

# Statistics in the Headlines

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World Statistics Day  
October 20, 2010

NATIONAL BESTSELLER

# STRUCK BY LIGHTNING

THE CURIOUS  
WORLD OF  
PROBABILITIES

JEFFREY S. ROSENTHAL

"Like *Freakonomics*,  
*Struck by Lightning* attacks  
conventional wisdom."  
OTTAWA CITIZEN



**P.S.**  
INSIGHTS,  
INTERVIEWS  
& MORE...

# Lotteries, Lotteries, Lotteries ...

Lotto fever hits hard with ticket sales soaring

BY CARMEN CHAI, CANWEST NEWS SERVICE JUNE 24,  
2010 COMMENTS (15)

STORY

PHOTOS ( 1 )



On the day of the largest lottery prize amount in Canada's history, potential multimillionaires lined up to buy their shot at a \$50-million jackpot from Lotto Max.

## MORE ON THIS STORY

- Lotto Max 'voluntary' on the spot Canadian mathematical
- Lotto fever burns on \$50M jackpot goes unclaimed again

STORY  
TOOLS

## Everyone Loves Lotteries . . .

Lottery action hits fever pitch

\$50-million jackpot still up for grabs

**CANWEST NEWS SERVICE** JUNE 20, 2010

Canadians dreaming of a \$50-million payday will wait at least another week.

Thirty Canadians became millionaires overnight Friday, but no one had the winning ticket to the whopping Lotto Max jackpot.

It was the third week in a row that the lottery's maximum \$50-million prize went unclaimed, meaning the lottery corporation will have its top jackpot up for grabs again for next Friday.

# “jackpot fever”

## Lotto 6/49 jackpot fever strikes

Article

 **Comments (12)**

Published On Sat Feb 21 2009

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**Thandiwe Vela**

Staff reporter

There's a buzz in the air as the 9 p.m. deadline looms to get a ticket for tonight's colossal Lotto 6/49 jackpot worth a whopping \$48 million.

It's the second-largest prize in Canadian lottery history. Lack of winners in the past four draws, including Wednesday's \$39 million, boosted the prize upwards.

Throngs of customers are making sure they get their tickets today, as vendors brace for the rush that leads up to the numbers being drawn.

# So What Do Statisticians Say?

## Advice for lottery winners: Chill out

*The Toronto Star, Ellen Roseman*

What are your odds of winning the lottery?

Unimaginably small, says University of Toronto statistics professor Jeffrey Rosenthal.

You have one chance in 14 million to score big playing Lotto 6/49. (That's where you have to match all six numbers chosen from 1 to 49.)

"To put it in context, you are over 1,000 times more likely to die in a car crash within the year."

# “Scary, scary . . . will never stop”

## Lotto 6-49 jackpot could go higher than \$41-million

Article

Published On Fri Mar 19 2010

Email | Print |

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The Canadian Press

University of Toronto statistics professor Jeffrey Rosenthal gives people a jolt of reality when he puts that probability into perspective.

"If you see an adult woman chosen at random, the chance that she will give birth in the next minute and a half is about the same as the chance you'll win the jackpot," he said.

### Ads by Google Will You Win the Lottery?

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It would be four times more likely for a person chosen at random to become prime minister than for a ticket holder to win the big prize, adds Rosenthal, the author of "Struck by Lightning: The Curious World of Probabilities."

Rosenthal confesses he has never bought a commercial lottery ticket, but jokes that he doesn't want to discourage people from buying more since they bring in revenue for the government \_ revenue that pays his salary.

"Scary, scary," laughed Tracy Williams, a secretary for Blake, Cassels and Graydon law firm, when she heard Rosenthal's probabilities.

Williams and her husband have been playing lotteries for 25 years, and said he will never let her stop.

## What About Crime?



The image shows a screenshot of a news website. At the top, there is a banner with the text "CP 24" in large white letters on the left and "TORONTO'S BREAKING NEWS" in white and black letters on the right, set against a red and orange background. Below the banner is a navigation menu with the following items: "Home", "News", "Weather", "Traffic", and "Sports". Underneath the menu, the date and time "Tue Dec. 30 2003 10:38:28 AM" are displayed. The main headline is "Toronto worried by rash of gang-style shootings" in red text. Below the headline, the author is listed as "CTV.ca News Staff". The beginning of the article text is visible: "A spree of shootings in recent days in Toronto has kept police reeling and residents wondering when the killings will stop."

CP 24 TORONTO'S BREAKING NEWS

Home | News | Weather | Traffic | Sports

Tue Dec. 30 2003 10:38:28 AM

**Toronto worried by rash of gang-style shootings**

*CTV.ca News Staff*

A spree of shootings in recent days in Toronto has kept police reeling and residents wondering when the killings will stop.



# Be Very Afraid!

## Shootings & Gun Violence Have Risen Dramatically This Fall

2006/10/13 | CityNews.ca Staff

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# “wave of gun violence”

## Toronto police address rash of gun attacks



Font-size:    Share  Print

CTV.ca News Staff

Date: Mon. Feb. 14 2005 11:30 PM ET

Toronto's police chief is pushing for tougher sentences for criminals who use firearms after a wave of gun violence swept through the city over the weekend.

Since Friday, there have been a total of five shootings across Toronto that left two people dead and at least seven injured.

## “Summer of the Gun”



### One killer in Toronto's 'summer of the gun' sentenced

A young man who shot and killed a 21-year-old immigrant from El Salvador in a Toronto park in a dispute that began over a cigarette, was sentenced to life in prison Friday with no chance of parole for at least 15 years.

JUNE 29, 2007

A young man who shot and killed a 21-year-old immigrant from El Salvador in a Toronto park in a dispute that began over a cigarette, was sentenced to life in prison Friday with no chance of parole for at least 15 years.

Troy Palmer, 20, showed no emotion as he was sentenced by Superior Court Justice Tamarin Dunnet for shooting Rommel Molina to death in one of the most notorious incidents during Toronto's so-called "summer of the gun" in 2005.

# “Summer of the Gun”, Again

## Experts warn of another 'Summer of the Gun'



Font-size:    Share  Print

CTV.ca News Staff

Date: Sat. Jun. 3 2006 11:51 PM ET

Gun violence is on the rise in Canada's major cities, and police are bracing themselves for another season of escalating casualties.

# “Summer of the Gun”, Yet Again

News » Local

## T.O. Feared Heading For New 'Summer Of The Gun'





2008/07/28 | CityNews.ca Staff

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It's a term you've heard a lot in the GTA since the murder of 15-year-old Jane Creba on Boxing Day 2005 - the Year Of The Gun.

Police in the city are fearful we may be heading through another season of heated firearm violence, after seven murders in the last two weeks - and several instances of gunplay that have left others wounded in Toronto.

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### Story Tools

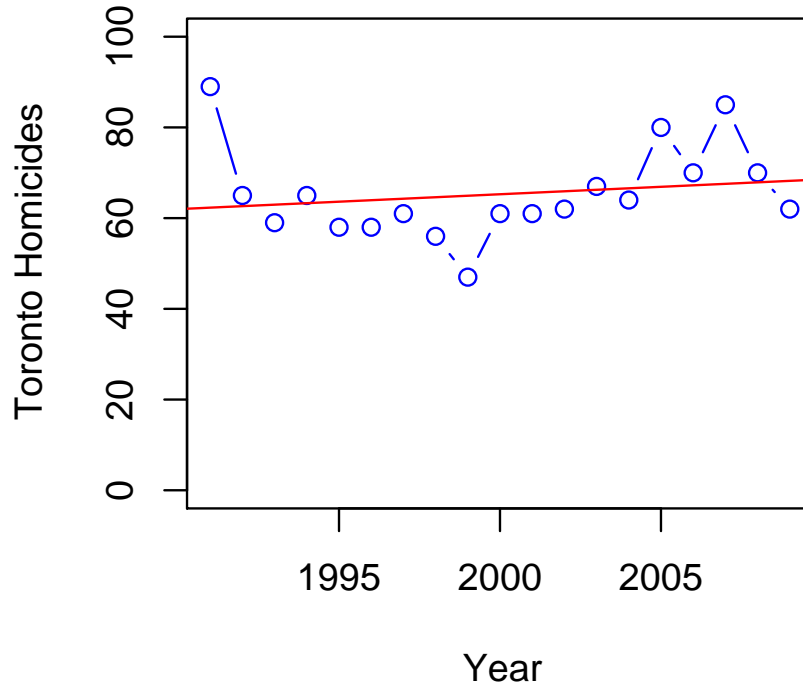
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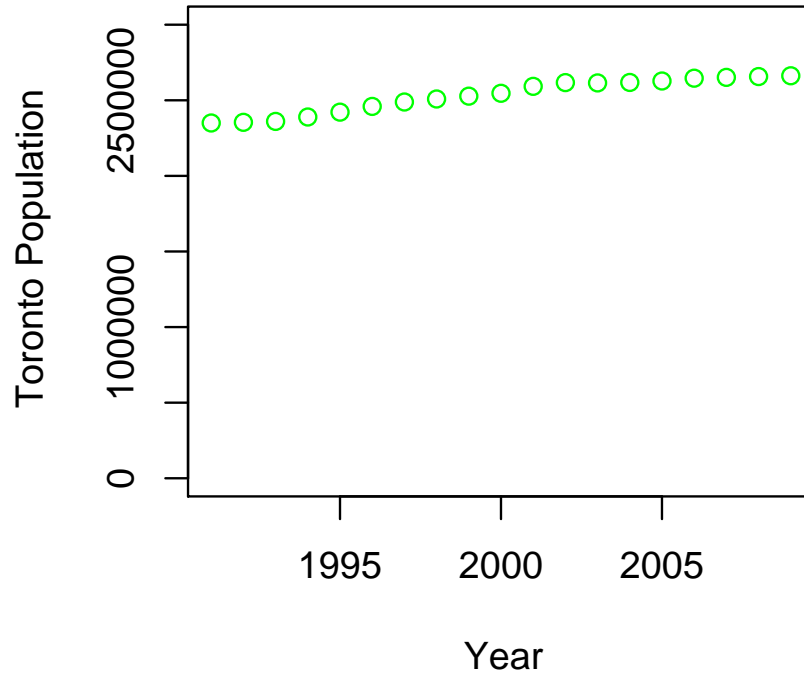
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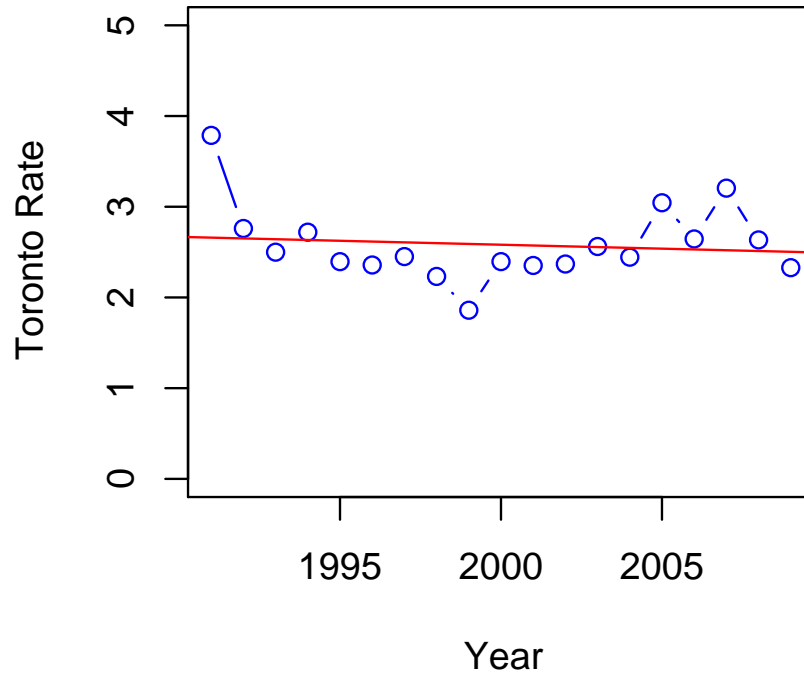
# But Is It Really So?



# But the Population Increased Too ...



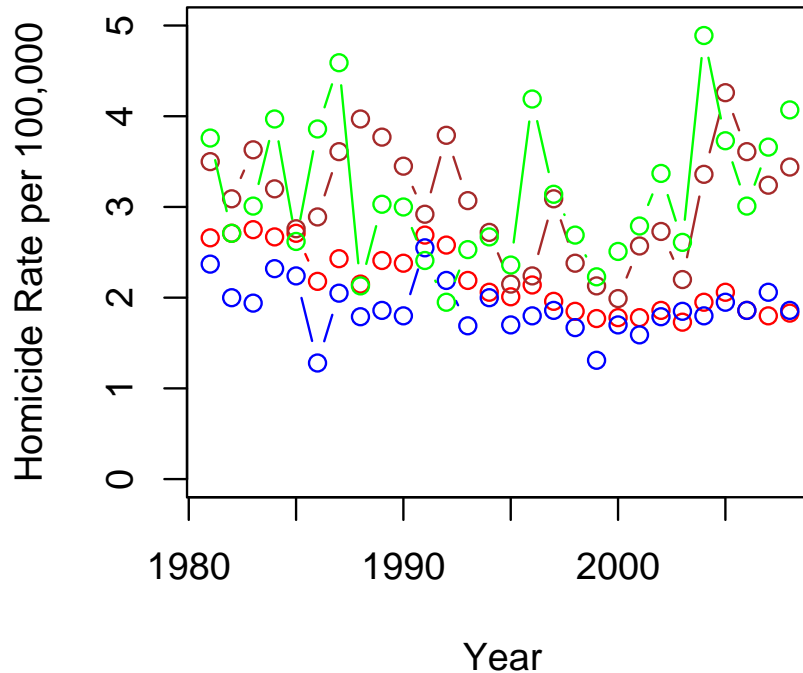
# Homicide Rate per 100,000



And how does Toronto compare to other cities?



# Rates: Winnipeg, Edmonton, Canada, Toronto



[2005: New York 6.6, Buffalo 19.8, Detroit 39.5, ...]

[Transportation fatality rate (Canada): 9.50]

# The Truth is Out There ...

## Canada's crime rate falls

By KATHLEEN HARRIS, PARLIAMENTARY BUREAU

Last Updated: July 20, 2010 9:48am

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Size **A A A** | Report Typo

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OTTAWA — Canada's crime rate is falling, fuelled by a dwindling number of auto thefts, break-ins and mischief offences and fewer violent crimes.

A Statistics Canada study released Tuesday shows the rate and severity of police-reported crime fell by about about 3% in 2009 — to a total of 2.2 million crimes. That's about 17% lower than a decade ago.

Police-reported violent crime in Canada is also on the wane, though at a slower pace of decline than overall crime.

# ... As the Statisticians Know

## You're safer than you think: Statistics expert

Article **Photos (4)**

Published On Sat Jan 19 2008

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**Paola Loriggio**  
Staff Reporter

As long as there have been cities, there has been fear. Fear of violence, fear of death, fear of anonymous, big city crime.

High-profile cases of random crime — like the recent shootings of John O'Keefe and Hou Chang Mao, both innocent bystanders killed within a week — feed the public's anxieties.

But is that fear justified? Random crime isn't going away, but neither is it increasing. Does a spate of random killings put us in greater danger than before? The *Star* asked an expert statistician to assess the risk.

University of Toronto professor Jeffrey S. Rosenthal is the author of *Struck*



Police cordon Gerrard St. E. near Broadview Ave. as part of the investigation into a fatal shooting Thursday. A statistics expert says the odds are better of dying in a car accident, than being killed by random crime.

HENRY STANCU/TORONTO STAR FILE  
PHOTO

# And Yet the Argument Continues ...

## Stockwell Day cites 'alarming' rise in unreported crime to justify new prisons

CAMPBELL CLARK

Ottawa— From Wednesday's Globe and Mail

Published Tuesday, Aug. 03, 2010 9:23PM EDT

Last updated Wednesday, Aug. 04, 2010 12:28PM EDT



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Although the official crime rate is going down, a senior Harper government minister says there is reason to disbelieve the statistics and spend billions of dollars on new prisons: an “alarming” increase in unreported crime.

Stockwell Day's argument is based on a Statistics Canada survey, conducted like a large poll, which showed a slight rise in unreported crimes – though the increase was in property crimes and petty theft, not violent crimes. And the survey was conducted in 2004 – an ironic

## ... Though Not All Are Fooled

GLOBE EDITORIAL

### Sound the alarm on Stockwell Day's statistics

From Thursday's Globe and Mail

Published Wednesday, Aug. 04, 2010 6:30PM EDT

Last updated Thursday, Aug. 05, 2010 1:11PM EDT



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The only alarming thing about a six-year-old rise in unreported crime is that the government of Canada is leaning on it to justify a \$5.1-billion a year expansion of the prison system.

# Statistics Under Attack

TALKING POINTS

Tories blast back in tit-for-tat  
feud,  
labelling Liberals 'soft on crime'

JANE TABER

Globe and Mail Update

Posted on Wednesday, August 4, 2010 5:50PM EDT

The political war over crime statistics continues with the Conservatives mounting an email attack on what they're calling Michael Ignatieff's "soft on crime policies," accusing the Liberals of using statistics to "ignore Canadians' concerns about crime."

"Michael Ignatieff spokesman Mark Holland continues to peddle the Liberals' soft on crime policies," the party memo says. "He suggests statistics show crime is going down, and that our government's commitment to crack down on crime is too costly."

# I Know How They Feel

BOOK REVIEWS

## Random acts

BY JOSEPH WILSON

Poor Jorge Marquez.  
The Cuban farmer has the dubious distinction of having being struck by lightning five times.

Even though being struck by lightning just once is exceedingly rare, the record for such events would in fact most likely be set by someone who works outdoors on an island in the Caribbean.

**STRUCK BY LIGHTNING**  
THE CURIOUS WORLD OF PROBABILITY'S  
JEFFREY S. ROSENTHAL



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Because he's based at the University of Toronto, many of Rosenthal's examples are local. He points out fallacies in the oft-heard cry from the media that our crime rate is skyrocketing by calmly looking at the numbers. But this is where he falters, because quantitative analysis can come across as cold. Knowing that several shootings occurring on a single weekend aren't cause for alarm but a mere example of Poisson clustering hardly consoles the families of the victims.

# Pedestrian Deaths (Jan. 2010)

## Pedestrian deaths on rise

Last Updated: January 27, 2010 8:02pm

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Driving traffic safety home:

**Seven**

The number of pedestrians who have died on Toronto streets so far this year; five women, two men, aged 31 to 80.

**Two**

The number of pedestrian fatalities at this time last year.



# Pedestrian Deaths (Jan. 2010)

## **Toronto area pedestrian deaths up to 14 this month**

Last Updated: Monday, January 25, 2010 | 9:32 PM ET

Comments  174 Recommend  80

CBC News

A woman was struck and killed by a sport utility vehicle Monday as she crossed an intersection in Toronto's west end while a man who was injured after being hit by a streetcar this weekend has also died.

The woman, 38, was hit by a Dodge Durango at the intersection of Davenport Road and Symington Avenue at around 6:30 p.m., Toronto police told CBC News.

# Worry and Fear

**A week of pedestrian death: any explanation?**

BY DYLAN REID // 32 COMMENTS



# Searching for the Cause

## Why so many pedestrian deaths?

Article

Comments (122)

Published On Thu Jan 21 2010

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Denise Balkissoon

19

San Grewal



A woman, 76, was hit and killed by a vehicle on Rutherford Rd. Jan. 19, 2010.

CARLOS OSORIO/TORONTO STAR

# Interesting Theories ...

## **Car-friendly suburban streets can be deadly for pedestrians**

**Wide lanes and sweeping curves encourage speed and make people out walk more vulnerable**

Article

Published On Wed Jan 20 2010



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Report

### **Dylan Reid**

Sometimes, it seems like pedestrian issues only get attention after a tragedy.

In the span of just eight days, nine people on foot have been killed in traffic accidents in the GTA.



## ... And More Theories ...

### CTV TORONTO

**Can pedestrian deaths be blamed on warm weather?**

[View larger image](#)



**Image from the CTV News helicopter over the Dufferin Street, just south of Eglinton Avenue, Wednesday, Jan. 20, 2010.**



## The Politicians Get Involved

### **Toronto council to debate pedestrian safety**

Last Updated: Tuesday, January 26, 2010 | 10:14 PM ET

Comments  118 Recommend  28

CBC News



After eight pedestrian deaths in two weeks Toronto city council is set to take up the issue.

Council will spend much of Wednesday debating what it can do to make Toronto streets safer.

## What did the Numbers Say?

- \* Toronto pedestrian deaths in January 2010: 7
- \* The ten-year monthly average: 2.66.
- \* Compute probabilities with the Poisson distribution:

$$\text{Prob}(7 \text{ or more}) = \sum_{j=7}^{\infty} e^{-2.66} (2.66)^j / j! = 0.0192$$

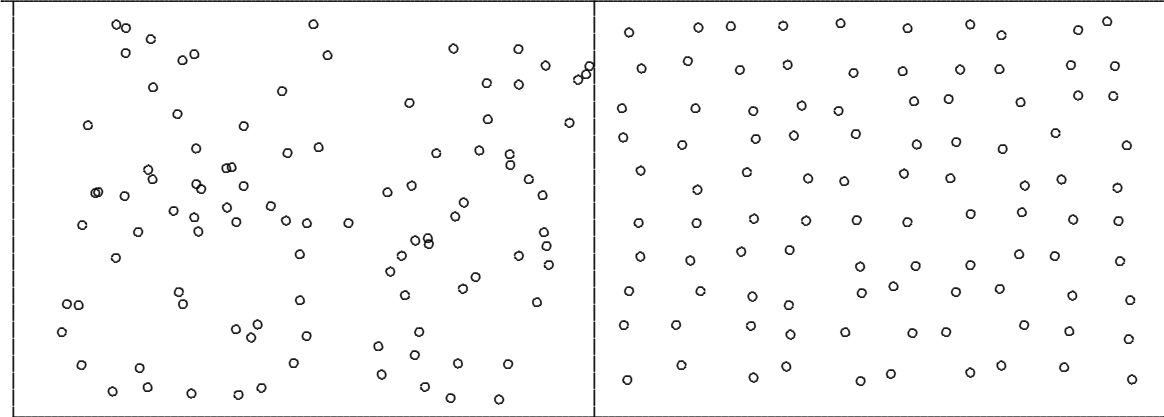
- \* So, 7 or more pedestrian deaths would occur in 1.9% of all months by pure chance alone.

That is, about once every 4.4 years.

Not so out of the ordinary.

# “Poisson Clumping”

Which Dots are Truly Random - the Left or the Right?





# Metro News, Front Page

Not so rare for rarities to occur in waves: Professor

**TORSTAR NEWS SERVICE**

**Published:** January 29, 2010 5:23 a.m.

**Last modified:** January 29, 2010 12:40 a.m.

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Scary numbers have dominated Toronto headlines this month: Seven dead in seven days.

Fourteen pedestrians killed across the GTA. The deadliest January for city pedestrians in a decade.

No wonder people are walking scared.

**31.9**

► Seven isn't that big a number when looked at through a statistician's lens. Jeffrey Rosenthal calculates that between 2000 and 2009, Toronto witnessed an average of 31.9 pedestrian deaths per year and 2.7 deaths per month. Using Poisson distribution, this means there is about a 1.9 per cent chance of there being seven or more pedestrian deaths in a single month.

# “Maybe There *Is* No Meaning”

## Numbers don't always tell the whole story

Article

Published On Sat Jan 30 2010

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**Jennifer Yang**

Staff Reporter

Scary numbers have dominated Toronto headlines this month: Seven dead in seven days. Fourteen pedestrians killed across the GTA. The deadliest January for city pedestrians in a decade.

There is a tendency to grip these disturbing numbers and wring them for meaning: **Why** such a spate of senseless tragedy in such a short time? **What's** causing the spike? Is January the deadliest month for crossing the road?

But for statisticians, maybe there *is* no meaning behind the numbers, just probability.

"Chances of a big clump are more than you would think," said Jeffrey Rosenthal, a professor of statistics at the University of Toronto. "Yes, (the numbers) are rare and January was certainly much worse than usual, but it wasn't something that is completely unexpected."

# Just a “statistical hiccup”, right?

## January pedestrian deaths a statistical hiccup: mathematicians

Posted: January 27, 2010, 7:03 PM by Ron Nurwisah  
[Traffic](#), [pedestrians](#)

**By Joseph Brean, National Post**

On the face of it, the horses of the 19th century Prussian army have little to do with pedestrian safety in modern Toronto.

But ever since the French mathematician Siméon-Denis Poisson studied the frequency with which they kicked Prussian soldiers to death, they have been an iconic reminder to mathematicians that random events always occur in bunches, known as Poisson Bursts.

Toronto pedestrian deaths, Feb 1 – Mar 15, 2010:

TWO.

## Lottery “Insider” Wins

Bob Edmonds: defrauded out of \$250,000, in 2001.



CBC’s “The Fifth Estate”: other similar cases?

## What did the Numbers Say?

- \* Ontario lottery wins, \$50,000+, 1999–2006: 5,713
- \* Number recorded as claimed by lottery insiders: 214. (True figure might be higher.) Too many??
- \* Total number of retailers at any given time: 36,050? “50,000 to 60,000”? 101,000? 140,000?
- \* Factor by which lottery retailers outspend the adult population on lottery tickets: 1.5? 1.52? 1.9?
- \* It follows that the expected number of retailer wins is 35, or 57, or 96, or ... In any case, 200 or more wins is extremely unlikely.
- \* Another minor media interview, right?

welcoming country. A16

■ Editorial. A26

See IRAQ on page A16

# 214 lottery 'insiders' won big bucks

## Odds of Ontario results astronomical, investigation by CBC program reports

BY SHANNON KARI

More than two-hundred lottery "insiders" have won prizes of \$50,000 or more in Ontario since 1999, and more than two-thirds of these wins may have involved the deception of a customer who bought the ticket.

The allegation is made by the

CBC program *the fifth estate*, after an investigation into the number of "insider wins" in the province in the past seven years.

A statistical analysis of the number of insider wins concluded that fewer than 60 insiders, such as ticket retailers or clerks, should have won major prizes during the period

that was investigated.

The odds that the 214 insiders who claimed major prizes — \$50,000 or more — since 1999 won as a result of pure luck, is one in a trillion, trillion, trillion, trillion, said University of Toronto professor Jeffrey Rosenthal, who conducted the analysis.

The program airing tonight suggests this may be a problem across Canada and the United States.

See LOTTERY on page A10

# Those big winnings may have been yours

How is it that the people who sell lottery tickets do better than those who buy them?



Joe Warmington

Could it be you?  
Is it possible your winning lotto numbers came up and you don't even know it? Is someone else enjoying your cash?

"It is possible more than 100 people since 1999 have won a major jackpot and don't even realize it," said Dr. Jeffrey Rosenthal, of the University of Toronto.

You do the math. That's a





# Province to probe the windfalls of lottery retailers

## Opposition wants outside investigator Statisticians lay bets there was fraud

ROB FERGUSON  
AND CURTIS RUSH  
STAFF REPORTERS

Queen's Park has ordered a probe of the Ontario Lottery and Gaming Corporation's security measures in the wake of allegations that an astonishing number of inside retailers have won prizes of \$50,000 or more since 1999.

"If there is anything we can do to strengthen that we certainly will act," David Caplan, the minister responsible for the corporation, said yesterday.

Caplan said he has ordered

frey Rosenthal's statistical analysis carried out for the fifth estate.

Rosenthal's numbers suggest that the real odds of 214 insiders claiming major prizes in those years are one in a trillion, trillion, trillion — that's a 1 followed by 48 zeroes.

In its Tuesday night report, CBC claimed that two-thirds of

wins by so-called insiders may have involved deception by unscrupulous vendors who stole customers' winning tickets.

Rosenthal, a statistician with the University of Toronto, claims the chances of so many vendors winning by chance are so small that "almost anything you can think of is more likely."

The odds that you'll be hit by lightning in the next year are one in 5 million; that you'll be killed in your next vehicle trip one in 7 million, according to

Rosenthal, author of *Struck by Lightning: The Curious World of Probability*.

Roncon says the lottery calculations are off.

"We don't know if they've used the correct retailer base," she said, adding that there are more than 140,000 people in the province that sell its products. "In the sit-down interview I did with them (CBC), they presented a very simplistic mathematical equation. It speaks to the fact they don't understand the com-

plexities of our business."

Statistical experts the *Toronto Star* contacted supported Rosenthal's findings.

Fred Hoppe, professor of mathematics and statistics at McMaster University, calculated that no more than about 20 retailers should have won major prizes, depending on assumptions made about how many retailers play the lottery.

Peter Bell, professor of management science and information systems at the University of

Western Ontario, said in an e-mail that "it is there is zero the

Roncon said ing some fraud room for fraud in any business world. But by think retailers ple."

The OPP has charges involv since 2001, one other in Coboc

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## Another lottery gamble

Imagine that you are trusting enough to give your provincial lottery ticket to a store clerk to learn whether you have won. Imagine that, against astronomical odds, the ticket is worth a lot. The vast majority of retailers and clerks will tell you the truth. But, on the evidence of an episode of CBC's *the fifth estate* scheduled to air last night, a number will lie. They will say you won only a tiny prize and will collect the major one themselves. Yes, there are all sorts of mechanisms to prevent that from happening, including self-serve ticket checkers and machines that play different tunes depending on how much money a ticket has won, but it happens.

One case in Ontario has become public, though the Ontario Lottery and Gaming Corporation (OLGC) has worked hard to keep some details secret. Bob Edmonds, now 82, bought a ticket in 2001 worth \$250,000, but a variety-store owner told him he had won only a free ticket. Mr. Edmonds grew suspicious when he later read that the store owner had "won" the big prize. An OLGC investigator had concerns as well, but the corporation paid the retailer the money. It was only when Mr. Edmonds went to the police, and the police began investigating, that an e-mail was sent within the OLGC suggesting that Mr. Edmonds' claim was legitimate.

Even then, nothing happened. The OLGC fought Mr. Edmonds until 2005, settling with him just as a civil lawsuit about

tion incurred \$425,000 in legal costs, far exceeding the amount Mr. Edmonds should have won in 2001. And it required that the settlement be covered by a confidentiality clause — a demand that Mr. Edmonds's lawyer plans to contest in court next Monday, on the excellent grounds that an agency of government should not keep such secrets from the public.

The OLGC says the Edmonds case was "isolated" and insists it keeps a tight rein on those who sell its tickets (lottery mechanisms vary across Canada). The math would suggest otherwise. Initially, using an OLGC figure of 60,000 retailers and clerks in Ontario, *the fifth estate* asked Jeffrey Rosenthal, author of *Struck by Lightning: The Curious World of Probabilities*, what the odds were of those clerks winning nearly 200 times in the past seven years with an average prize of \$500,000. Dr. Rosenthal's answer: "one chance in a trillion, trillion, trillion, trillion." According to the CBC, the OLGC last week said it really had closer to 140,000 retailers and clerks; even at that, Dr. Rosenthal said, the chance of so many winning so much was "extremely unlikely."

Mr. Edmonds's case would appear not so "isolated" after all. The Ontario government has ordered an internal review of its lottery system. For its part, the lottery corporation should remove the muzzle from Mr. Edmonds and let the public know the details of the settlement it reached. And

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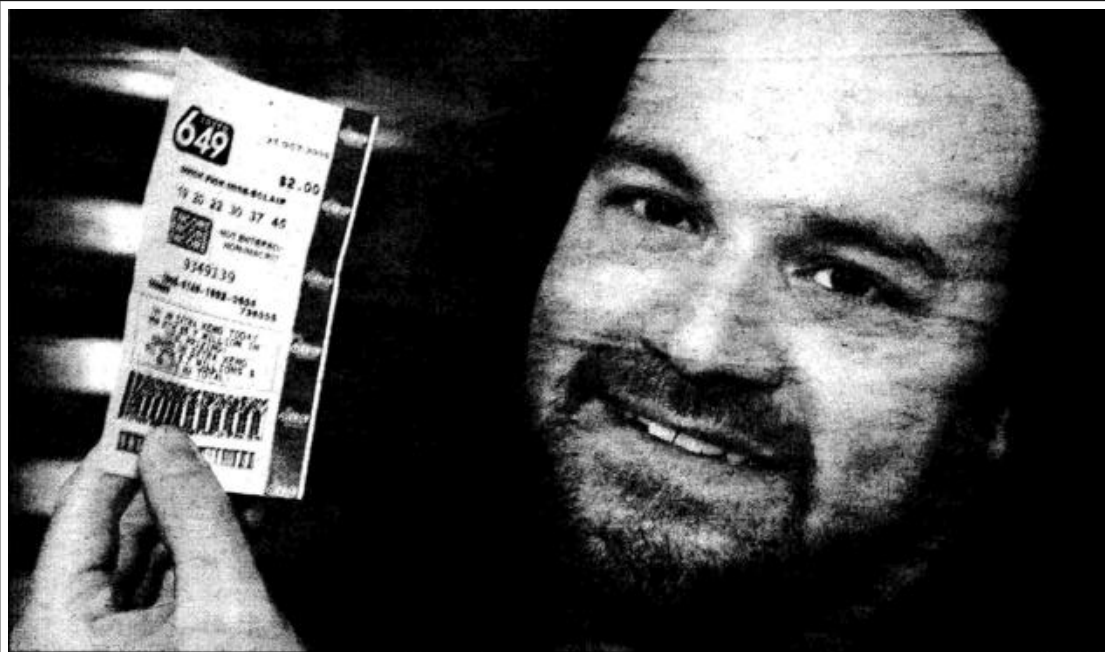
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## Toronto Sun – page 4



MARK O'NEILL

University of Toronto statistician Prof. Jeffrey Rosenthal holds up a 6/49 ticket. He says so many retailers have won prizes it raises suspicions.

# Storekeepers lucky?

Lottery officials dismiss statistician's claim that retailers' wins defy odds

# Customers Furious ... New Rules ...

## Ontario Lottery Introduces New Rules To Protect You From Fraud

2006/11/09 | CityNews.ca Staff

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The controversy started when a math professor compared the number of lottery kiosk clerks who've claimed big prizes with the chances of so many of those people actually winning that much money. When he calculated the odds in the multi-trillions, alarm bells went off.

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# Let the Statistical Battle Begin

## OLG RESPONDS



After repeated requests, Duncan Brown agreed to meet with the fifth estate's Gillian Findlay.

After repeated requests, CEO Duncan Brown agreed to sit down with Gillian Findlay and **the fifth estate** the evening before our Lottery Update was broadcast on November 22, 2006.

Here is more of the conversation between Gillian Findlay and Duncan Brown. (Runs 21:11)

OLG CEO: “What was missing from the Fifth Estate’s numbers was the frequency of play by the retailers.”

Not true!!

# The Ombudsman Steps In

## Ontario Ombudsman To Investigate Allegations Against Lottery And Gaming

2006/10/25 | CityNews.ca Staff

That's what a University of Toronto statistician suggests after studying the amount of lottery workers who've won major jackpots over the past seven years and that conclusion has led to some startling allegations against the integrity of the Ontario Lottery and Gaming Corporation.

A recent investigation found that 214 ticket-sellers out of about 140,000 retailers have won jackpots averaging \$500,000 since 1999, and number cruncher Dr. Jeffrey Rosenthal said the odds of "insiders" winning that much and that often seemed strange.

"We did an analysis of how many lottery store owners and employees are out there and how often we should expect them to win," the statistician explained.

"We figured that maybe at most, maybe 57 would be expected to win. Then you say, okay, maybe 60 or 65 might win just if they're a bit lucky.

"But the fact that about 200 of them won, that's just not going to happen and we ran the numbers and something like one chance in a trillion trillion trillion trillion that that many insiders would win just by pure luck alone."

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# The Ombudsman Reports ...

## **Lottery agency's close ties to retailers 'fatal flaw': report**

Last Updated: Monday, March 26, 2007 | 2:00 PM ET

**CBC News**

The organization that runs Ontario's lottery system is fixated on profits rather than customer service and needs an independent regulator, the province's ombudsman said Monday.

André Marin spoke at a Toronto news conference to announce the results of an investigation into the Ontario Lottery and Gaming Corp., which has also been ordered to turn over all relevant files to the Ontario Provincial Police so the force can determine whether to launch a criminal investigation.

"The OLG is fixated on profits rather than customer service. It's lost sight that it is supposed to be the guardian of public trust," Marin said.

The government-owned corporation is "too cozy" with its retailers and paid out \$100 million to "lottery insiders" from 1999 to 2006, he said.

# “\$100 million to lottery insiders”

## **Lottery agency's close ties to retailers 'fatal flaw': report**

Last Updated: Monday, March 26, 2007 | 2:00 PM ET

**CBC News**

The organization that runs Ontario's lottery system is fixated on profits rather than customer service and needs an independent regulator, the province's ombudsman said Monday.

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# “stealing because they can”

## **OLG Fiddled While Lottery Process Burned, Charges Ontario Ombudsman**

2007/03/26 | CityNews.ca Staff

"Dishonest".

"Unscrupulous retailers".

"Rude and inept".

"Hanky panky".

"Turning a blind eye".

"Retailers have been stealing for one good reason - because they can."

Those are just some of the phrases featured prominently in an Ontario ombudsman's scathing report about the flaws in the province's lottery system.

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# The Government Reacts ...

## Fired lotto chief `in shock'

Article

Published On Sat Mar 24 2007

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**Robert Benzie**

**Debra Black**

Staff Reporters

The head of Ontario's Lottery and Gaming Corporation has been fired – a casualty in an ever-growing controversy at the lottery corporation involving allegations of theft and fraud.

Duncan Brown was told of his dismissal earlier this week and was asked to keep it quiet until Ontario's Ombudsman releases his report on the problems within the lottery corporation.

# The Scandal Spreads Beyond Ontario

## **B.C. lottery boss terminated**

Last Updated: Friday, June 1, 2007 | 6:43 PM ET

**CBC News**

The president and CEO of the B.C. Lottery Corporation has been fired following a scathing report by the province's ombudsman that found ticket retailers were winning too often.

In a written statement, the lottery corporation's board said it was terminating Vic Poleschuk effective immediately.

[Similar investigations in Nova Scotia, Western Canada, California, Texas, ...]

## Call the Cops

# **Police open probe of fraudulent Ontario lottery wins**

Last Updated: Tuesday, March 27, 2007 | 10:17 AM ET

**CBC News**

Ontario Provincial Police have been called in to investigate tens of millions of dollars in suspicious lottery wins — prizes paid out to ticket retailers and lottery corporation insiders — following a damning report by the Ontario ombudsman Monday.

The minister responsible for the Ontario Lottery and Gaming Corporation, David Caplan, announced late Monday that he's ordered the corporation to hand over all relevant files on insider wins to the police.

# One Retailer Charged, \$5.7 Million Repaid

## Lottery winners finally paid as retailer charged

**KAREN HOWLETT AND KENYON WALLACE**

With a report from Dakshana Bascaramurty

Published Thursday, Dec. 20, 2007 12:00AM EST

Last updated Tuesday, Jun. 15, 2010 11:31AM EDT



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Four co-workers who faithfully played the same lottery numbers were finally presented with a cheque for \$5.7-million yesterday, three years after their golden ticket was purloined by an Ontario lottery retailer, police say.

## Another Retailer Charged . . .

### **OPP lay charges for theft of winning Lotto 6/49 ticket**

Oct 30, 2008 - 18:05 EST

---

BURLINGTON, ON, Oct. 30 /CNW/ - The Ontario Provincial Police (OPP), with the assistance of the Alcohol and Gaming Commission of Ontario (AGCO) has charged a man in relation to the theft of a Lotto 6/49 ticket. The incident was referred to the OPP by the Ontario Lottery and Gaming Corporation (OLG) in January, 2008. The investigation revealed that on November 28, 2004, the manager of a Burlington convenience store allegedly stole a Lotto 6/49 ticket with a winning prize of \$80,341.

## ... and \$80,000 Repaid

### Lotto winner paid four years later

Article

Comments (26)

Published On Wed Dec 17 2008 Email | Print | (26) |

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**Dale Anne Freed**

STAFF REPORTER

The Ontario Lottery and Gaming Corp., which was slammed in a 2007 Ontario ombudsman's report for not cracking down on retailers over lottery fraud, has paid out \$80,000 plus interest to a Burlington woman allegedly victimized by a lottery retailer.

Jamie Antinori, 49, bought her winning 6/49 ticket on Nov. 28, 2004, from a Burlington convenience store.

# Three More Retailers Charged ...

## **\$12.5M lottery prize theft leads to 3 arrests**

Last Updated: Wednesday, September 29, 2010 | 10:25 PM ET

Comments  462 Recommend  322

CBC News



The case of Kathleen Chung, who allegedly cashed the winning ticket at her brother's convenience store in Burlington in early 2004, was profiled by the CBC's Fifth Estate, triggering a report by the Ontario ombudsman. (CBC)

Three family members in the Toronto area have been charged in the theft of a \$12.5-million lottery prize, while police seek the rightful owner of the Lotto Super 7 ticket bought in 2003.

Two of the accused are a father and son who worked at a Burlington lottery outlet and were actively stealing tickets from customers, Ontario Provincial Police Commissioner Chris Lewis

# \$12.5M ... “seeking rightful winner”

## \$12.5M lottery ticket stolen; police seeking rightful winner

Article

Photos (5)

Published On Thu Sep 30 2010

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Curtis Rush and Jayme Poisson

51

Staff Reporters





## 12.5 Million Dollars, Anyone?

### **OLG team up with cops to find rightful owner of \$12.5-million ticket**

680News staff » *Sep 29, 2010 23:57:46 PM*

 29 Comment(s)

 21 Recommendation(s)

The Ontario Lottery and Gaming (OLG) Corporation has teamed up with police to track down the rightful owner of a winning lottery ticket worth \$12.5-million after a family allegedly stole the jackpot.

# Yes, Please!

## Flurry of calls for allegedly stolen jackpot

By **TAMARA CHERRY**, TORONTO SUN

Last Updated: September 30, 2010 6:43pm

Story

Comments

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A lotto hotline was inundated with calls Thursday from people who think they may have been cheated out of \$12.5 million.

By day's end, the Ontario Lottery and Gaming hotline that usually gets "four or five calls a day" had received "well over 130," OLG spokesman Tony Bitonti said.

Of those calls, more than 30 were forwarded to the OPP "for closer vetting," Bitonti said.

# Good Luck!

## OLG forwards hundreds of claims for allegedly stolen jackpot to police

Article

Published On Sun Oct 10 2010

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The Canadian Press

Hundreds of claimants of an allegedly stolen \$12.5-million jackpot are a step closer to getting their hands on the money.

The Ontario Lottery and Gaming Corporation says it has forwarded 341 files to police.

That means the claimants' answers to detailed questions about their lottery habits deserve further investigation.



One lucky gamer could be rewarded at least \$14.8 million if his/her claim turns out to be true.

JIM RANKIN/TORONTO STAR FILE PHOTO

# And It All Followed From Statistics

## Solving equations and solving crime

Toronto math prof proves his point when it comes to insiders winning lottery prizes

By **THANE BURNETT**, NATIONAL BUREAU

Last Updated: 21st February 2009, 2:36am

Story

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For a guy who's never bought a lottery ticket at a corner store, Jeff Rosenthal has sure hit it big.

And lottery corporations across Canada would likely wish he would just stop playing their numbers so well.

Since 2006, the Toronto math professor has been the brain behind uncovering a suspected massive theft of lottery winnings by sticky fingered store clerks.

Before his sleuthing into insider wins, Rosenthal already defied convention, or at least the image of a math professor who's married to a librarian.

# The Long-Form Census Controversy

## **Tories scrap mandatory long census**

**Move could affect amount of detailed information obtained**

Last Updated: Tuesday, June 29, 2010 | 8:22 PM ET

Comments  314 Recommend  137

By Karina Roman, **CBC News**



# “intrusion into their personal privacy”

## Tories scrap mandatory long-form census

JENNIFER DITCHBURN

Ottawa— The Canadian Press

Published Tuesday, Jun. 29, 2010 6:39PM EDT

Last updated Wednesday, Jun. 30, 2010 7:08AM EDT



The federal government is scrapping the mandatory long census form in favour of a voluntary survey – a move some critics blame on a Conservative campaign to slash analytical work done by Statistics Canada.

For the first time in 35 years, the census will not feature a detailed, long form that Canadians are obliged to send back to the government.

“Our feeling was that the change was to make a reasonable limit on what most Canadians felt was an intrusion into their personal privacy in terms of answering the longer form,” Erik Waddell, spokesman for Industry Minister Tony Clement, said Tuesday.

# Privacy Concerns?

Financial Post | News | Trading Desk | Energy | Mining | Financials |

Legal Post | Marketing | FP500 | Business Insider

## NEWS

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Privacy commissioner sees few complaints about census form



# To Save Money?

Brandon Sun - ONLINE EDITION

## Less information to cost more: expert

Manitoba statistician pans census change

By: Mia Rabson

13/07/2010 9:16 AM | [Comments: 9](#)



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OTTAWA -- Scrapping the mandatory long-form census in favour of a voluntary national household survey will cost more and produce unreliable results, Manitoba's chief statistician said Monday.



# Recommended by Statistics Canada?

## StatsCan recommended move to voluntary census, Tony Clement says

Article

Published On Fri Jul 16 2010

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**Bruce Campion-Smith**

Ottawa Bureau chief

19

OTTAWA—Industry Minister Tony Clement's claim that Statistics Canada supports Ottawa's plan to replace the long-form census with a voluntary survey doesn't hold water, Canada's former top statistician says.

Facing a barrage of criticism for his decision to axe the 61-question census form, Clement has begun telling reporters that the move was made with the consultation and support of StatsCan officials.

But Ivan Fellegi, who served as chief statistician of Canada for 23 years before retiring, says he can't believe that his former colleagues would have endorsed a government move that many other experts say will produce data that is suspect and unreliable.

## Or Not ...

### **StatsCan head quits over census dispute**

Last Updated: Wednesday, July 21, 2010 | 11:16 PM ET

Comments  917 Recommend  536  
CBC News

Munir Sheikh, the head of Statistics Canada, resigned Wednesday over the federal government's decision to scrap the mandatory long-form census.



Munir Sheikh, the head of Statistics Canada,

"I want to take this opportunity to comment on a technical statistical issue which has become the subject of media discussion. This relates to the question of whether a voluntary survey can become a substitute for a mandatory census," Sheikh said in a release.

"It cannot," he said. "Under the circumstances, I have tendered my resignation to the prime minister."

## “1,000 e-mails a day”

Tories agree to explain decision to scrap long-form census

**BY SHANNON PROUDFOOT, POSTMEDIA NEWS** JULY 18, 2010

STORY

PHOTOS ( 1 )



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As industry minister during the 2006 census, Bernier said he was inundated with privacy complaints over a five- to six-week period.

"I received an average of 1,000 e-mails a day during the census to my MP office complaining about all that, so I know that Canadians who were obliged to answer that long-form census — very intrusive in their personal lives — I know they were upset," he said.

## ... Or Not

Documents show '1,000 emails a day' remark grossly exaggerated: CBC

**POSTMEDIA NEWS** OCTOBER 4, 2010

Bernier — now a Conservative backbencher — told reporters in July he received “an average of 1,000 emails a day” to his MP office while his department was undertaking the Canada-wide survey.

But CBC said access-to-information documents show a high-ranking Statistics Canada employee had asked Industry Canada to provide any numbers to back up Bernier’s claim.

In an email response, an Industry employee wrote on July 18 that an “internal survey of correspondence did not show anything close to a thousand a day,” before adding in brackets that “we got a standard 25-30 (complaints) a year.”

## ... Or, Uh, Never Mind

### **Census change not about complaints: Bernier**

Last Updated: Tuesday, October 5, 2010 | 10:21 PM ET

Comments  652 Recommend  223

CBC News

Conservative MP Maxime Bernier, who raised eyebrows this summer by claiming he received 1,000 complaints a day over the mandatory long-form census in 2006, says the government's decision to make it voluntary is about "principle," not the number of complaints.

## “proof that I had been lying”

### **‘Once and for all’**

by Aaron Wherry on Thursday, October 7, 2010 5:25pm - 15 Comments

Maxime Bernier has released a statement intended to clear up any **census-related confusion**. It reads as follows.

*I would like once and for all to set things straight with regard to the many reports that have appeared recently in the media regarding my position on the census.*

*First of all, the CBC has obtained some internal correspondence through an access-to-information request saying that Industry Canada and Statistics Canada only received a few hundred emails of complaint related to the census in 2006. Some commentators have concluded that this was proof that I had been lying when I claimed to have received about a thousand a day for a couple of days.*

*But I had clearly indicated when I made this declaration back in July that these emails had been received at my MP office on the Hill and not at my minister's office. It was a discussion with my MP office staff that had led us to recall receiving these emails. Contrary to the correspondence received by the ministry, which is kept by civil servants, the email correspondence at my MP office has all been deleted.*



# “These questions continue to be essential”

Liberal MP Bryon Wilfert exposes Bernier’s support for long-form census

POSTED ON OCTOBER 7, 2010

Responding to recent statements made in the House of Commons by Minister of Industry Tony Clement and his predecessor, Maxime Bernier, the Honourable Bryon Wilfert has released **a letter that demonstrates Bernier’s previously adamant support for the long-form census.**

“I can assure you that all of the information collected by the census is needed,” Mr. Bernier’s August 21, 2006 letter to Mr. Wilfert stated.

“These questions continue to be essential for providing the information needed by governments, businesses, researchers and individual Canadians to shed light on issues of concern to all of us.”





# Imported from America?

THE  
**CAPITOLIST**

 FEED

## Ron Paul to Census Bureau: 'None of Your Business!'

6 months ago

A Text  



Email



PATRICIA  
MURPHY  
*Capitol Hill  
Bureau Chief*

Libertarian hero and small government crusader Rep. Ron Paul (R-Texas) has a message for the Census Bureau: "None of your business."

# The Opposition Opposes (of course)

Opposition vents spleen over Tory census bungling

GLORIA GALLOWAY

Posted on Thursday, July 22, 2010 11:29 AM EDT

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Federal statistical fo  
Canada's long-form c

The Liberals want to call Industry Minister Tony Clement before a Commons committee to find out what information he was supplied by Statistics Canada before the government decided to scrap the mandatory long-form census.

Ralph Goodale, the Opposition House Leader, told a news conference Thursday his party plans to “call Mr. Clement to the carpet and to invite other affected groups to speak out.”

# So Do Most Provinces ...

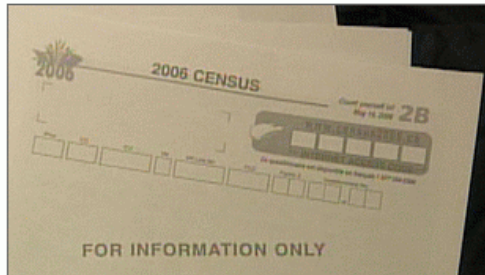
## **Ont., Que. urge return of long-form census**

**Clement says provinces singing 'same tune' from beginning**

Last Updated: Wednesday, September 29, 2010 | 1:37 PM ET

Comments  173 Recommend  55

The Canadian Press



The government eliminated the mandatory long questionnaire in late June, arguing it was intrusive and the threat of jail was overly coercive. (CBC)

Ontario and Quebec have launched a formal complaint against the federal government's decision to axe the mandatory long-form census, calling the move a "mistake" that will have serious consequences.

Cabinet ministers from both provinces have written to federal Industry Minister Tony Clement, requesting he reinstate the long-form census survey "as soon as possible."

## ... Even Nunavut

Nunavut joins chorus to keep the long-form census

**BY CHRIS WINDEYER, POSTMEDIA NEWS** JULY 24, 2010

Nunatsiaq News

IQALUIT, Nunavut - Nunavut's finance minister says Ottawa's decision to scrap the long-form census will hamper the territory's ability to craft policy and tackle social problems.




Keith Peterson said his government relies on information from the long-form census to shape policy on a range of issues from poverty and housing to health care and education.

### STORY TOOLS

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# “the gap in our knowledge”

## Information must be Canada’s bedrock

ROY ROMANOW

Special to Globe and Mail Update

Published Wednesday, Aug. 11, 2010 5:00AM EDT

Last updated Wednesday, Aug. 11, 2010 7:38AM EDT



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When the next census takes place in 2011, it will mark 345 years since **Jean Talon** personally surveyed the 3,215 colonists of New France. Since then, the story of Canada’s census has been much like that of Canadians themselves – a story of change, of new responses to evolving conditions and of transformation to meet the demands of new times.

# But Do Ordinary Canadians Care?

Canadians support long-form census

**NORMAN SPECTOR**

Posted on Saturday, July 24, 2010 9:54AM EDT



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A

That's the conclusion of an **Angus Reid poll** conducted between July 22-23.



In fact, according to the poll (margin of error 3.1 points), 52 per cent of Canadians think the government should reverse its decision and keep the mandatory long form census. Only 27 per cent support the decision to replace it with a voluntary form (24 per cent of Canadians think the long form is overly intrusive).

Nearly three in five Canadians think the long form yields data that is important in the formulation of public policy (53per cent of Conservative supporters).

# More Than They Bargained For

## **Ottawa says census long form gone for good as opposition grows louder**

Dominique Jarry-Shore, The Canadian Press »  
*Jul 13, 2010 17:46:35 PM*

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[Recommendation\(s\)](#)

TORONTO - The privacy concerns Ottawa is citing as justification for scrapping the mandatory long-form census are overblown, a diverse range of groups said Tuesday in calling for the government to reverse its controversial decision.



# “among the dumbest things Harper has done”

## Census plan continues to dog Harper

By MICHAEL DEN TANDT, QMI AGENCY

Last Updated: July 30, 2010 12:00am

Story

Comments

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The Liberals say they want Stephen Harper to rescind his plan to scrap the mandatory long-form census.

Not true. A reversal is the last thing the Grits would like.

That's because this move, and the government's obduracy in the face of criticism from just about everyone, is among the dumbest things Harper has done as PM.

# Bringing Canadians Together ...

In such opposition, they join...

... the governments of Manitoba, Ontario, Quebec, Prince Edward Island and Nunavut, representatives from the United Way, Canadian Labour Congress, Toronto Board of Trade, Canadian Nurses Association and Canadian Public Health Association, the Federation of Canadian Municipalities, city officials in Edmonton, Calgary and Red Deer, Ottawa city council, the town of Smith Falls, the mayor of Fredericton, Penetanguishene city council, the mayor of Surrey, the Greater Moncton Chamber of Commerce, the chief economist of the Greater Halifax Partnership, the French Language Services Commissioner of Ontario, the Canadian Marketing Association, the executive director of the Société franco-manitobaine, the Canadian Jewish Congress and the Evangelical Fellowship of Canada, the United Church of Canada, the Anglican Church of Canada, the Canadian Conference of Catholic Bishops, the Catholic Civil Rights League, the Assembly of First Nations, the Inuit Tapiriit Kanatami, the Marketing Research and Intelligence Association, the Quebec Community Groups Network, the Canadian Bar Association, the president of the CD Howe Institute, the Canadian Council on Social Development, the Association of Municipalities of Ontario, the Canadian Federation of Independent Business, the Economic Development Association of British Columbia, the Canadian Medical Association Journal, the director of Toronto Public Health, the Registered Nurses Association of Ontario, Peterborough's medical officer of health, the Ontario Public Schools Boards' Association, the Canadian Association of University Teachers, the Canadian Library Association, the Statistical Society of Canada, the Executive Council of the Canadian Economics Association, the director of the Prentice Institute at the University of Lethbridge, the senior economist at the Canadian Centre for Policy Alternatives, the Canadian Institute of Planners, the Canadian Association for Business Economics, Ancestry.ca, the co-chairman of the Canada Census Committee, the National Statistics Council, former clerk of the Privy Council Alex Himelfarb, Mr. Census, former chief statistician Ivan Fellegi and former chief statistician Munir Sheikh.

## Final Thought

In essence, all these different groups who:

- \* Support the long-form census.
- \* Ask about lottery probabilities.
- \* Wonder about pedestrian deaths.
- \* Investigate crime rates.
- \* Object to excessive lottery insider wins.
- \* Or think about casinos, polls, medical studies, coincidences, airplane safety, disease spread, sampling bias, interpretation of trends, decision making, etc., etc.

... they're all saying that statistics are important.

Happy World Statistics Day!

My web site: [probability.ca](http://probability.ca)