Knowing Where and How Criminal Organizations Operate Using Web Content

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The Intelligence Problem

Information complexity critically affects the ability of security agencies to collect intelligence information by making it more costly

Criminal activities happen every day...

But they are often blurred

Criminal organizations usually have high interest in hiding their activities from the public

However...

The dark side of Maltese crime

Malta is a relatively safe country on paper, but with its total of 182,034 reported crimes from 1998 to 2008, it is not exactly a Garden of Eden. Criminologist SAVIOUR FORMOSA (www.crimemalta.com) analyses Malta's crime statistics and demographics

CRIME SCENE

Chicago supergang coming, experts say

— CHICAGO, *from Page 1*

"We want to be ready for them when they come out here," he

Earlier this year, Hoover and six associates were found guilty by a federal jury in Chicago of wide-ranging narcotics charges in what

TENSE CLIMAX TO LETCHWORTH SHOOTING TRIA

(Continued from page 1)

She heard revolver shots about 12.30. There were between four and six shots in rapid succession. Looking out of the window, she saw Malyon just inside Wilbury Farm drive making towards the spinney.

"I saw he had a revolver in his hand," added witness, "and I looked my door and stood in my hall."

She went to a neighbour's house, a Mrs. Hill, and through her window saw Malyon walking up and down.

Mr. Norman Birkett: If you pass along this drive to the farm is there a footpath to Abbott's road?—Yes.

SEEMED VERY AGITATED

Further examined, Mrs. Cherry said when Malyon was walking up and down he seemed very agitated.

Phyllis Hills, Burslandi, Letchworth, said she was in her mother-in-law's house at Wilbury road [illegible] which her attention was attracted by bangs like reports of a gun.

Going upstairs, she looked out of the bedroom window and saw the form of a man lying up the drive. Malyon was walking about in the road.

Coming downstairs, she looked out of the window and saw Malyon go into the drive. He had not gone far when he ran out and went up to a lorry.

He spoke to the driver of the [illegible] which went on.

Malyon again went into the spinney and out again, and then stopped two farm carts. The carts went down the drive, and Malyon went towards Letchworth.

He stopped a car, and went in it towards Letchworth.

Wilfred Bernard Carter, of 4, Croftlane, Letchworth, said he was driving a farm cart towards Wilbury Farm, followed by another cart.

At the farm drive he saw Malyon, who was standing on the side of the road.

He seemed to be in quite good condition," went on Carter, " and stopped me and told me not to go down the drive as he had shot a man."

ASKED FOR POLICEMAN

Malyon asked him to fetch a policeman and witness told him he would have to go down the drive to fetch one. Malyon said, " You can please yourself" and walked away.

Witness went down the drive and saw the body of a man with blood-stains on his face.

During the evidence Malyon got up from his seat in the dock and had a

house-street, Hitchin, said the trigger of the pistol had to be pressed for each shot.

The magazine held nine cartridges, one of which when the pistol was cocked passed into the breech.

The effective killing range of the pistol was anything up to fifty yards.

Spent bullets produced were suitable for firing in a pistol of the type produced.

P.c. Newcomb said that at Wilbury Farm drive he saw the body of a man. While undressing the body at the mortuary three bullets dropped out. There were holes in the clothing worn by Walters.

Cross-examined by Mr. Norman Birkett, the constable said that altogether counted eleven holes in the

Dr. Norman Macfadyen, [illegible] stated that when he saw Ma police station he was under [illegible] amount of tension. Witness a about his work and Malyo [illegible] shift for some time. He h a great strain.

Mr. St. John Hutchinson: anything about the crime?— hand over his forehead a don't know what has come

" I Did Not Me Kill Him "

Did he say anything ab to do it?— He said, " I d to kill him."

Mr. Birkett: During the did he say " I never meant did it on the impulse?" think so

If my learned friend, Mr. has a signed statement fo what would you say?—I right.

Dr. Macfadyen said his was that Malyon had com and now that it was over how it had happened.

" Did he seem to expres what had happened?" asked and the doctor replied-in th

Sixteen Wounds

By Docto

Dr. Charles Phillip Cy worth, who on March 18 autopsy on the body described the wounds he all.

The cause of death, sai was gunshot wounds in temple, right side of the n lesser extent other parts

of the incident, and was employed as a driller at the Vauxhall Motor Works, Luton. He had been married just over seven years, and had two children, a boy and a girl aged six and four.

His married life was very happy.

Of the 20 months that he had been employed at Luton, for nine he had been on night shifts, which meant that he left home at 7 p.m. and returned at nine the following morning as a rule.

It was his habit to sleep the greater part of the day after he had got home.

On Saturday, March 13, his wife went to a conference of the Friends of the Soviet Union at the Friends Meeting House, London. She told him about a

conclusion that he loved his wife, and told her that he would forgive her, and it was up to her whether she stopped with him or went with Walters.

" When I told the wife I had forgiven her," added Malyon, " she didn't know what to do for the best, and did not know her own mind."

About 1.30 he thought that if he went out he would be able to pull himself together. His wife said that she had nothing to go out for, only to fetch the little girl from school about four o'clock, and this he said he would do.

His wife was still crying, and asked him to get some Aspros, as she had a

was there told Wilbury Crest.

It was closing be could not g be remembere would be open way home.

He called at Aspros, and s children

It came on t the doorway; spoke he could a hill. He turn whether he s he what until ing, and decid cause he thou be might do would be sorry

He also i see Walters to him outs

Mr. Birkett: your mind at body any harm of anything c see him, and was going to d

Malyon went at the house, came to the c surprised [illegible] before. He sa know why I h said " Yes." the screenhole

They went he forgot the t he asked Walt for himself. wife had told Walters said walk down th the road tog spoke to Wal and nervous gone to thras

(Conti

POLICE SAW OF HASHISH

Men fled, threw drugs into dock

THE midnight import of " hashish "—Indian hemp—from a ship in Swansea Docks, by two Jamaicans who travelled by car from Liverpool to collect it, was silently watched by police and Customs officers, Swansea magistrates were told yesterday.

Then, as the officers closed in, the men threw the packets, containing 4½lbs. of the drug, into King's Dock, and ran in opposite directions.

The Jamaicans, 30-year-old crane driver Roy Thompson, of Normanby-street, and 38-year-old motor mechanic Herman Sylvester McKay, of Jermyn-street, both of Liverpool, were sent to prison for six months on each of three charges concerning the hemp, the sentences to run concurrently.

Tuesday, August 10, 2010 THE PHILADELPHIA INQUIRER www.philly.com B D3

Book Review

Cajun cop deals with a gusher of violence

The Glass Rainbow

ames Lee Burke
n & Schuster. 448 pp. $25.99

wed by Paul Davis

uisiana color shimmers like an heen in *The Glass Rainbow*, the installment of James Lee e's series of crime novels fea- g Cajun cop Dave Robicheaux. x crimes and corporate greed ite the bayous, with bad guys ng the land as well as young ien.

rke offers up more than a half- n villains for Robicheaux, a de- ve with the New Iberia, La., partment to deal with. truggling alcoholic, Viet- n and former New Or- ide detective, is called

on of a wealthy family and author of Southern historical novels. Abelard, 10 years older than Alafair, is romantically involved with her and also acts as her mentor as she tries to write a novel.

Robicheaux laments the loss of Louisiana's natural beauty and he resents families like the Abelards, who are part of what he describes as a small oligarchy that has ruined the area.

"The availability of the ancient cypress trees, the alluvial soil, that was among the most fertile in the world, the untapped oil

resents it.

"You're like most good people, Alafair," Robicheaux tells his daughter. "Our greatest virtue, our trust of our fellow man, is our greatest weakness."

The murder investigation soon intertwines with a case of major corporate malfeasance.

Despite Robicheaux's stated liberal sensibilities (which he shares with author Burke), he ultimately confronts the cast of evil villains with *Dirty Harry* violence and retribution.

Burke, 73, grew up on the Texas-Louisiana gulf coast and has worked as an oil company landman, newspaper reporter, English professor and skid row social worker — a breadth of experience that no doubt helped him create the array of characters in *The Glass Rainbow*.

Half British 'crime' is by motorists

TEDDY BOYS ARE BETTER

By Daily Mail Reporter

A HOME OFFICE report on law-breaking in Britain yesterday showed that the class responsible for more offences against the law in 1953 than any other was—the motoring class.

This "criminal" class, including motor-cyclists, cyclists, drivers of cars, lorries and

A federal judge sentenced Abdo, 22, to two life terms plus additional time. The federal prison system offers no chance of parole. He was convicted of planning what he claimed would have been a massive attack on a Texas restaurant filled with troops from Fort Hood.

In court, Abdo referred to Maj. Nidal Hasan – the Army psychiatrist soon to be tried in a deadly shooting rampage

Arguing for a life sentence, Frazier had said Abdo still presented a threat. Abdo's nuth was covered in court, Frazier said, because he had earlier spat his on blood at agents believing he was infected with HIV. That belief turned out to be wrong.

Abdo was AWOL from Fort Campbell, Ky., when he was arrested with bomb-making materials last summer at a Fort

But his conscien was put on hold af with possessing ch May 2011. Abdo to the pornography ac only because he ha Army.

"I just can't ima being placed on a that charge.

Former border agents convicted of snuggling

Associated Press

SAN DIEGO — Two former Border Patrol agents were found guilty Friday of smuggling hundreds of people into the U.S. in Border Patrol vehicles.

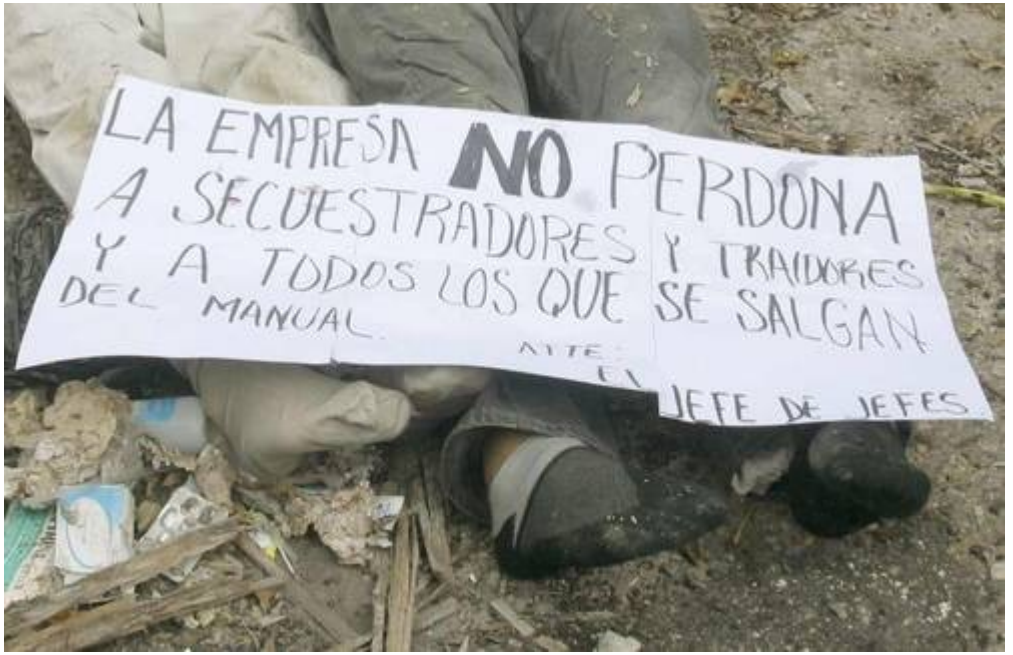
Raul and Fidel Villarreal were convicted of charges that they brought illegal immigrants into the U.S. for money and received bribes by public

poles, plted undercover recording devices, t tracking instruments on Border Prol vehicles and followed a smugglin oad by airplane.

The psecution also relied on accounts of leged accomplices and migrants who entered the country illegally, includinsome who identified Fidel Villarrea photographs. One 24-year-old Brazian woman said she paid

Former Border Pa Villarreal and his

Moreover...


LA EMPRESA NO PERDONA
A SECUESTRADORES Y TRAIDORES
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Problems

- The Web's knowledge is:
  - Too large to be analyzed as a whole;
  - Subject to reliability concerns.

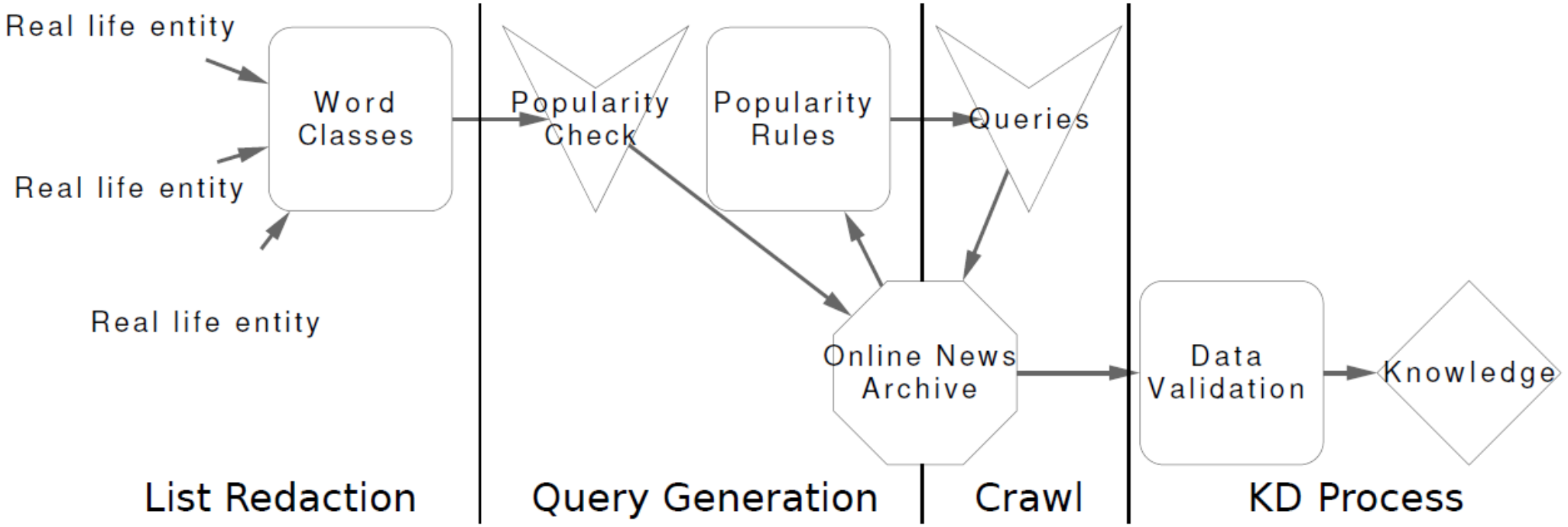
Our Approach

Already deals with data selection and cleaning to index only reliable and relevant news

We design an intelligence-oriented, topic-specific automatic query and data cleaning process

We derive an operative picture of the world and we test it against ground truth

MOGO: Making Order using Google as an Oracle



Entity Definition Rules

- Firstly define the “actor lists”
  - In our case: drug traffickers' names and municipalities
- Classify words into:
  - Generic
  - Common
  - Unique
  - State Unique

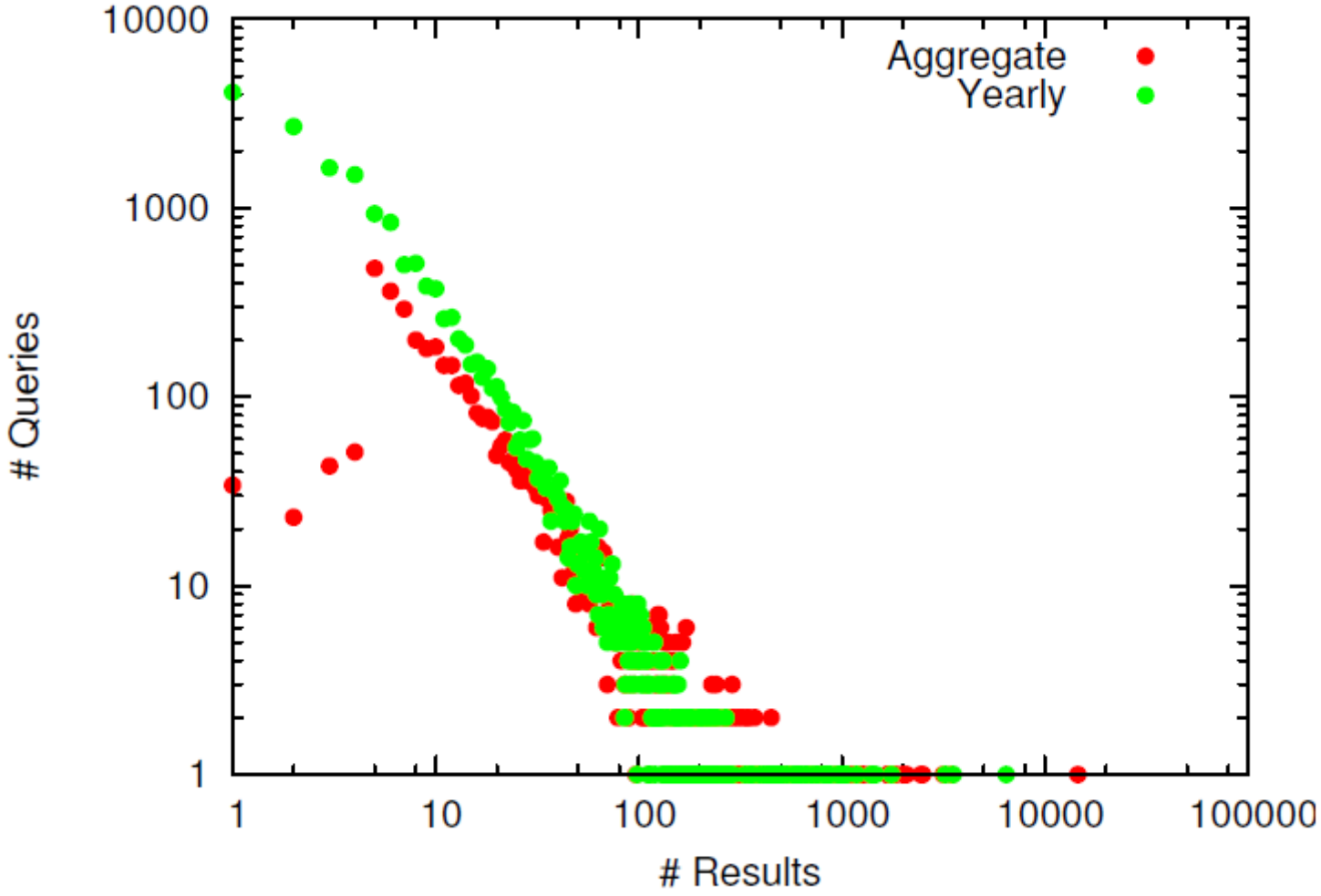
First Query Generation Step

- A query is either:
  - Unique word by itself (because unambiguous)
  - State Unique + State Name (it makes it unambiguous)
  - Prune out Generic and Commons
- Other rules to avoid ambiguity (i.e. a municipality with the same name of a state)

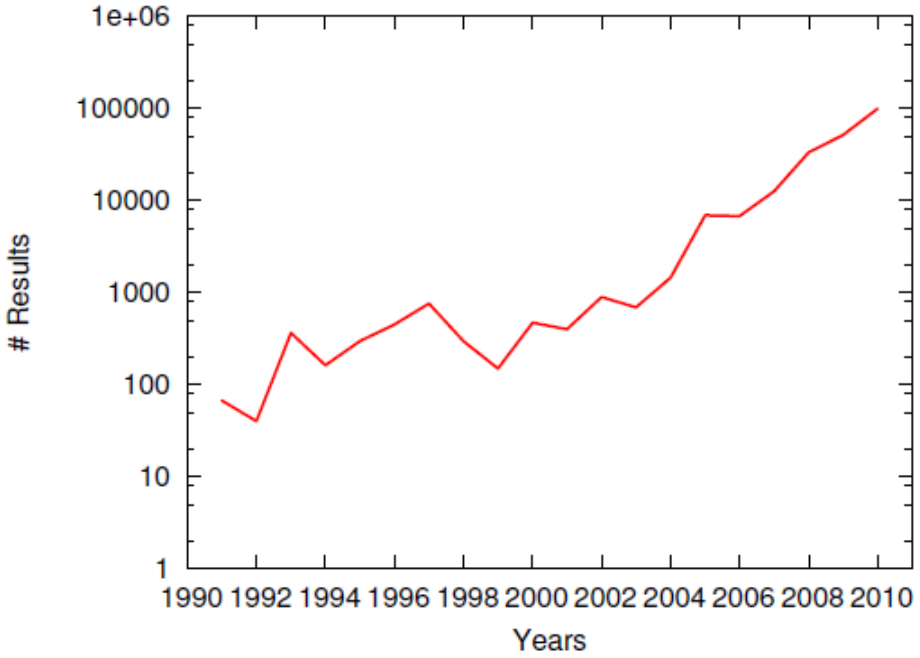
The Popularity Check

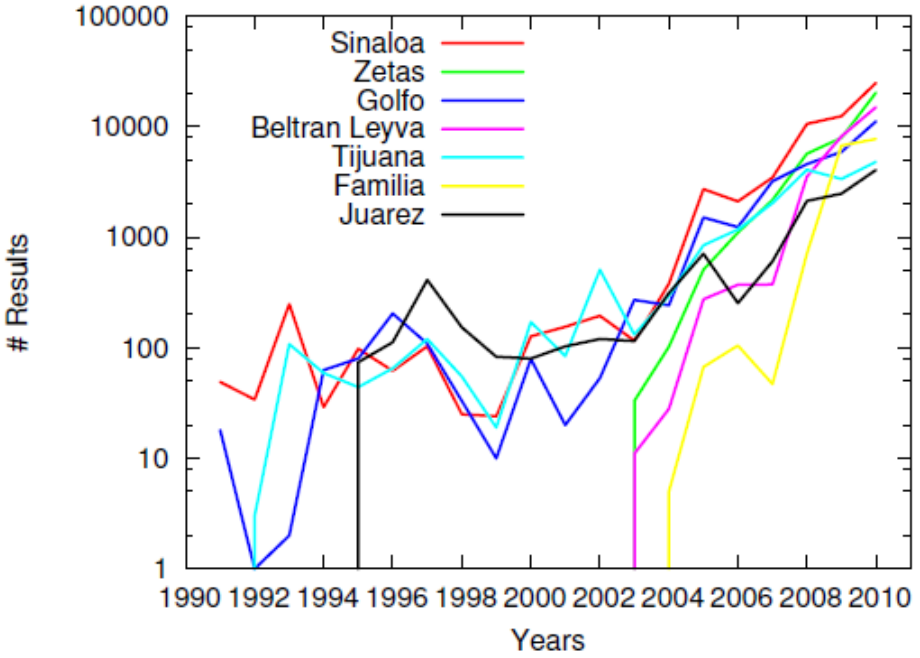
- Pruning out clear outliers that escaped the query generation step
  - Exaggerate popularity
  - Extremely high deviation

Data Statistics



Fat-tail distributions





Logarithmic growth

Data Cleaning & Validation

Cleaning

- Just because a trafficker co-appears a lot with a municipality, it does not mean that the connection is strong
- We validate the results against a null model

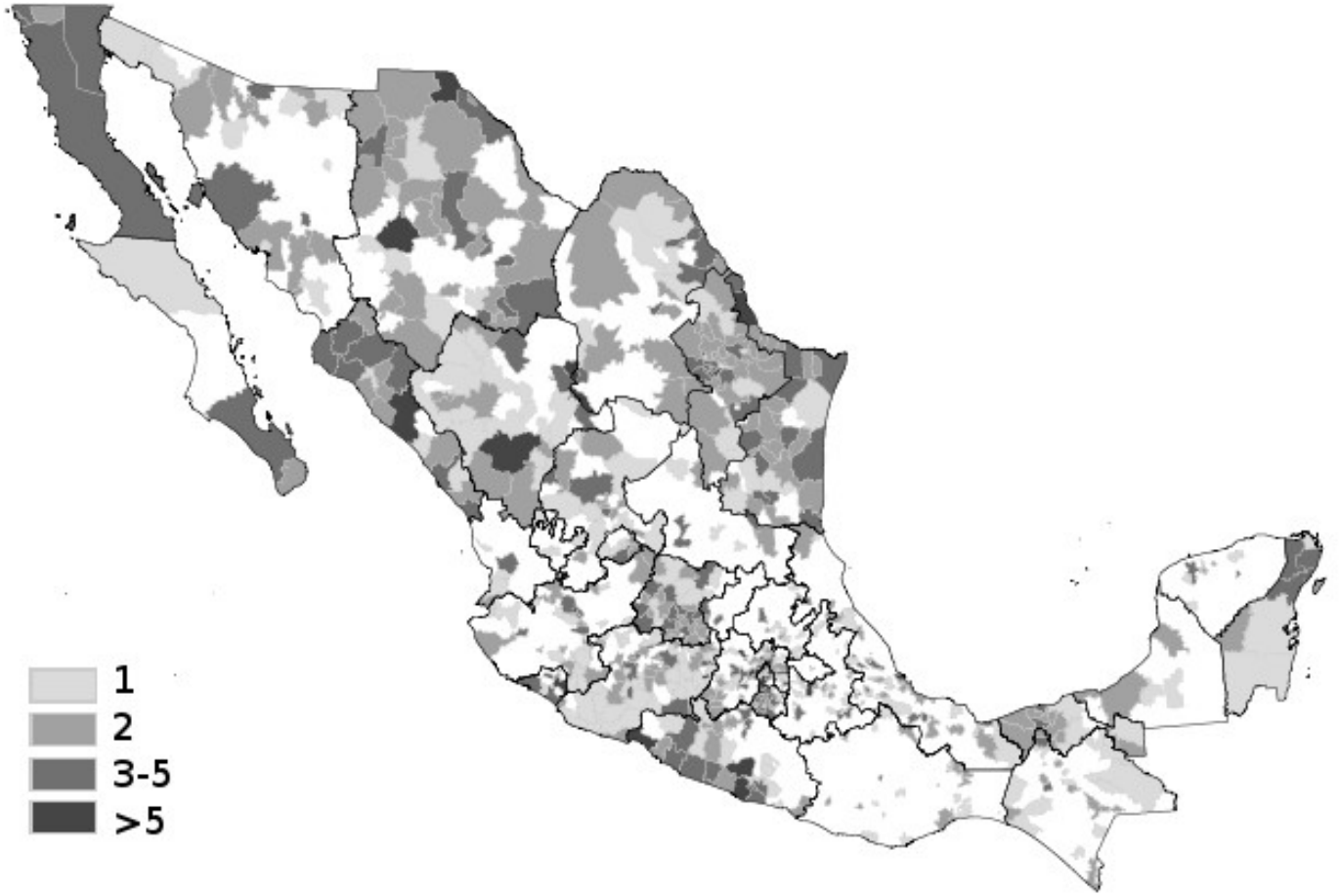
$$PMF(t_i = \bar{t_i}) = \frac{\binom{\mathcal{T}_i}{\bar{t_i}}\binom{\mathcal{M} - \mathcal{T}_i}{\bar{m}_i - \bar{t_i}}}{\binom{\mathcal{M}}{\bar{m}_i}}$$

$$CDF(t_i = \bar{t_i}) = \sum_{a=0}^{\bar{t_i}} PMF(t_i = a)$$

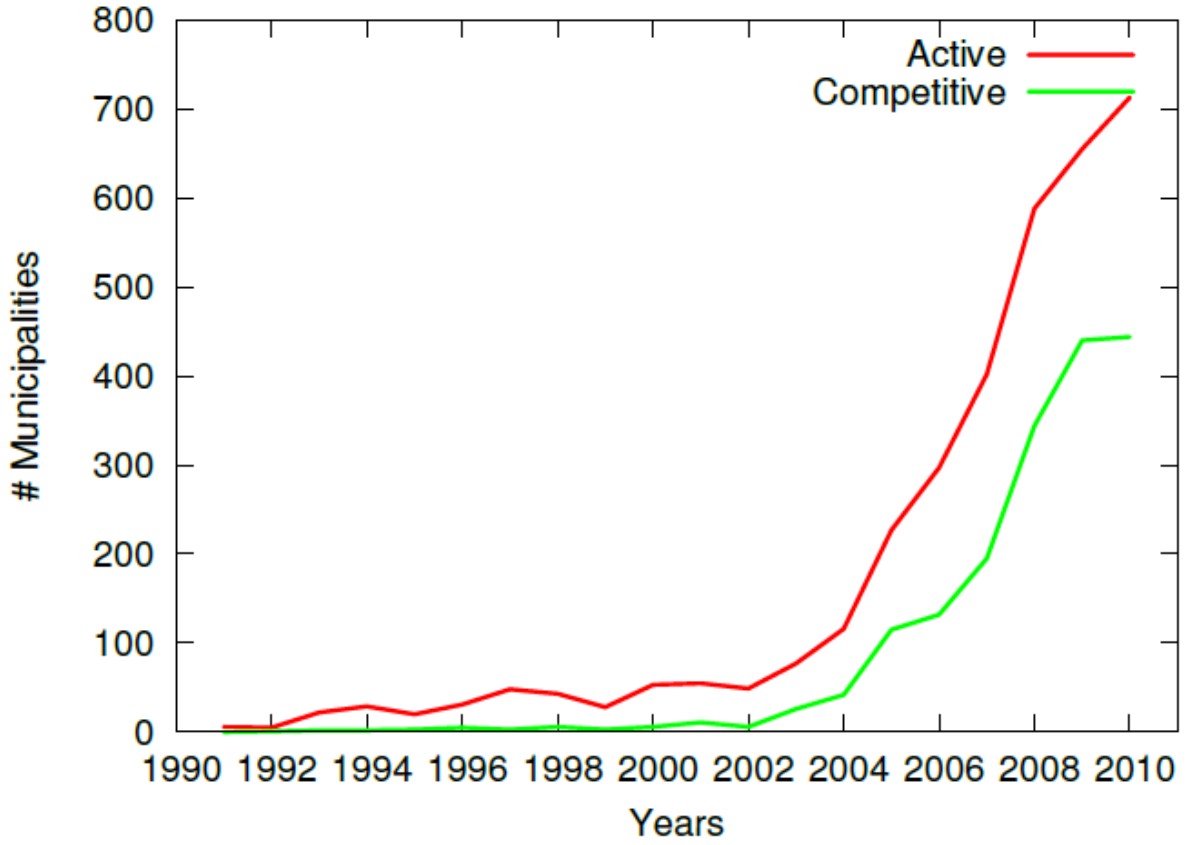
Validation using politician activities

Results

Drug-Active Municipalities

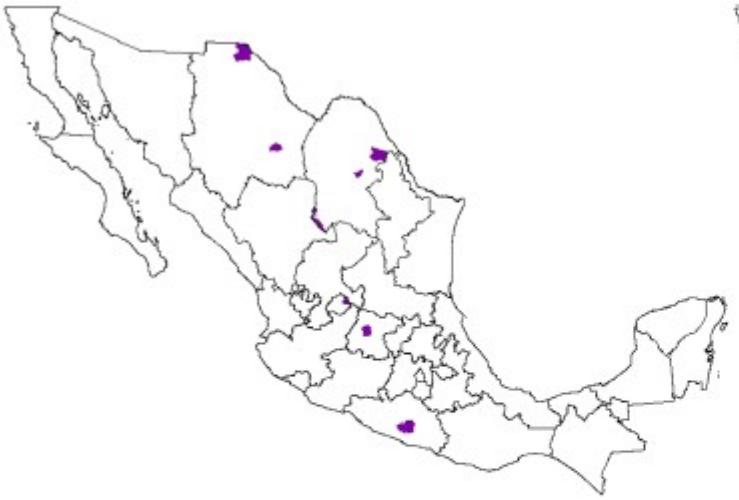


Competition Among Cartels



Drug Cartels Classification

Trafficking Org	2010 Territories	Start Year	Territories	Abandoned	Years operated	Competitive	Exploratory	k
Juárez	74	1997	13.85	10.15	2.78	-0.67	-0.03	1
Tijuana	39	1997	10.1	8.15	2.74	-0.96	-0.21	1
Sinaloa	176	1993	25.6	16.95	2.84	0.18	0.64	1
Barbie	66	2006	5.75	2.45	1.63	-0.48	-0.72	2
Mana	32	2006	3.8	2.2	2.15	-0.82	-0.73	2
Sinaloa faction	53	2008	5.15	2.5	1.96	-0.67	-0.70	2
BL faction	57	2008	5	2.15	1.79	-0.52	-0.75	2
Other	24	2008	2.15	0.95	1.38	-0.99	-0.75	2
BL	157	2004	18.65	10.8	2.08	0.81	-0.36	3
Fam	227	2005	18.75	7.4	2.09	0.95	0.01	3
Golfo	244	1994	35.55	23.5	3.01	1.25	1.07	4
Zetas	405	2003	42.2	21.95	2.71	1.94	2.55	4



(a) 2000.

(b) 2010.

The migration pattern for Juarez cartel.

(a) 2000.

(b) 2010.

The migration pattern for Zetas cartel.

Thank You

Questions?