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**The future of surveys**

**CENTER OF GRAVITY**

BY RONY V. DIAZ



*The most repeated complaint against surveys, especially by political candidates whose scores were less than their expectation, is the size of the sample.*

**CENTER OF GRAVITY  
BY RONY V. DIAZ**

The most repeated complaint against surveys, especially by political candidates whose scores were less than their expectation, is the size of the sample.

"How can 1,200 respondents," they ask, "reflect the preference of 35 million voters?"

Short of giving them a crash course in statistical methods and game theory, they will - in all probability - refuse to give up their bias.

In a sense they might be right. However carefully a survey might have been designed, it's still a blunt instrument. It could make predictions on the basis of statistical regularities but it cannot make distinctions between respondents nor give an indication on how and why they made a particular decision.

Social scientists have tried over the years to refine their ways of collecting their data and interpreting them. Their latest attempts were put on display at a conference on complex systems at Oxford University on September 25 to 29, 2006. A report on it appeared in the November 10, 2006, issue of Science.

Instead of an interview, the method that is proposed is to "track people's electronic footprints." This is now possible because of the ubiquity of mobile phones, digital records, faster computers and an array of mathematical models that allow a researcher to analyze data for individuals in an entire society. Questions that could not be asked in the traditional way can now be addressed.

One of the presentations was by a team of scientists from Helsinki University and Oxford University that used data from actual telephone calls made by 7 million people over an 18-month period.

This data set captured "the digital signatures of human interactions, such as communication, travel, voting and shopping."

To protect privacy, names and addresses were replaced by codes. The data set, for example, that Oxford sociologist, Peter Hedström, used comprised 3 million people above the age of 16 who lived in Stockholm from 1990 to 2003. Hedström's data set covered everything from absenteeism from work, wrangling on divorce, gripes regarding taxes, complaints about school grades, and even criminal intentions.

From such an information lode, the connection between individual behavior and social phenomena could be empirically deduced and analyzed.

Another researcher, Jukka Pekka-Onnela, is studying the "architecture of social webs" particularly how information flows through society. His data set of 7 million people represents 20 percent of the population of a European country where 90 percent have a cell phone.

The Onnela data set contained no personal information; relationships were weighed using the number and duration of phone conversations. Because the calls were between users of mobile phones, most business calls were excluded; business calls in this country were generally made on landlines. The result, Onnela said, "is a good representation of the entire society."

One of the most important experiments in this project is to discover the "rules" that underlie collective behavior. It uses recent work on the mathematics of networks, complex systems, and chaos.

Do such networks survive "stress"? Felix Reed-Tsochas, an Oxford theoretical physicist, working with Brian Uzzi, a sociologist at Northwestern University in Evanston, Illinois, studied the garment industry in New York City that in recent years had shrunk because of relocation of factories to Asia. The network held together and continued to function although there was no overall planner nor control. But when Reed-Tsochas and Uzzi modeled the same contraction based

**EYES SEE**



*Temperance and the British soldiers*  
By MIRIAM CORONEL FERRER

Halalan 2007



- Pangulong Arroyo good mood sa paggaling ng asawa
- Kulelat na rating ni John O. ipinaliwanag
- Dalawang Pilipina laban sa Ms Universe



- Malinis na halalan pinagdududahan pa rin
- 3 Senate bets nagpatalbagan sa education platform
- FG buhay pa taliwas sa kumalat na 'text'



**OPINION**

Curing a virus

By ANA MARIE PAMINTUAN



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on what's known about network dynamics, the garment industry collapsed. The preliminary conclusion is that social networks become fragile when they lose their economic purpose.

Other areas of research, using basically the same methodology and tools, were on the flow of money, suicide and the operations of terrorist groups.

The computer models for terrorism are particularly revealing. The social network on which it is based is simple - gregariousness. "All you need is to have people forming cohesive groups that share information, technology and supplies," according to Sean Gourley, a physicist working with social scientists at the Conflict Analysis Resource Center in Bogotá, Colombia. But when they plotted the distribution of terrorist events over time, another distinctive signature emerged. Terrorist networks do not operate in the same way.

These examples show that research into individual behavior and social phenomena is going to be tied in the near future to the use of new tools and new data sets derived from digital and other records.

From these, more refined descriptions and predictions could be made - with far-reaching implications for the whole society.

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#### OTHER STORIES

##### Feeling worse off

Rather than question the accuracy of survey results, the administration can view such sentiments as a challenge to do more.

[The Philippine Star Editorial \(4/13/2007 2:10:31 AM\)](#)

##### Temperance and the British soldiers

If those arrested were American marines, would the US have acted with the same calm?

[MIRIAM CORONEL FERRER/abs-cbnNEWS.com \(4/13/2007 2:09:50 AM\)](#)

##### Curing a virus

An administration with credibility, which delivers good government, need not ever worry about losing military support. It's not going to happen.

[ANA MARIE PAMINTUAN/The Philippine Star \(4/13/2007 2:08:35 AM\)](#)

##### Breastfeeding cause rests on court battle

In a land where one of every four toddlers is undernourished, it is the most potent potion against diarrhea, pneumonia and infections. Still, many parents, including 25 percent from the poorest classes, are enticed into infant formulas.

[JARIUS BONDOC/The Philippine Star \(4/13/2007 2:07:40 AM\)](#)

##### The last hurrah

If punitive actions are inutile in the fight against corruption, adopting some preventive measures may be the better way to stop it. Many preventive steps are available but not all of them are immediately doable.

[JOSE C. SISON/The Philippine Star \(4/13/2007 2:06:28 AM\)](#)

##### Police bodyguards

The National Police Commission will reportedly conduct headcounts to make sure members of the Philippine National Police are not serving as bodyguards of candidates in the May elections. The Napolcom move is good news – if it can be enforced.

[The Philippine Star Editorial \(4/12/2007 2:00:03 AM\)](#)

##### Overwhelmed by people's support

Trillanes said considering the restrictions that his candidacy is being subjected to, foremost of which is no media access, he is touched by the tremendous support he is getting. "I'm inspired to live up to their expectations," he said.

[ELLEN TORDESILLAS/abs-cbnNEWS.com \(4/12/2007 1:57:48 AM\)](#)

##### GSIS pensioners gripe about eCard use

FEW ATMs: Our mention of the Government Service Insurance System now paying its pensioners via Automated Teller Machines instead of by checks mailed to them elicited enough retort that could keep the GSIS sleepless in the next six months plugging the holes in its system.

[FEDERICO D. PASCUAL JR./The Philippine Star \(4/12/2007 1:56:47 AM\)](#)

##### Chairman Ben Abalos is on the hot seat again

Ben Abalos shouldn't wait for the Supreme Court to settle the Party-List issue. It serves him better to settle it himself.

[WILLIAM M. ESOSO/The Philippine Star \(4/12/2007 1:55:48 AM\)](#)

##### The Fall of Bataan

Last Monday we celebrated the Fall of Bataan. What is important about any celebration is how it is celebrated.

[ALEJANDRO R. ROCES/The Philippine Star \(4/12/2007 1:54:52 AM\)](#)

**Inconclusive**

The result of examinations of questioned handwriting even with the benefit of the aid of experts and scientific instruments is, at best, inconclusive. Other factors must be taken into consideration.

JOSE C. SISON/The Philippine Star (4/12/2007 1:53:48 AM)

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