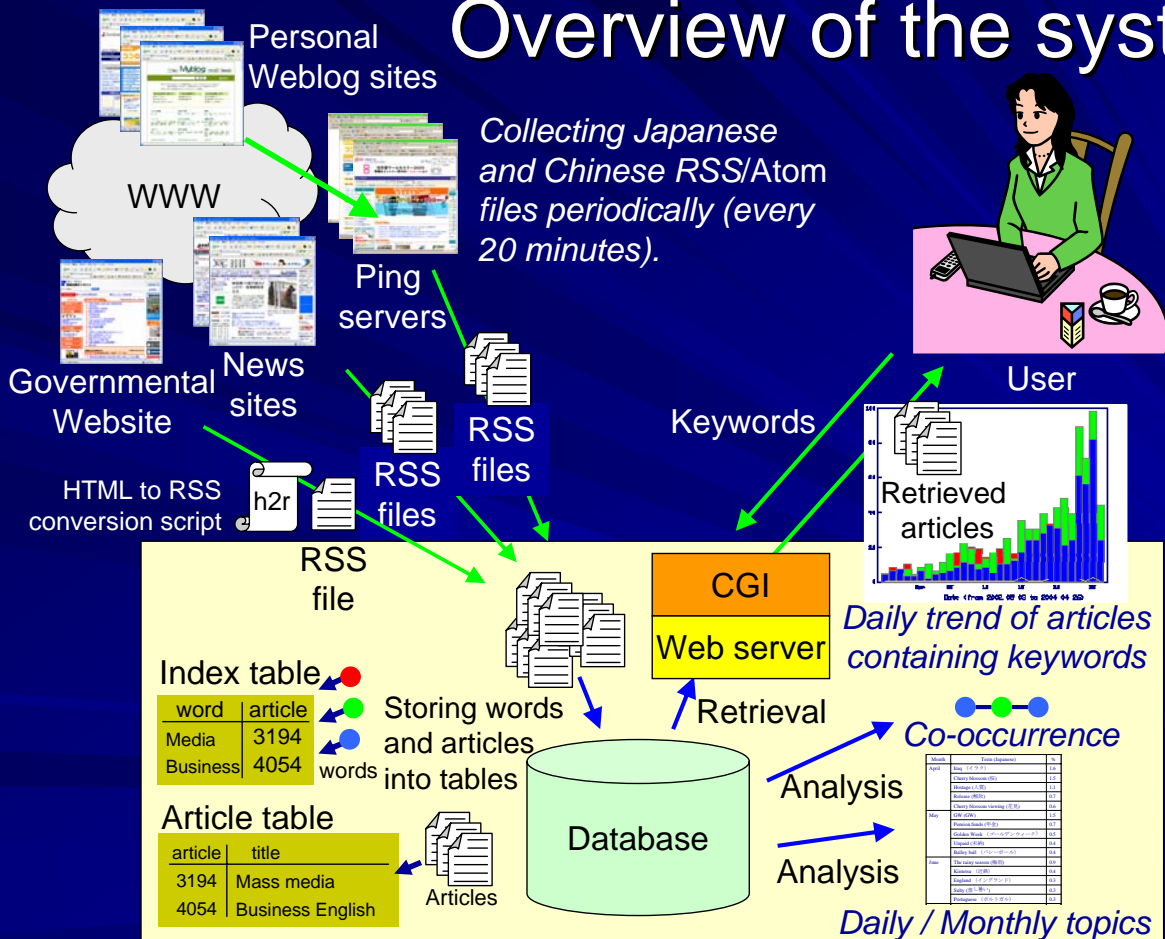
- There are many social problems in our society.
  - e.g., Earthquake, Typhoon, Tsunami, SARS, BSE, Terrorism, and so on.
  - Understanding concerns of people is important for finding key issues to be solved.
- The aim of this research is
  - to understand concerns of people by collecting and analyzing Weblog articles.
  - We are investigating concerns by creating a system that collects and analyzes blog articles.

Earthquake  
(The Kobe-Awaji Earthquake (1995))

SARS

BSE

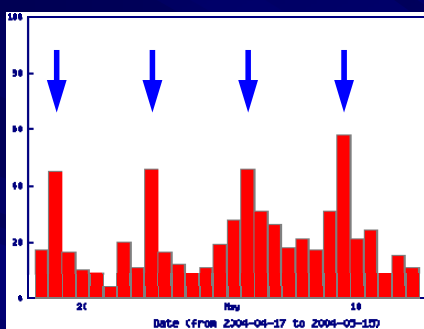
## Overview of the system



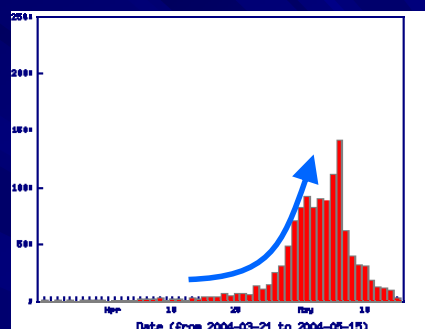
# Analysis results

1. Patterns of social concerns
2. Relations between concerns and real world temporal data
3. Concerns of a person

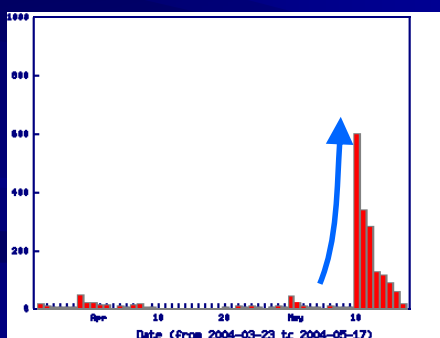
## 1. Patterns of social concerns



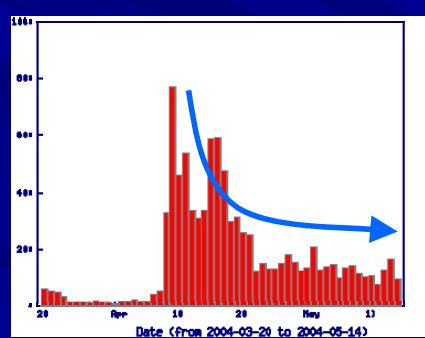
I. Periodic



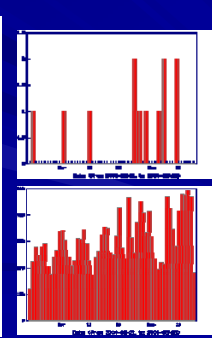
II. Gradual increase



III. Sensitive

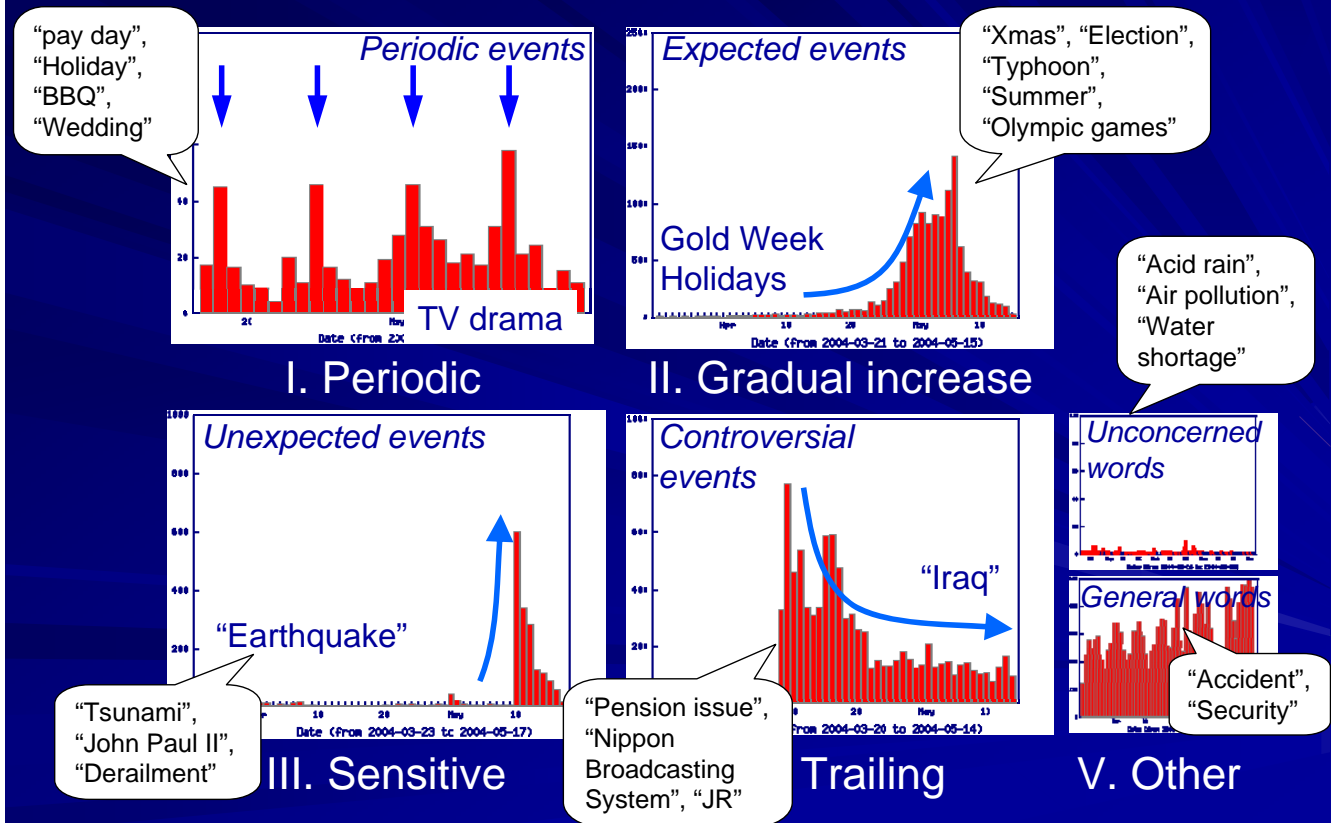


IV. Trailing

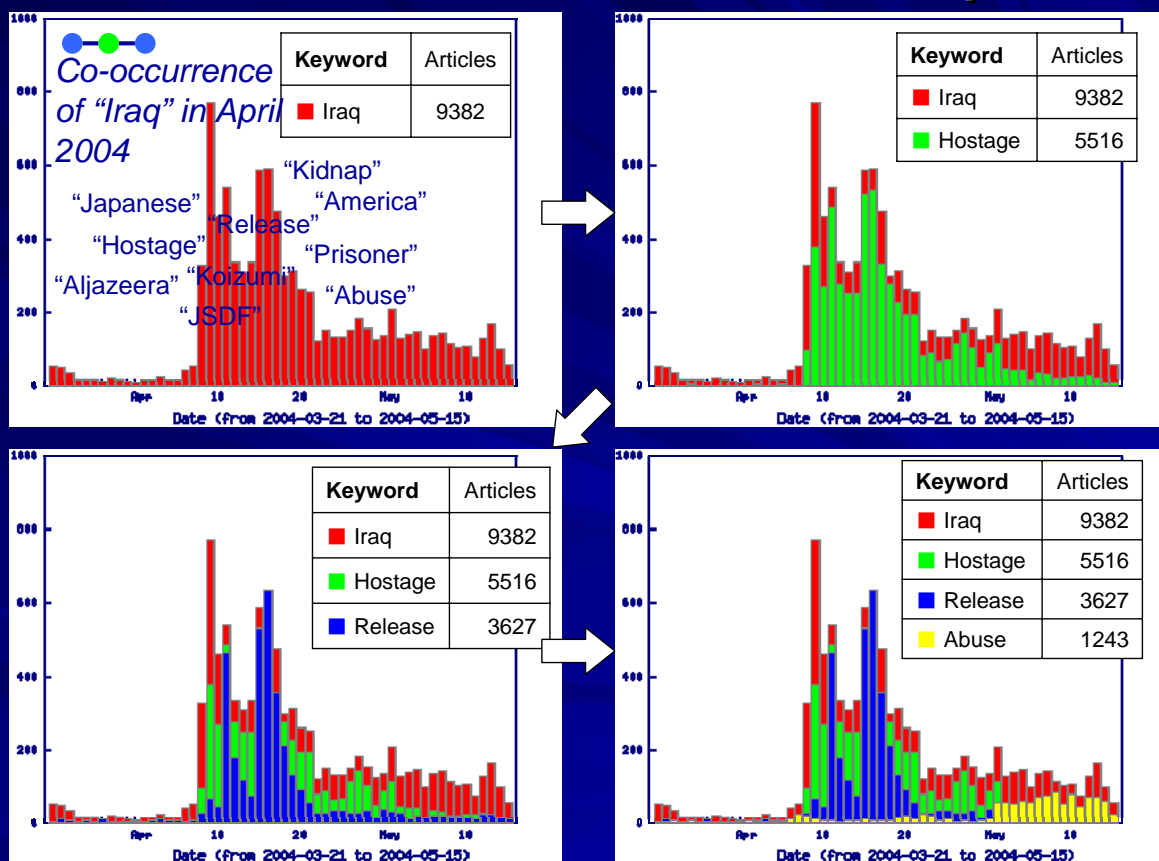


V. Other

# Examples of social concerns

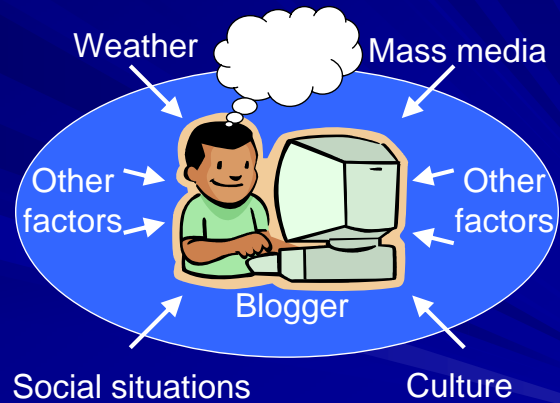


# Shift of focuses on “Iraq”

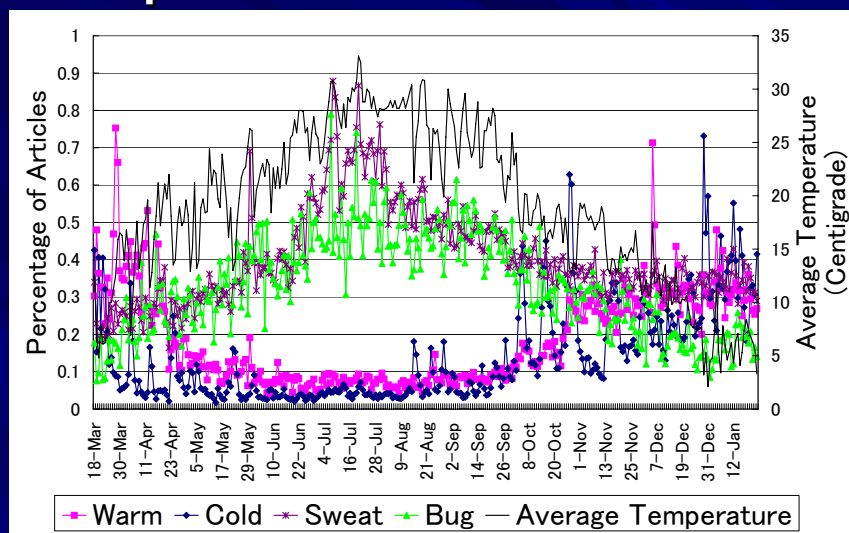


## 2. Relations between concerns and real world temporal data

- We consider that concerns are affected by various real world factors.
  - e.g., Weather, Mass media (TV, News), Social situations, Culture, and so on.
- *We examined relations between concerns and real world temporal data.*
  - As a first step, we used temperature.



## Temperature and concerns



- We compared words and temperature of Otemachi, Tokyo in 2004.
  - Correlated words can be found by calculating correlation coefficient between temperature and number of blog articles.
- Several words have *positive correlation* with temperature:
  - e.g., “bug”, “mosquito”, “cockroach”, “suntan”, “air conditioner”, ...
- Several words have *negative correlation*.
  - e.g., “sweater”, “heater”, “glove”, “cold”, “snowboard”, “slope”, ...

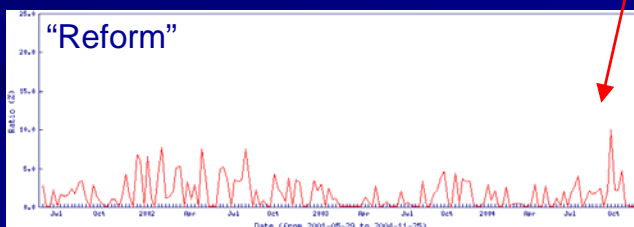
# 3. Understanding concerns of a person

- Purpose
  - To understand concerns of a person from articles written by the person.
- Data
  - E-Mail magazine of Koizumi cabinet.
  - 184 articles from May 29, 2001 through April 7, 2005.

Junichiro Koizumi  
(Prime minister of Japan)

## Continuous concerns of Mr. Koizumi

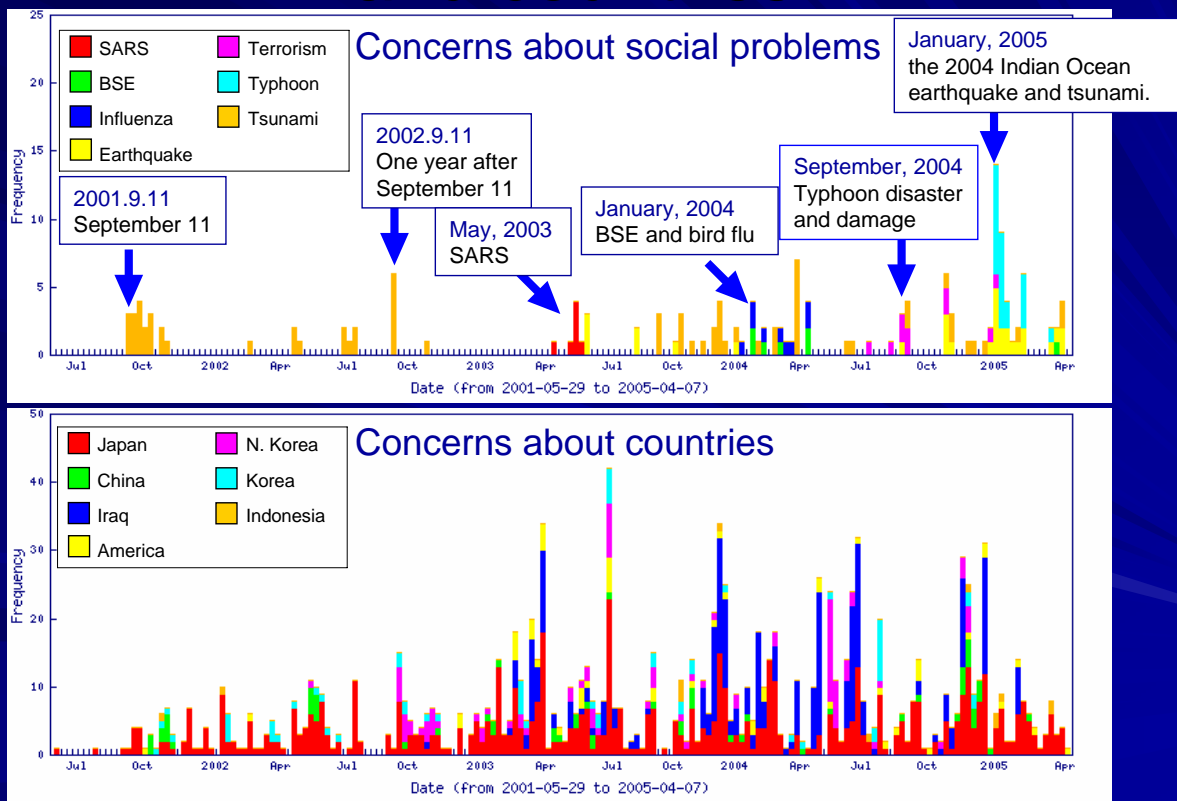
- We can find continuous concerns of Mr. Koizumi from feature value of words.
- “Reform of Japan” is Mr. Koizumi’s political slogan.



Continuous concerns of Mr. Koizumi

No.	Term	<i>c value</i>
1	Japan	0.01112
2	Reform	0.00870
3	Koizumi	0.00725
4	I	0.00538
5	Jun'ichiro	0.00505
6	People	0.00464
7	Issue	0.00312
8	Everyone	0.00235
9	Nation	0.00205
10	Economy	0.00198
11	World	0.00185
12	Citizen	0.00137
13	Iraq	0.00137
14	Cooperation	0.00134
15	Relation	0.00129
16	Everyone	0.00129
17	Head of a state	0.00116
18	Assistance	0.00106
19	Society	0.00102
20	Efforts	0.00100

# Concerns about social problems, and countries



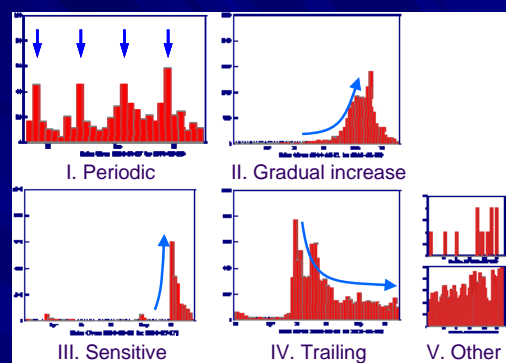
## Conclusion

■ We reported analysis results of concerns of people by using Weblog articles.

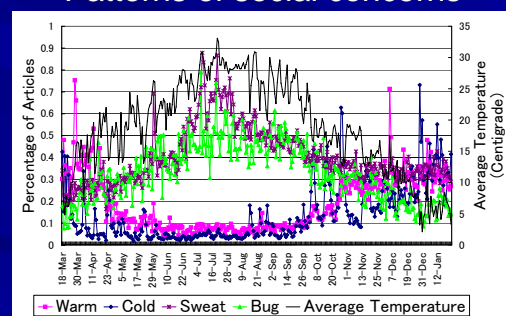
1. Patterns of social concerns,
2. Relations between concerns and temperature, and
3. Concerns of a person.

■ Future work

- Finding patterns and concerns automatically



Patterns of social concerns



Relation between temperature and concerns