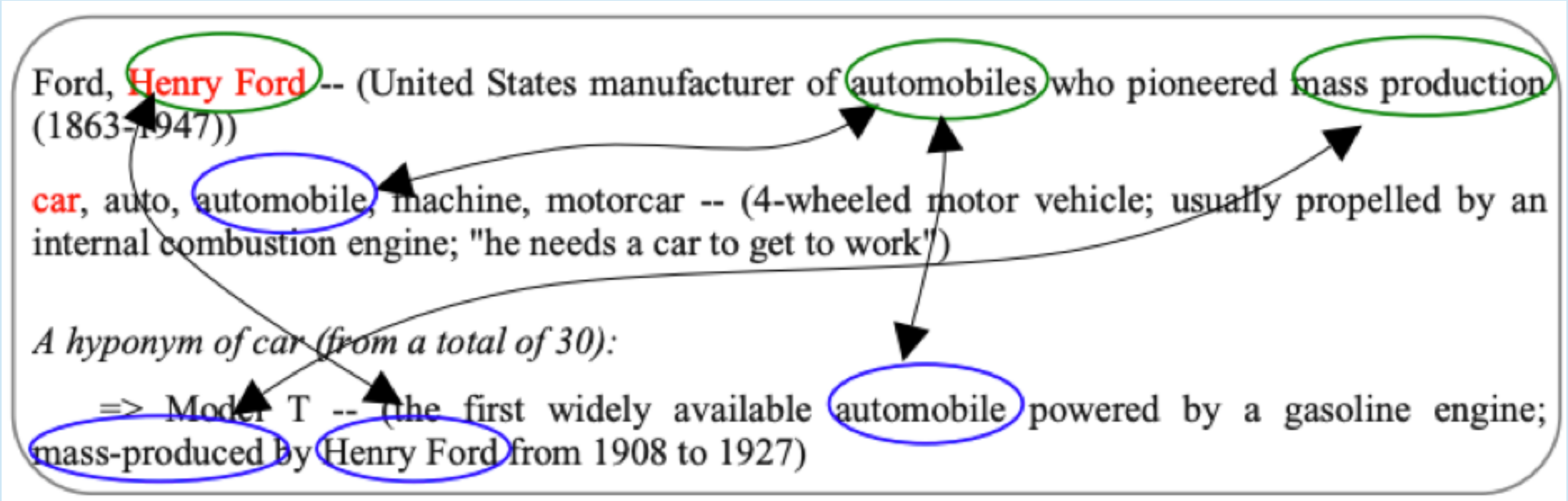
Adding value to NLP:

More semantic technologies in use

15 years ago in NLP, we were…

- Using ontologies for adding reasoning/additional information to text
- Developing linguistic tools for conceptual modelling
- Semantic enrichment for ontology mapping
- Developing ways to get from text to ontologies and back
- Trying to persuade the Semantic Web community that NLP was important

Mapping semantic relations



Ford, Henry Ford -- (United States manufacturer of automobiles who pioneered mass production (1863-1947))

car, auto, automobile, machine, motorcar -- (4-wheeled motor vehicle; usually propelled by an internal combustion engine; "he needs a car to get to work")

A hyponym of car (from a total of 30):

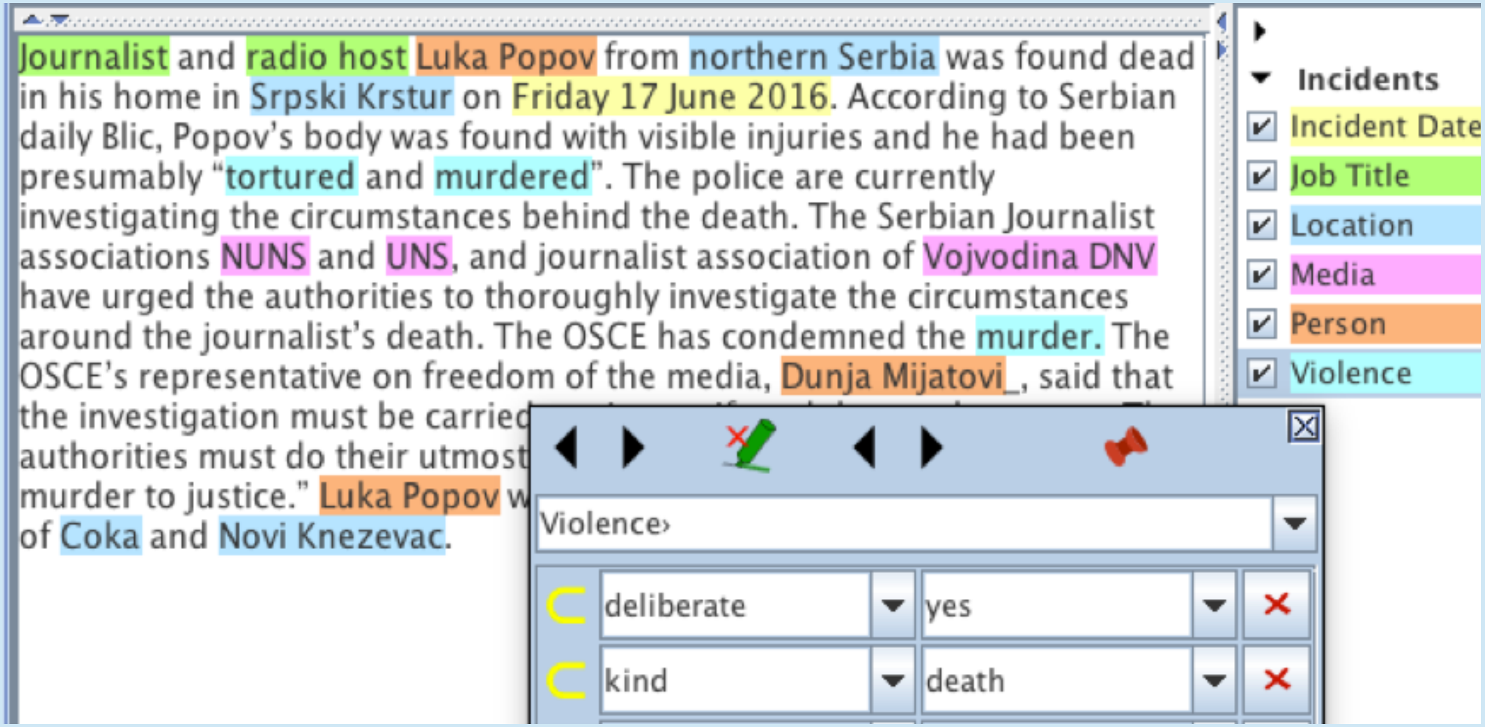
=> Model T -- (the first widely available automobile powered by a gasoline engine; mass-produced by Henry Ford from 1908 to 1927)

- Finding “hidden” semantic links between concepts using gloss information from dictionaries
- (We want to know that Henry Ford makes cars)
- These days we could just check Wikipedia ☺

Many of the underlying technologies are still relevant

- The techniques may have changed a bit: we now have
  - lots of lovely big data to play with
  - open source knowledge bases
  - powerful GPUs (crack cocaine for NLP students)
  - deep learning (all the cool kidz ☺)

How to impress a “freedom of the media” researcher



Journalist and radio host Luka Popov from northern Serbia was found dead in his home in Srpski Krstur on Friday 17 June 2016. According to Serbian daily Blic, Popov’s body was found with visible injuries and he had been presumably “tortured and murdered”. The police are currently investigating the circumstances behind the death. The Serbian Journalist associations NUNS and UNS, and journalist association of Vojvodina DNV have urged the authorities to thoroughly investigate the circumstances around the journalist’s death. The OSCE has condemned the murder. The OSCE’s representative on freedom of the media, Dunja Mijatovi_, said that
the investigation must be carried
authorities must do their utmost
murder to justice.” Luka Popov w
of Coka and Novi Knezevac.

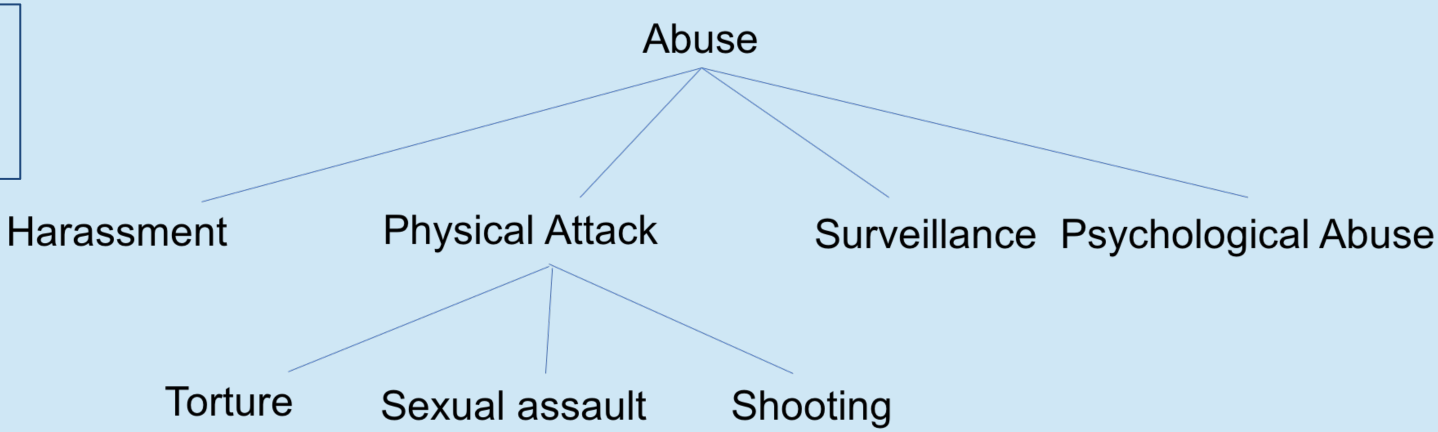
Incidents

☑ Incident Date
☑ Job Title
☑ Location
☑ Media
☑ Person
☑ Violence

Violence›

deliberate	yes
kind	death

“What is this wizardry?”



Feral databases

The problem: too much unstructured information

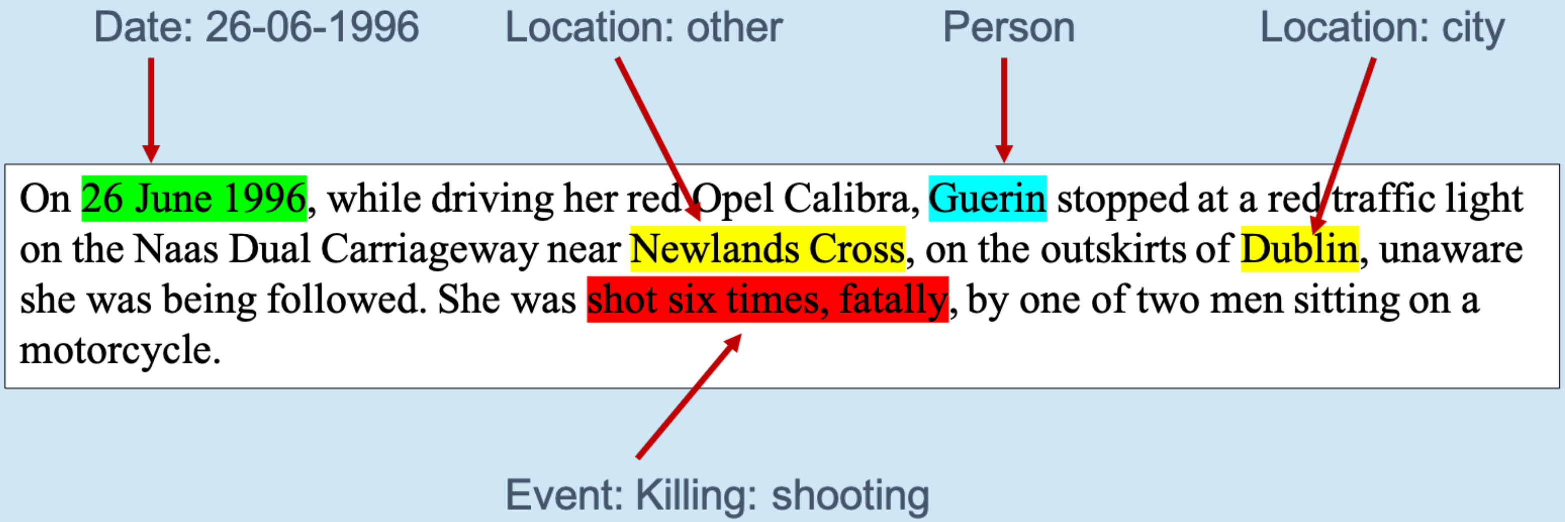
> On 26 June 1996, while driving her red Opel Calibra, Guerin stopped at a red traffic light on the Naas Dual Carriageway near Newlands Cross, on the outskirts of Dublin, unaware she was being followed. She was shot six times, by one of two men sitting on a motorcycle.

How many journalists died in 1996?

The solution: categorise it and stick it in a spreadsheet

“Everybody loves spreadsheets!”

That’s great, we have lots of NLP tools to do that!



Date: 26-06-1996

Location: other

Person

Location: city

On 26 June 1996, while driving her red Opel Calibra, Guerin stopped at a red traffic light on the Naas Dual Carriageway near Newlands Cross, on the outskirts of Dublin, unaware she was being followed. She was shot six times, fatally, by one of two men sitting on a motorcycle.

Event: Killing: shooting

Name	Date	Location City	Location Country	Event type	Type of death
Guerin	26061996	Dublin	Ireland	Killing	Shooting

Woe betide anyone who opens the sacred spreadsheet!

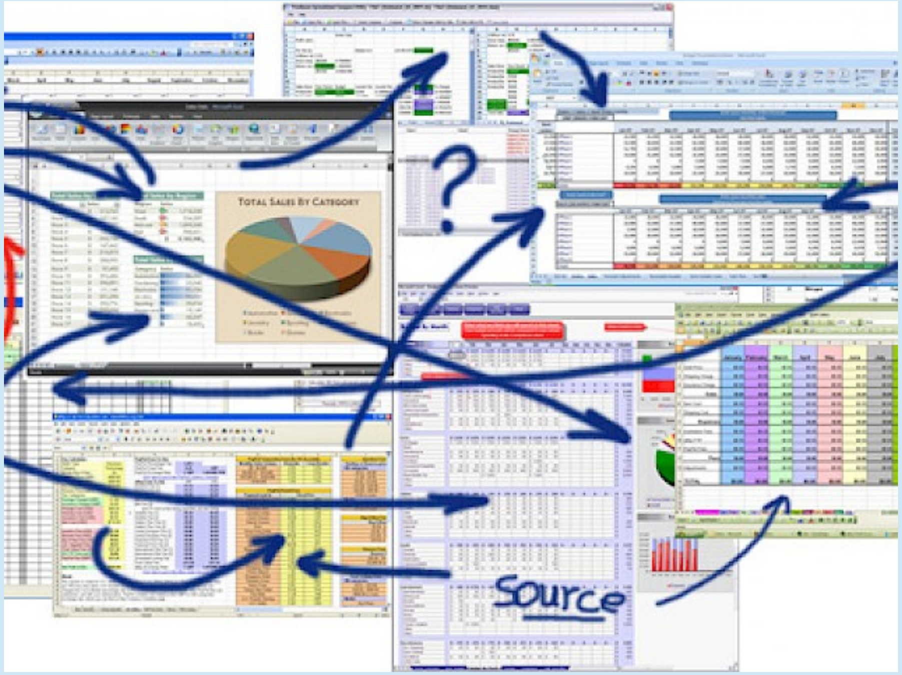
↓

Mass panic

↓

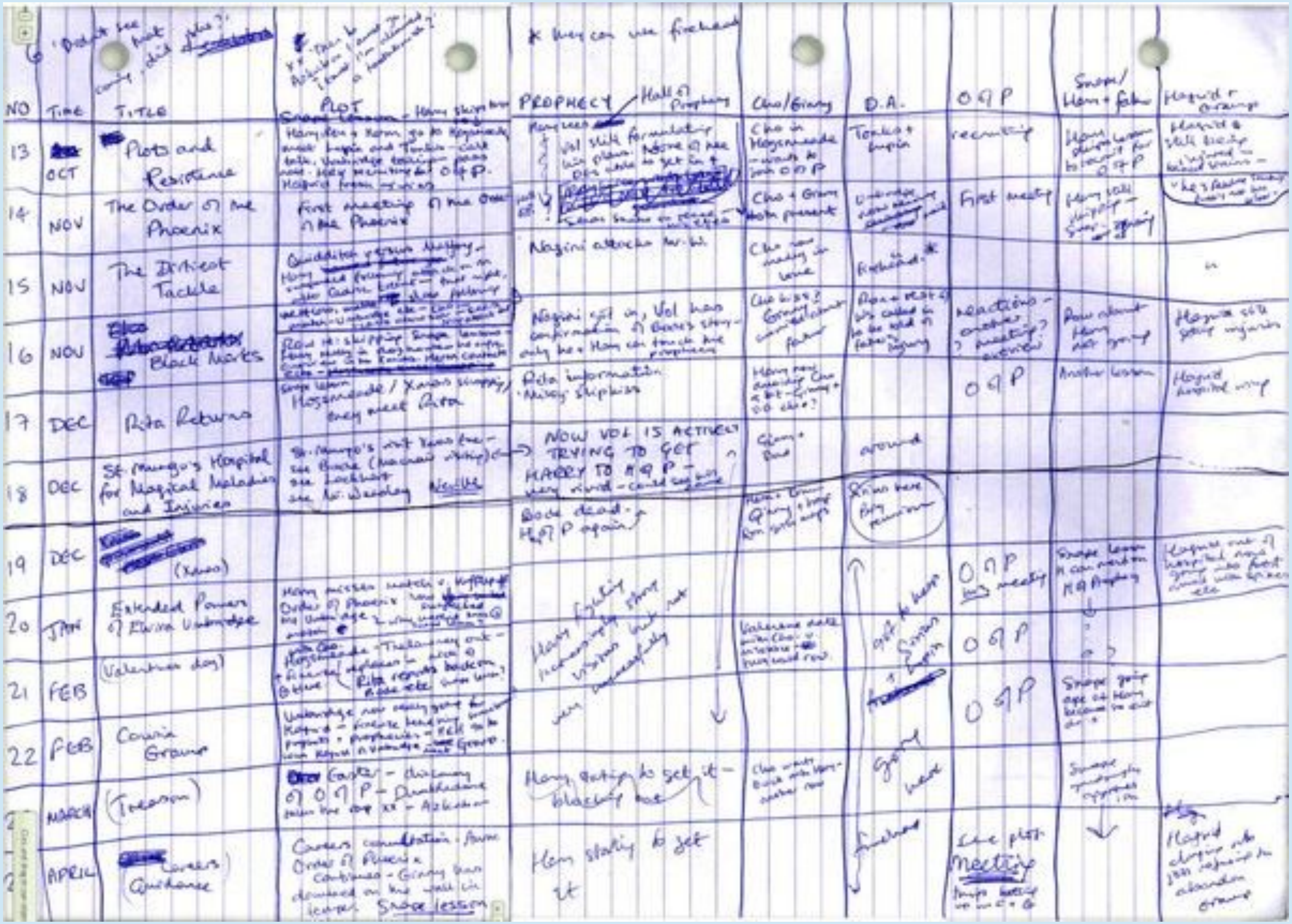
Let’s start a new spreadsheet!

↓



Aaaaggghhhh!!!

Harry Potter and the Spreadsheet of Doom



'Didn't see that coming, did ~~[illegible]~~ she?!'

XX – [illegible] Azkaban [illegible]

* they can use firehead

NO	TIME	TITLE	PLOT	PROPHECY / Hall of Prophecy	Cho/Ginny	D.A.	O of P	Snape / Harry + father	Hagrid + Grawp
13	OCT	Plots and Resistance	~~Snape lessons~~ – Harry skips them Harry, Ron + Hermione go to Hogsmeade – meet Lupin and Tonks – [illegible] talk, Umbridge [illegible] – Harry recruiting for O of P. Hagrid back from mission	Ron sees [illegible] Vol still formulating his plans. None of the DEs able to get in + [illegible]	Cho in Hogsmeade – wants to join O of P	Tonks + Lupin	recruiting	Harry [illegible] lessons to recruit for O of P	Hagrid & still [illegible] injured [illegible] –
14	NOV	The Order of the Phoenix	First meeting of the Order of the Phoenix	~~[illegible]~~ Snape teaches [illegible] – [illegible]	Cho + Ginny both present	[illegible]	First meeting	Harry still skipping – Snape [illegible]	"he's [illegible] [illegible]"
15	NOV	The Dirtiest Tackle	Quidditch versus Hufflepuff – Harry [illegible] – [illegible]	Nagini attacks Mr. W.	Cho now madly in love	firehead. *			[illegible]
16	NOV	~~[illegible]~~ Black Marks	[illegible] – Umbridge [illegible] Row re: skipping Snape lessons [illegible] Hermione contacts Rita – [illegible]	Nagini got in, Vol has confirmation of Bode's story – only he + Harry can touch the prophecies	Cho kiss? Ginny [illegible] father	[illegible] called in to be told of father's injury	reactions – another meeting? ? meeting extension	Row about Harry not going	Hagrid still [illegible] injuries
17	DEC	Rita Returns	Snape lesson Hogsmeade / Xmas shopping / they meet Rita	Rita information · [illegible]	Harry now avoiding Cho a bit – Ginny + [illegible]?		O of P	Another lesson	Hagrid hospital wing
18	DEC	St Mungo's Hospital for Magical Maladies and Injuries	St. Mungo's visit Xmas time – see Bode ([illegible]) see Lockhart see Mr. Weasley Neville	NOW VOL IS ACTIVELY TRYING TO GET HARRY TO H of P – very [illegible] – [illegible]	Ginny + [illegible]	around			
19	DEC	~~[illegible]~~ (Xmas)		Bode dead – H of P again?	[illegible] Ginny [illegible] Ron [illegible]	Sirius here [illegible]			
20	JAN	Extended Powers of Elvira Umbridge	Harry misses match v. Hufflepuff – Order of Phoenix [illegible] Umbridge [illegible]	Harry finding increasingly strong visions but not very successfully		[illegible] to keep	O of P [illegible] meeting	Snape lesson in connection with H of Prophecy	Hagrid out of hospital now – going into forest covered with injuries etc
21	FEB	(Valentine day)	[illegible] Hogsmeade – [illegible] – Rita reports back on [illegible]		Valentine date with Cho – [illegible] row.	Sirius + Lupin	O of P		
22	FEB	Cousin Grawp	Umbridge now really going for Hagrid – [illegible] prophecies [illegible] Grawp.				O of P	Snape going [illegible] at Harry [illegible]	
2	MARCH	(Treason)	~~[illegible]~~ Easter – [illegible] of O of P – Dumbledore [illegible] – Azkaban	Harry getting to see it – blacking out	Cho wants [illegible]	Going well		Snape [illegible]	
2	APRIL	~~[illegible]~~ Careers Guidance	Careers consultation – [illegible] Order of Phoenix continued – Ginny [illegible] on the [illegible] Snape lesson	Harry starting to get it		finished	The plot meeting [illegible]		Hagrid [illegible] abandon Grawp

This was once the latest in calendar technology…

Case studies: how can NLP and semantics help?

- Violations against journalists
- Disaster relief
- The B-word

Global monitoring of violations against journalists

- The situation: *cases of killing, kidnapping, enforced disappearance, arbitrary detention and torture of journalists, associated media personnel, often with impunity*
- The task: UN SDG agenda (indicator 16.10.1): we need a comprehensive monitoring system capturing the scope & nature of violations (lethal & non-lethal)
- The problem: the data is a horrible mess!
  - accessibility of reliable information on violations
    - gaps in the data beyond killings; cannot compile data on a wide range of violations; practical challenges of collection
  - systematisation and compiling of information
    - conceptual inconsistency; much information is unstructured

Events are complex

The family of murdered Maltese anti-corruption journalist Daphne Caruana Galizia is demanding an independent public inquiry because she had suffered years of intimidation.

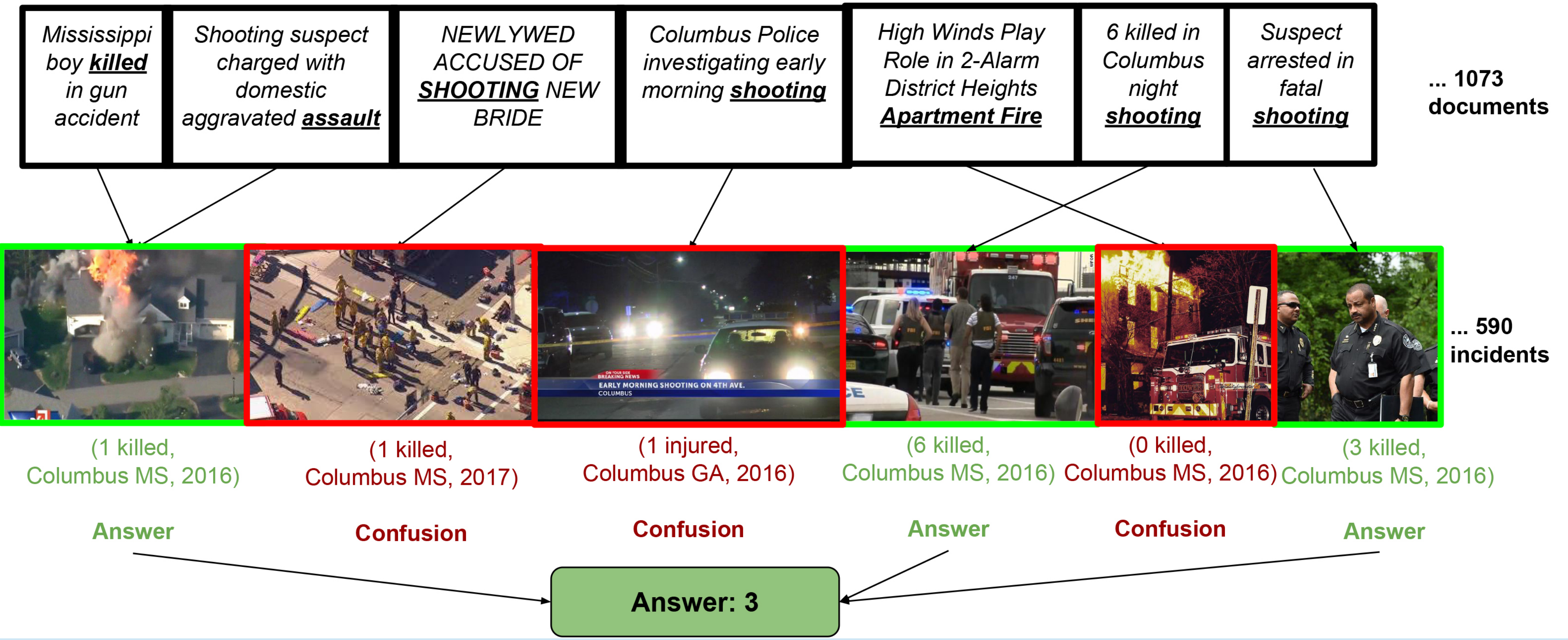
She was killed by a car bomb near her home in October. Her widely-read blog accused top politicians of corruption.

One of her sons, Paul, said three pet dogs were killed and attempts were made to burn down the journalist's home.

- Several separate events, but
  - are they related?
  - was it the same perpetrator(s)?
- Traditional methods use a person-centric approach with no relation between events

But we know how to understand complex events

Question: How many killing incidents happened in 2016 in Columbus, Mississippi?



*Mississippi boy **killed** in gun accident*

*Shooting suspect charged with domestic aggravated **assault***

*NEWLYWED ACCUSED OF **SHOOTING** NEW BRIDE*

*Columbus Police investigating early morning **shooting***

*High Winds Play Role in 2-Alarm District Heights **Apartment Fire***

*6 killed in Columbus night **shooting***

*Suspect arrested in fatal **shooting***

... 1073 documents

... 590 incidents

(1 killed, Columbus MS, 2016)

Answer

(1 killed, Columbus MS, 2017)

Confusion

(1 injured, Columbus GA, 2016)

Confusion

(6 killed, Columbus MS, 2016)

Answer

(0 killed, Columbus MS, 2016)

Confusion

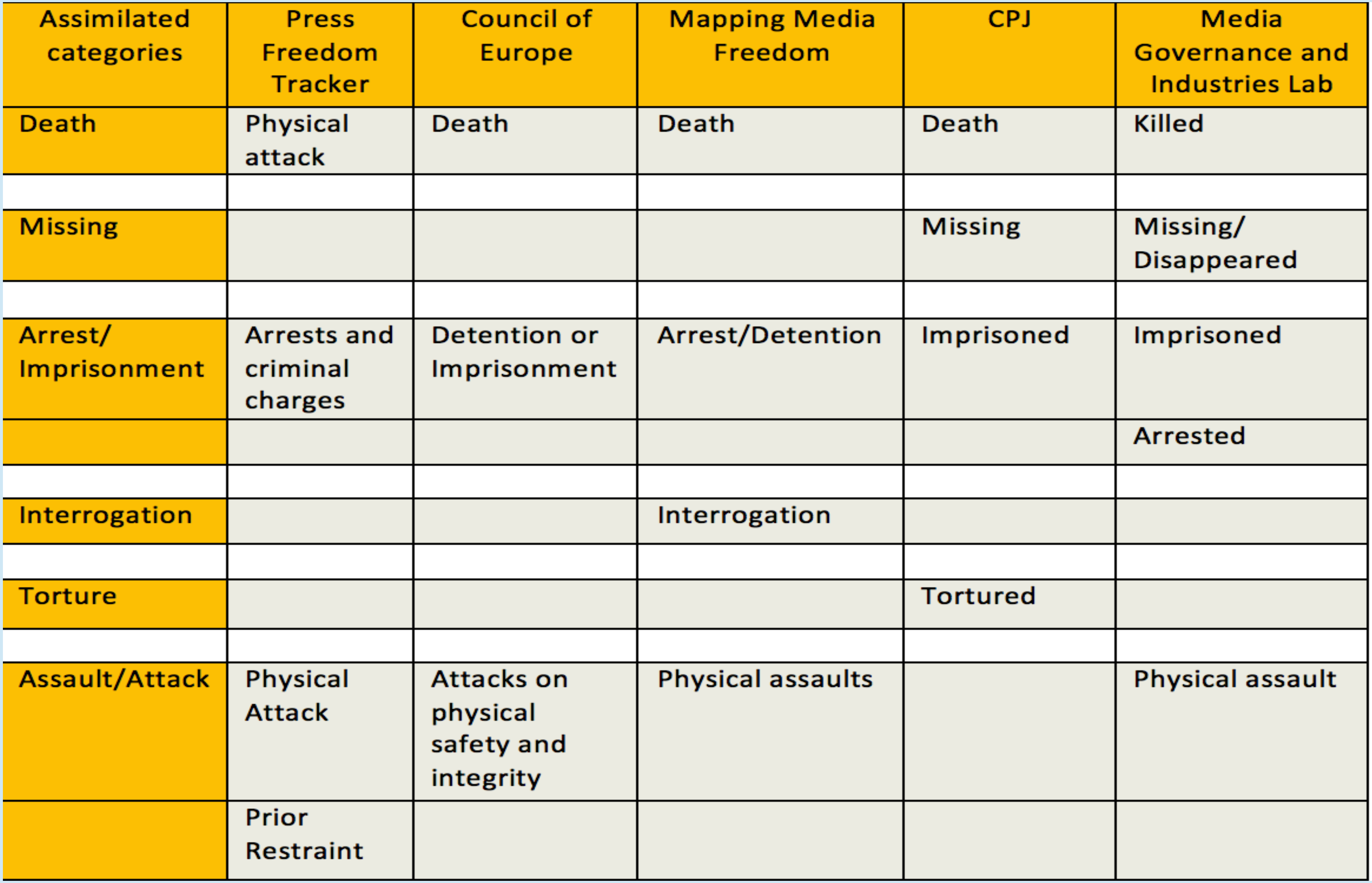
(3 killed, Columbus MS, 2016)

Answer

Answer: 3

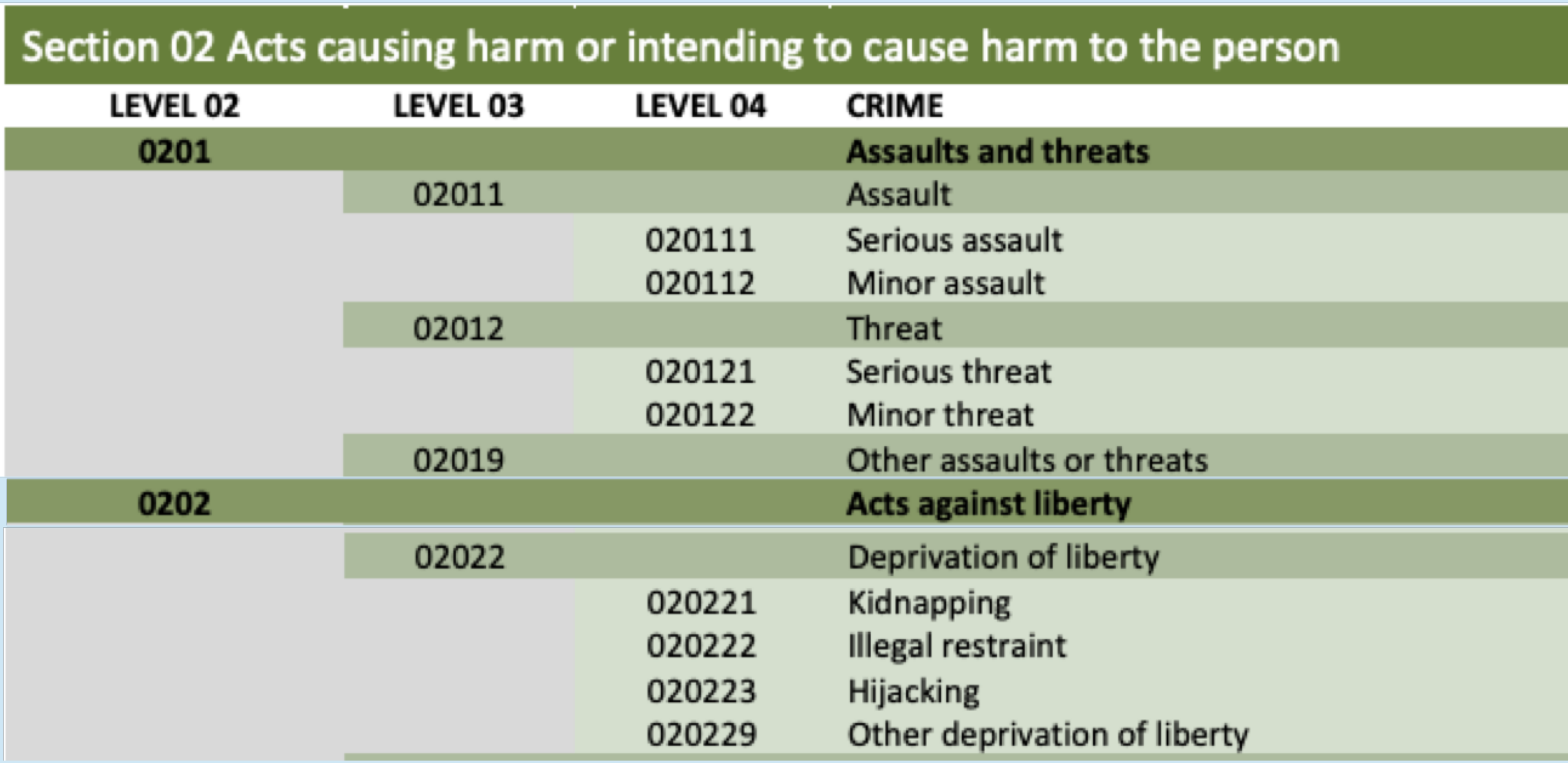
SemEval 2018 Task on Counting Events and Participants in the Long Tail

Information categories in current monitoring efforts



Assimilated categories	Press Freedom Tracker	Council of Europe	Mapping Media Freedom	CPJ	Media Governance and Industries Lab
Death	Physical attack	Death	Death	Death	Killed
Missing				Missing	Missing/ Disappeared
Arrest/ Imprisonment	Arrests and criminal charges	Detention or Imprisonment	Arrest/Detention	Imprisoned	Imprisoned
					Arrested
Interrogation			Interrogation		
Torture				Tortured	
Assault/Attack	Physical Attack	Attacks on physical safety and integrity	Physical assaults		Physical assault
	Prior Restraint				

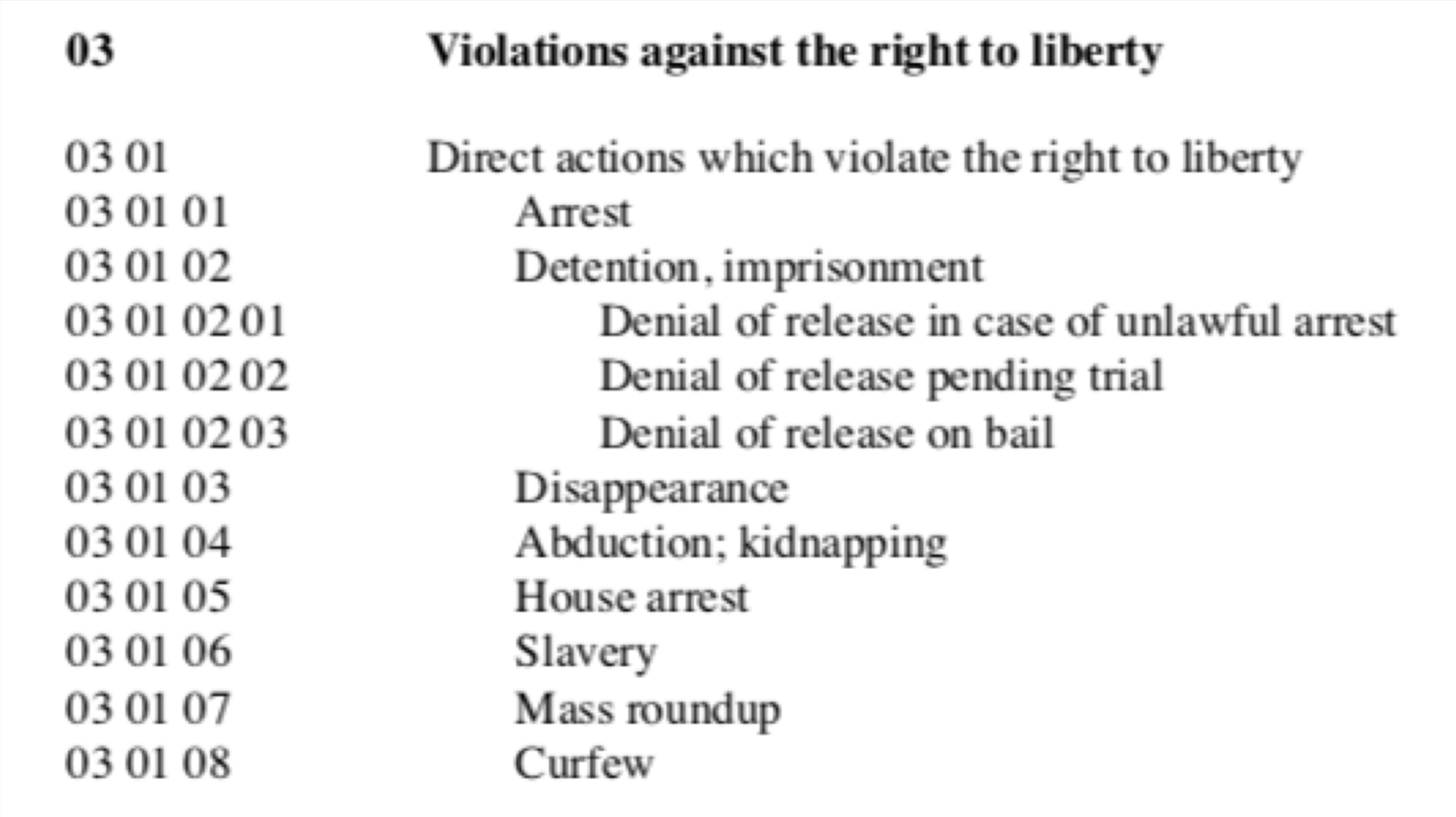
ICCS Crime Classification Scheme



Section 02 Acts causing harm or intending to cause harm to the person

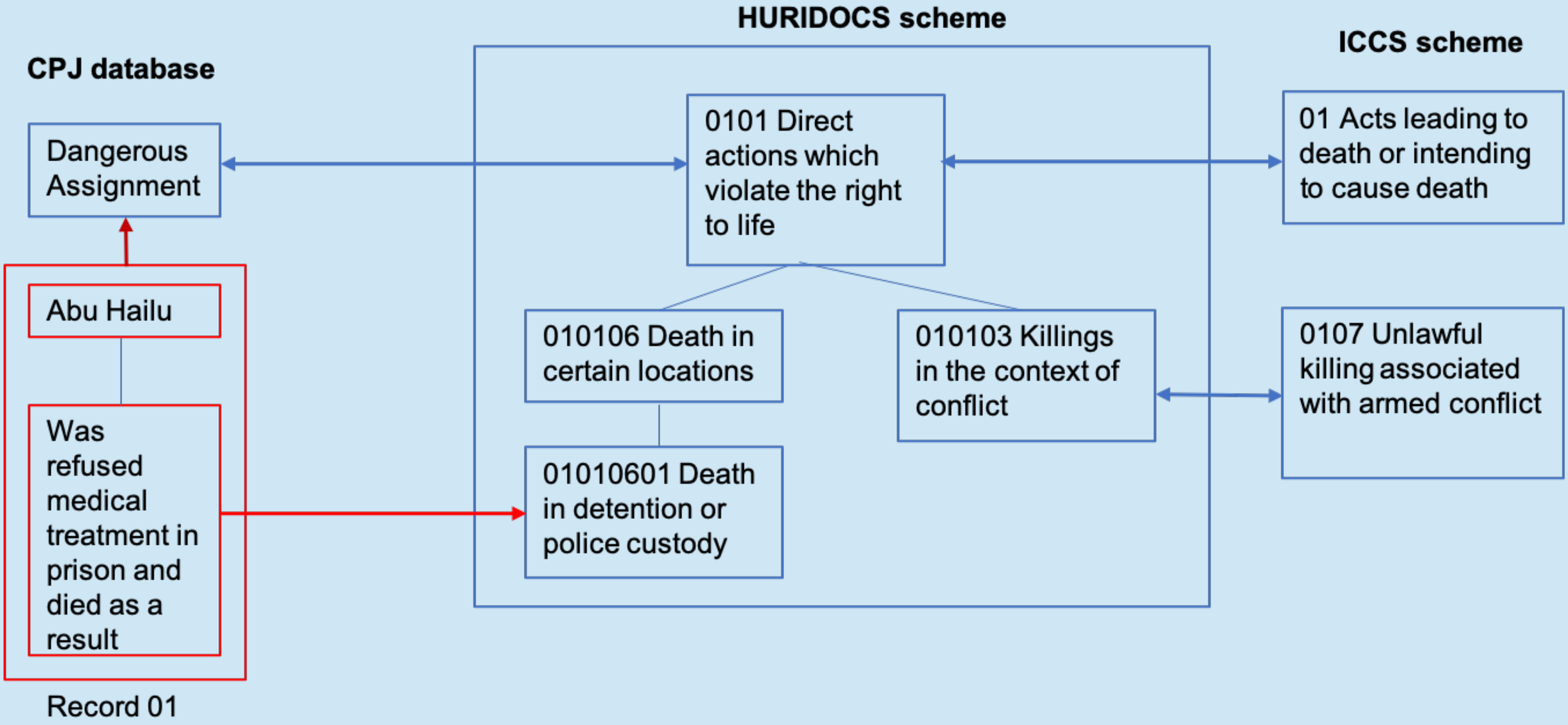
LEVEL 02	LEVEL 03	LEVEL 04	CRIME
0201			**Assaults and threats**
	02011		Assault
		020111	Serious assault
		020112	Minor assault
	02012		Threat
		020121	Serious threat
		020122	Minor threat
	02019		Other assaults or threats
0202			**Acts against liberty**
	02022		Deprivation of liberty
		020221	Kidnapping
		020222	Illegal restraint
		020223	Hijacking
		020229	Other deprivation of liberty

HURIDOCS classification scheme



03	**Violations against the right to liberty**
03 01	Direct actions which violate the right to liberty
03 01 01	Arrest
03 01 02	Detention, imprisonment
03 01 02 01	Denial of release in case of unlawful arrest
03 01 02 02	Denial of release pending trial
03 01 02 03	Denial of release on bail
03 01 03	Disappearance
03 01 04	Abduction; kidnapping
03 01 05	House arrest
03 01 06	Slavery
03 01 07	Mass roundup
03 01 08	Curfew

Putting it all together



HURIDOCS scheme

ICCS scheme

CPJ database

Dangerous Assignment

0101 Direct actions which violate the right to life

01 Acts leading to death or intending to cause death

Abu Hailu

010106 Death in certain locations

010103 Killings in the context of conflict

0107 Unlawful killing associated with armed conflict

Was refused medical treatment in prison and died as a result

01010601 Death in detention or police custody

Record 01

Reconciling information from different sources

Relation	Example	Issue	Solution	Same Event?
Exact match	Location: London Location: London	Identical facts	Two events can be merged	Very likely
Equivalent match	Type: murder Type: assassination	Semantically equivalent facts	Two events can be merged	Very likely
No-conflict	Location: London Date: 2019	Different but semantically compatible facts	Facts from two events can be merged	Probably
Specificity Conflict	Location: London Location: UK	One fact is more specific than the other, but both are semantically compatible	Facts can be merged at either specific or generic level	Probably
Direct conflict	Location: London Location: Paris	Facts conflict semantically: both cannot be correct	More info needed to resolve conflict	Unlikely

Reconciling our information

Name	Date	City	Country	Event type	Type of death
Guerin	26061996	Dublin	Ireland	Killing	Shooting

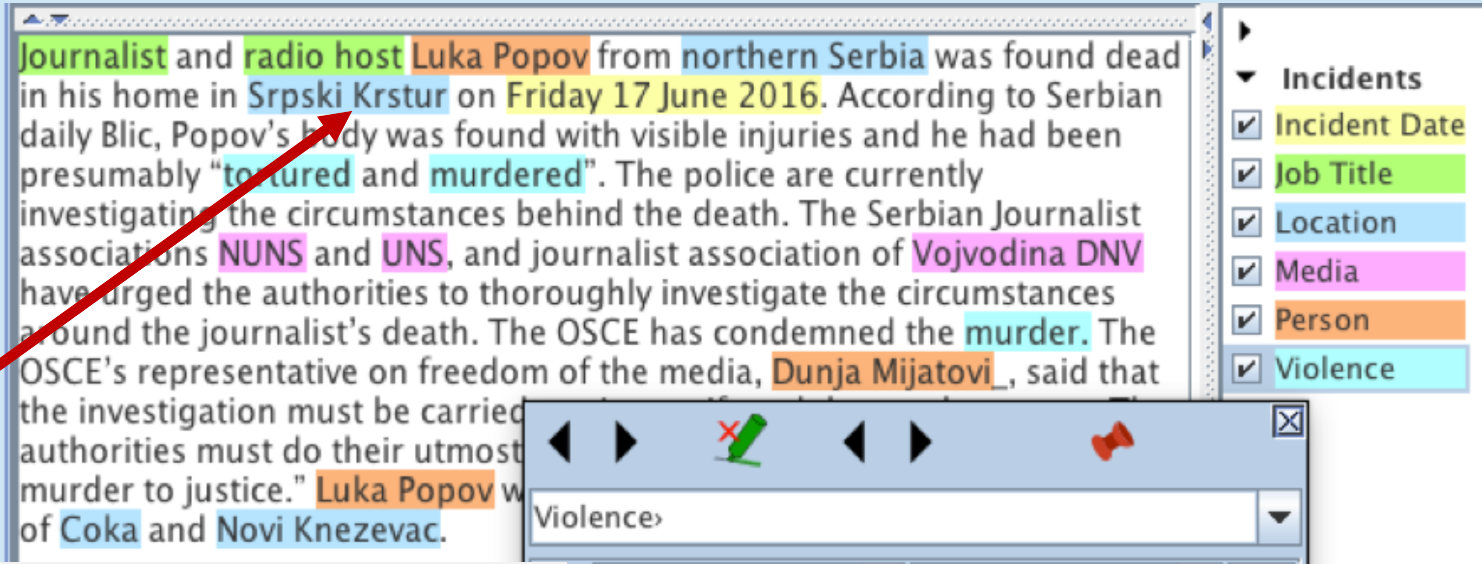
+

Name	Date	Organisation	Location	Event type
Veronica Guerin	26 June 1996	Sunday Independent	Ireland	Murder

=

Name	Date	Organisation	Location	Event type	Sources
Veronica Guerin	26061996	Sunday Independent	Dublin, Ireland	Shooting: deliberate, fatal	2

Automatic categorization of free text



Journalist and radio host Luka Popov from northern Serbia was found dead in his home in Srpski Krstur on Friday 17 June 2016. According to Serbian daily Blic, Popov's body was found with visible injuries and he had been presumably "tortured and murdered". The police are currently investigating the circumstances behind the death. The Serbian Journalist associations NUNS and UNS, and journalist association of Vojvodina DNV have urged the authorities to thoroughly investigate the circumstances around the journalist's death. The OSCE has condemned the murder. The OSCE's representative on freedom of the media, Dunja Mijatovi_, said that the investigation must be carried
authorities must do their utmost
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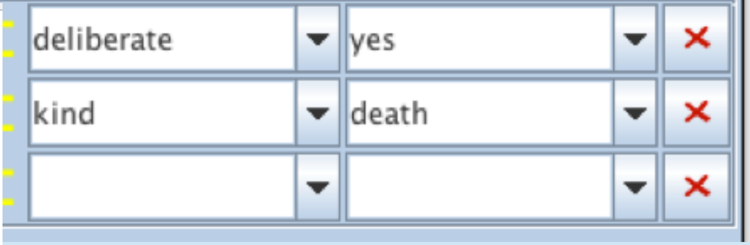
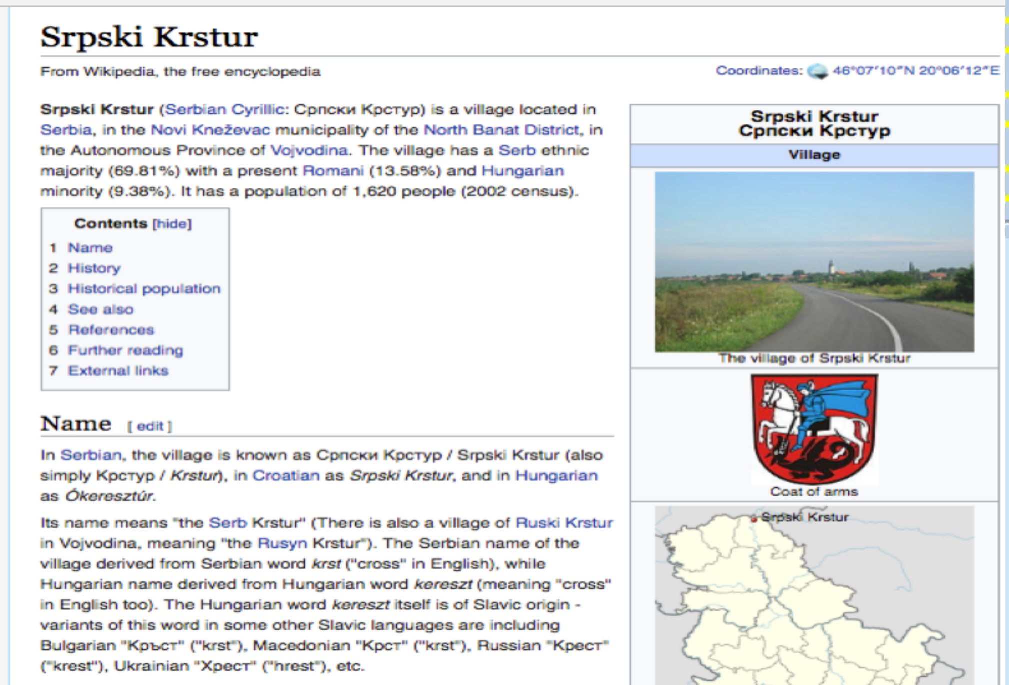


Violence›

deliberate	yes
kind	death



Srpski Krstur

From Wikipedia, the free encyclopedia

Coordinates: 46°07′10″N 20°06′12″E

Srpski Krstur (Serbian Cyrillic: Српски Крстур) is a village located in Serbia, in the Novi Kneževac municipality of the North Banat District, in the Autonomous Province of Vojvodina. The village has a Serb ethnic majority (69.81%) with a present Romani (13.58%) and Hungarian minority (9.38%). It has a population of 1,620 people (2002 census).

Contents [hide]

Name [edit]

In Serbian, the village is known as Српски Крстур / Srpski Krstur (also simply Крстур / *Krstur*), in Croatian as *Srpski Krstur*, and in Hungarian as *Ókeresztúr*.

Its name means "the Serb Krstur" (There is also a village of Ruski Krstur in Vojvodina, meaning "the Rusyn Krstur"). The Serbian name of the village derived from Serbian word *krst* ("cross" in English), while Hungarian name derived from Hungarian word *kereszt* (meaning "cross" in English too). The Hungarian word *kereszt* itself is of Slavic origin - variants of this word in some other Slavic languages are including Bulgarian "Кръст" ("krst"), Macedonian "Крст" ("krst"), Russian "Крест" ("krest"), Ukrainian "Хрест" ("hrest"), etc.

Entities and events are extracted, along with features, and linked to other knowledge sources, e.g. Wikipedia, other categorization schemes

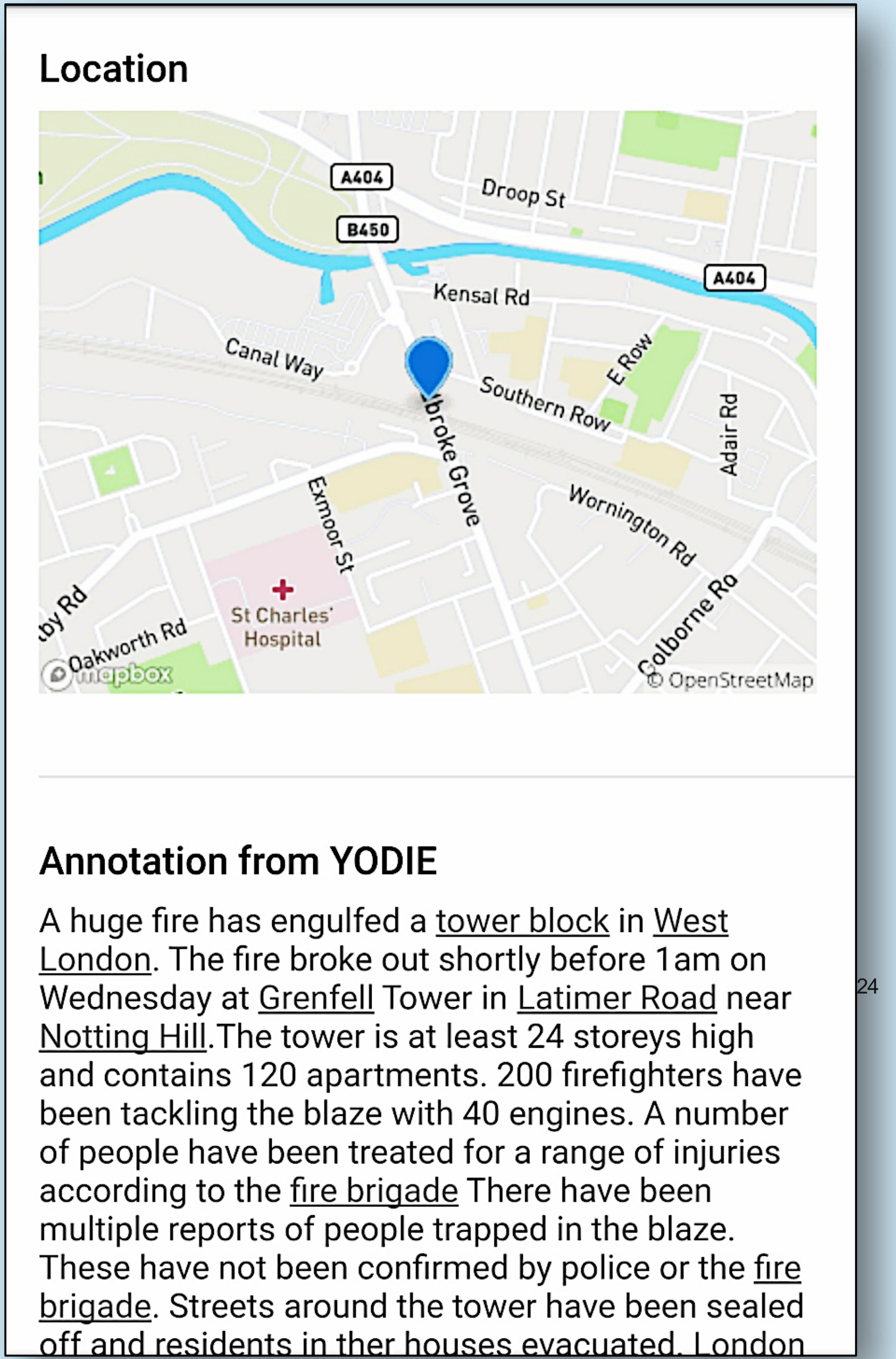
Social Media and Disaster Relief

- Hurricane Sandy in the US:
  - 1.1 million tweets in the first day; over 20 million in total
  - > 800K photos with #Sandy hashtag on Instagram
- Haze in Singapore: > 23 million
- Nepal earthquake in 2015: more than half a million posts

Aid workers in Nepal discussing strategy

Tools to help disaster victims get aid quickly: pinpointing geographic locations

- Many NGOs are not local to the disaster area and may not have a good grasp of the geography
- Place names are ambiguous
- Find mentions of locations in the text, match them to a knowledge base, and plot them on a map



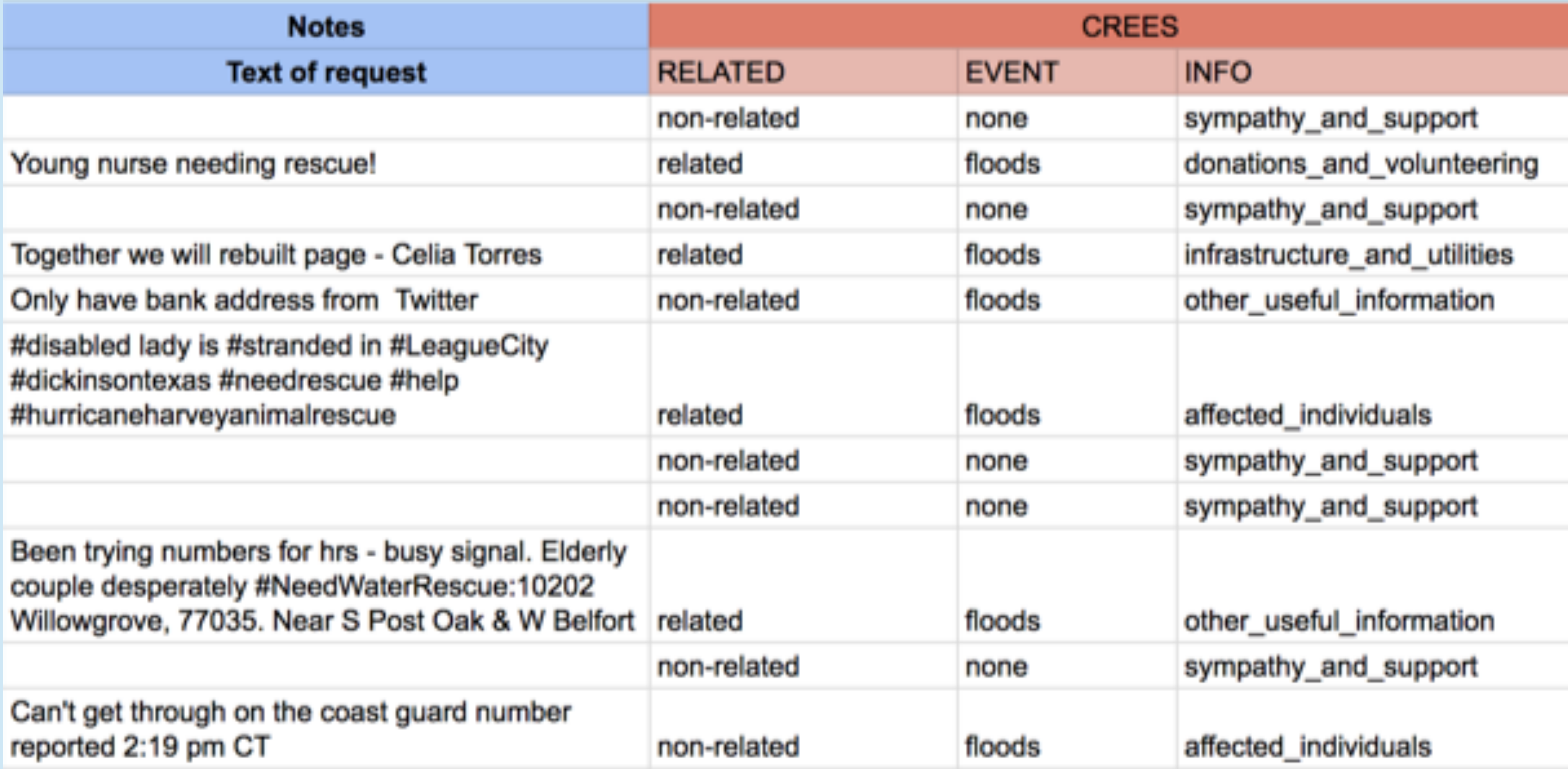
Location

Annotation from YODIE

A huge fire has engulfed a tower block in West London. The fire broke out shortly before 1am on Wednesday at Grenfell Tower in Latimer Road near Notting Hill.The tower is at least 24 storeys high and contains 120 apartments. 200 firefighters have been tackling the blaze with 40 engines. A number of people have been treated for a range of injuries according to the fire brigade There have been multiple reports of people trapped in the blaze. These have not been confirmed by police or the fire brigade. Streets around the tower have been sealed off and residents in ther houses evacuated. London

CREES Google Sheets Add-on

Adding semantic information (from BabelNet) improves cross-lingual crisis event classification



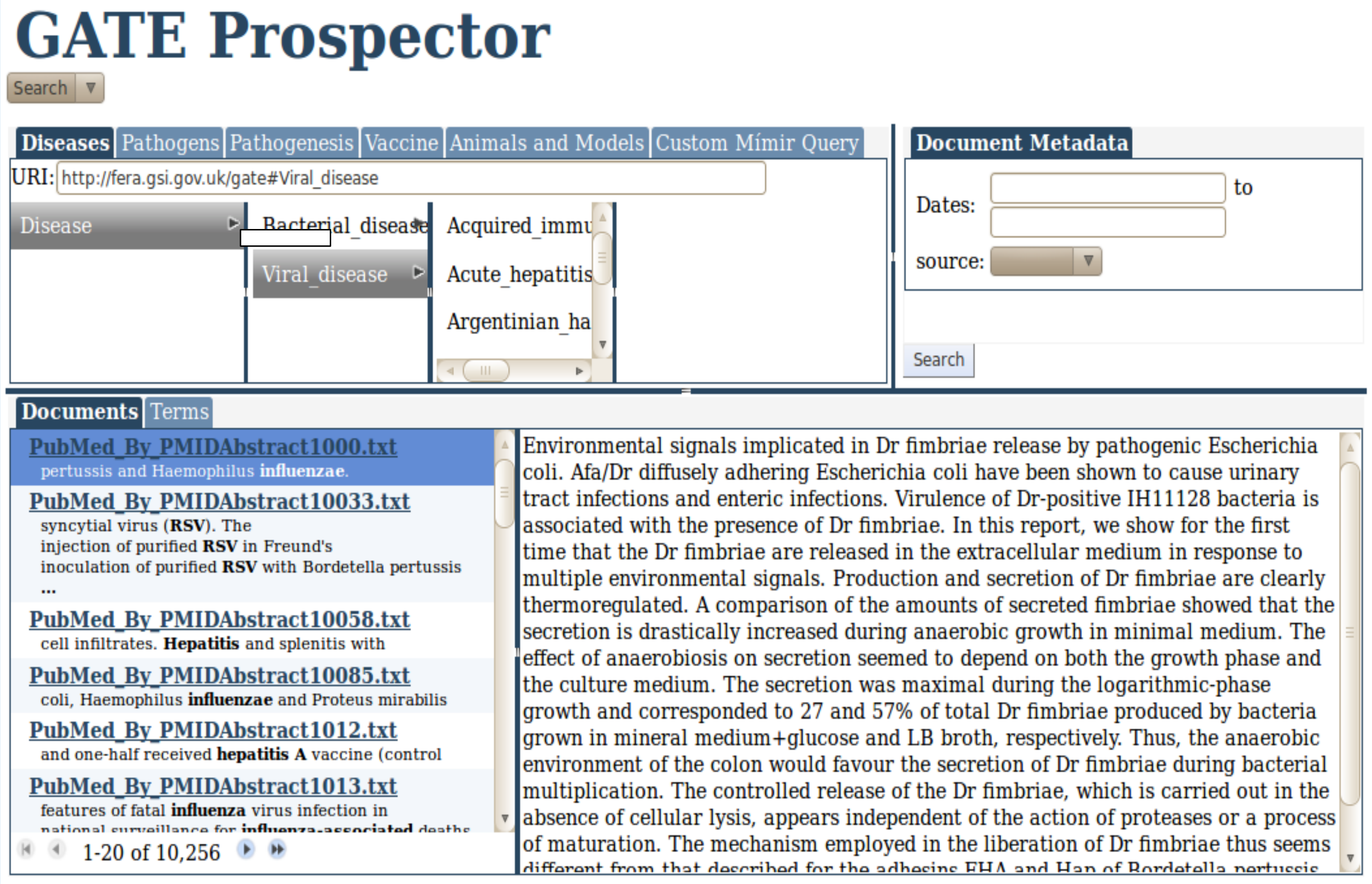
Notes	CREES		
Text of request	RELATED	EVENT	INFO
	non-related	none	sympathy_and_support
Young nurse needing rescue!	related	floods	donations_and_volunteering
	non-related	none	sympathy_and_support
Together we will rebuilt page - Celia Torres	related	floods	infrastructure_and_utilities
Only have bank address from Twitter	non-related	floods	other_useful_information
#disabled lady is #stranded in #LeagueCity #dickinsontexas #needrescue #help #hurricaneharveyanimalrescue	related	floods	affected_individuals
	non-related	none	sympathy_and_support
	non-related	none	sympathy_and_support
Been trying numbers for hrs - busy signal. Elderly couple desperately #NeedWaterRescue:10202 Willowgrove, 77035. Near S Post Oak & W Belfort	related	floods	other_useful_information
	non-related	none	sympathy_and_support
Can't get through on the coast guard number reported 2:19 pm CT	non-related	floods	affected_individuals

GATE MIMIR and Prospector

- Built on top of annotated text in GATE
- can be used to index and search over text, annotations, semantic metadata
- allow queries that arbitrarily mix full-text, structural, linguistic and semantic annotations
- open source
- you can issue ridiculously complex queries

```
 {
 {Person gender=male sparql = "SELECT ?inst WHERE {
   ?inst :party
 <http://dbpedia.org/resource/Labour_Party_%28UK%29> .
 ?inst :almaMater
 <http://dbpedia.org/resource/University_of_Edinburgh>  }"
 }
 [0..3] root:say
 [0..5] {Money currency=“£” value > 2000000}
}
IN
{Document date > 20050000 topic=uk_health}
```

Prospecting Biomedical Literature



URI: http://fera.gsi.gov.uk/gate#Viral_disease

PubMed_By_PMIDAbstract1000.txt
pertussis and Haemophilus **influenzae**.

PubMed_By_PMIDAbstract10033.txt
syncytial virus (**RSV**). The
injection of purified **RSV** in Freund's
inoculation of purified **RSV** with Bordetella pertussis
...

PubMed_By_PMIDAbstract10058.txt
cell infiltrates. **Hepatitis** and splenitis with

PubMed_By_PMIDAbstract10085.txt
coli, Haemophilus **influenzae** and Proteus mirabilis

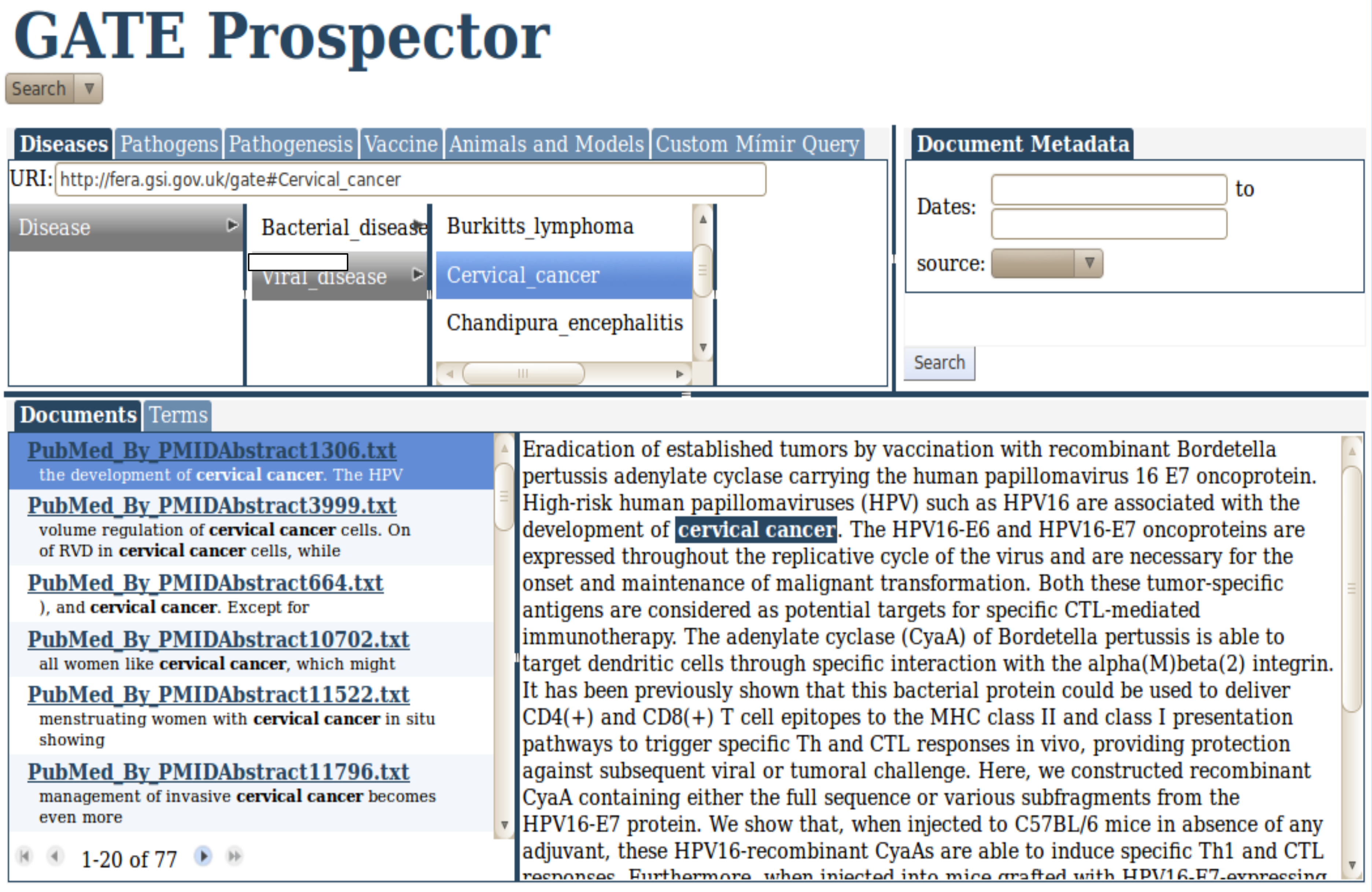
PubMed_By_PMIDAbstract1012.txt
and one-half received **hepatitis A** vaccine (control

PubMed_By_PMIDAbstract1013.txt
features of fatal **influenza** virus infection in
national surveillance for **influenza-associated** deaths

1-20 of 10,256

Environmental signals implicated in Dr fimbriae release by pathogenic Escherichia coli. Afa/Dr diffusely adhering Escherichia coli have been shown to cause urinary tract infections and enteric infections. Virulence of Dr-positive IH11128 bacteria is associated with the presence of Dr fimbriae. In this report, we show for the first time that the Dr fimbriae are released in the extracellular medium in response to multiple environmental signals. Production and secretion of Dr fimbriae are clearly thermoregulated. A comparison of the amounts of secreted fimbriae showed that the secretion is drastically increased during anaerobic growth in minimal medium. The effect of anaerobiosis on secretion seemed to depend on both the growth phase and the culture medium. The secretion was maximal during the logarithmic-phase growth and corresponded to 27 and 57% of total Dr fimbriae produced by bacteria grown in mineral medium+glucose and LB broth, respectively. Thus, the anaerobic environment of the colon would favour the secretion of Dr fimbriae during bacterial multiplication. The controlled release of the Dr fimbriae, which is carried out in the absence of cellular lysis, appears independent of the action of proteases or a process of maturation. The mechanism employed in the liberation of Dr fimbriae thus seems different from that described for the adhesins FHA and Hap of Bordetella pertussis

Choosing A Specific Instance



URI: http://fera.gsi.gov.uk/gate#Cervical_cancer

PubMed_By_PMIDAbstract1306.txt
the development of **cervical cancer**. The HPV

PubMed_By_PMIDAbstract3999.txt
volume regulation of **cervical cancer** cells. On of RVD in **cervical cancer** cells, while

PubMed_By_PMIDAbstract664.txt
), and **cervical cancer**. Except for

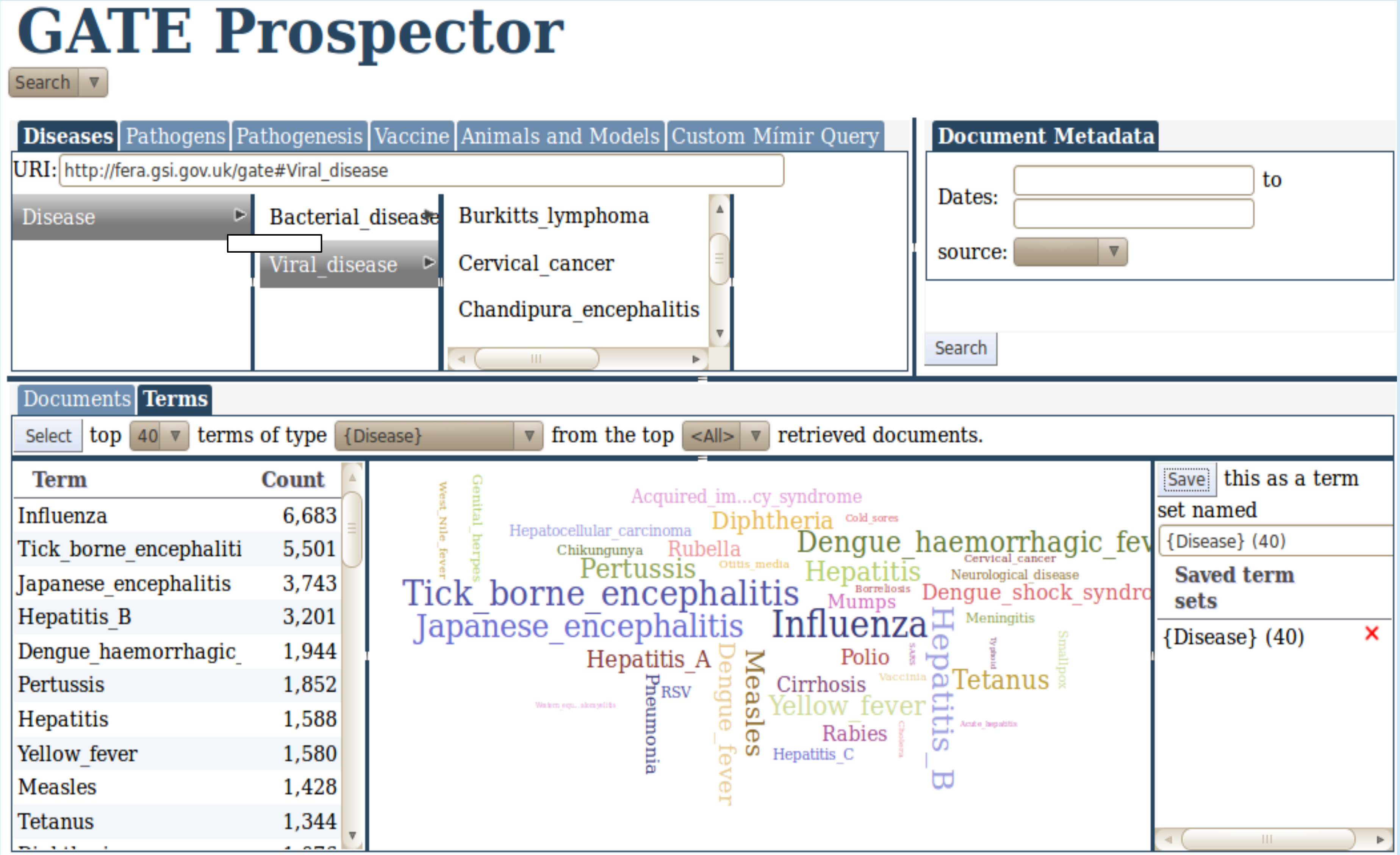
PubMed_By_PMIDAbstract10702.txt
all women like **cervical cancer**, which might

PubMed_By_PMIDAbstract11522.txt
menstruating women with **cervical cancer** in situ showing

PubMed_By_PMIDAbstract11796.txt
management of invasive **cervical cancer** becomes even more

Eradication of established tumors by vaccination with recombinant Bordetella pertussis adenylate cyclase carrying the human papillomavirus 16 E7 oncoprotein. High-risk human papillomaviruses (HPV) such as HPV16 are associated with the development of **cervical cancer**. The HPV16-E6 and HPV16-E7 oncoproteins are expressed throughout the replicative cycle of the virus and are necessary for the onset and maintenance of malignant transformation. Both these tumor-specific antigens are considered as potential targets for specific CTL-mediated immunotherapy. The adenylate cyclase (CyaA) of Bordetella pertussis is able to target dendritic cells through specific interaction with the alpha(M)beta(2) integrin. It has been previously shown that this bacterial protein could be used to deliver CD4(+) and CD8(+) T cell epitopes to the MHC class II and class I presentation pathways to trigger specific Th and CTL responses in vivo, providing protection against subsequent viral or tumoral challenge. Here, we constructed recombinant CyaA containing either the full sequence or various subfragments from the HPV16-E7 protein. We show that, when injected to C57BL/6 mice in absence of any adjuvant, these HPV16-recombinant CyaAs are able to induce specific Th1 and CTL responses. Furthermore, when injected into mice grafted with HPV16-E7-expressing

What diseases are in these documents?



URI: http://fera.gsi.gov.uk/gate#Viral_disease

Dates: □ to □

source: ▾

Select top 40 ▾ terms of type {Disease} ▾ from the top <All> ▾ retrieved documents.

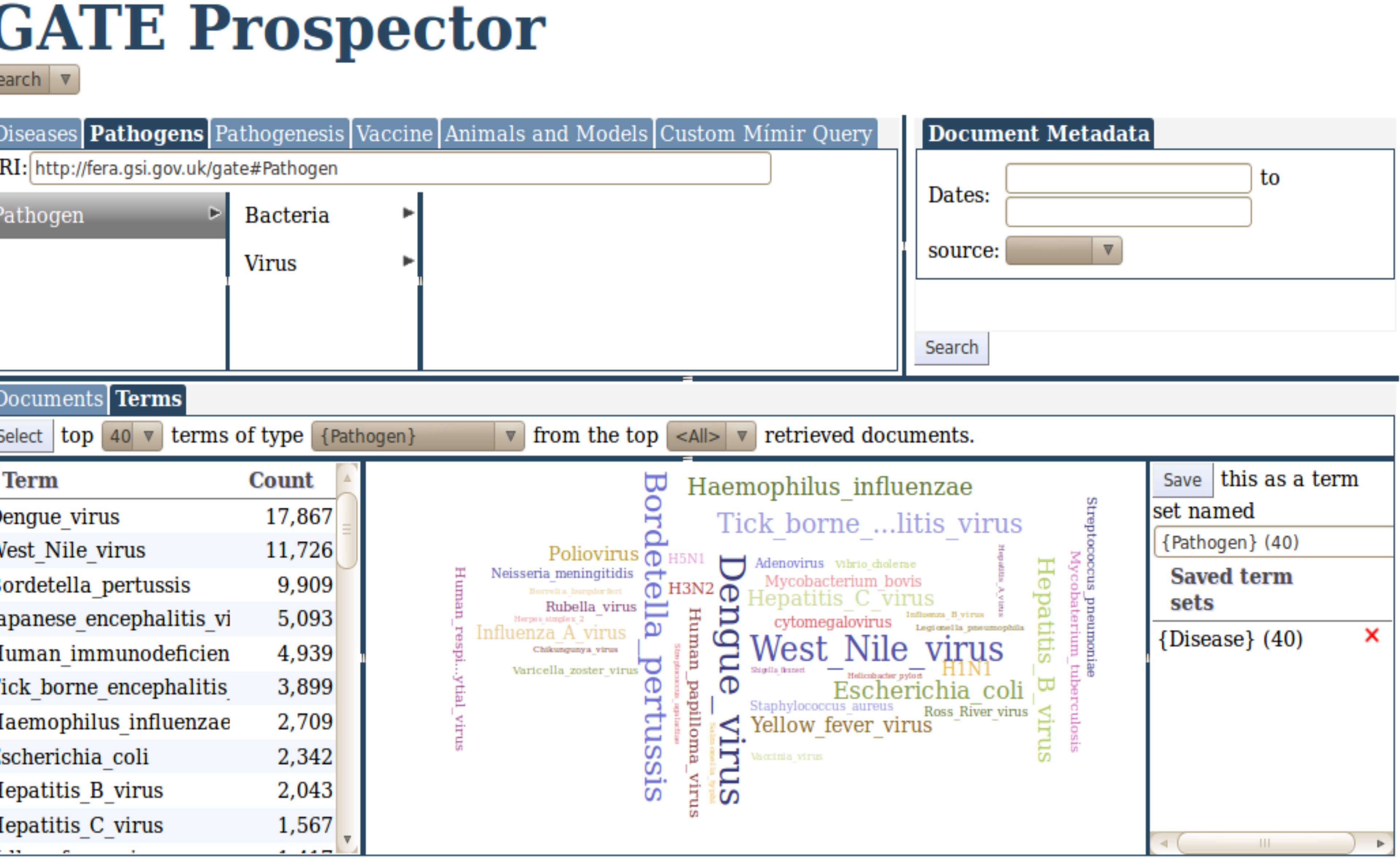
Term	Count
Influenza	6,683
Tick_borne_encephaliti	5,501
Japanese_encephalitis	3,743
Hepatitis_B	3,201
Dengue_haemorrhagic_	1,944
Pertussis	1,852
Hepatitis	1,588
Yellow_fever	1,580
Measles	1,428
Tetanus	1,344

Save this as a term set named {Disease} (40)

Saved term sets

{Disease} (40) ✕

What pathogens?



GATE Prospector

earch ▼

Diseases | **Pathogens** | Pathogenesis | Vaccine | Animals and Models | Custom Mímir Query

RI: http://fera.gsi.gov.uk/gate#Pathogen

Pathogen ▶ | Bacteria ▶ | Virus ▶

Document Metadata

Dates: ______ to ______

source: ▼

Search

Documents | **Terms**

Select top 40 ▼ terms of type {Pathogen} ▼ from the top <All> ▼ retrieved documents.

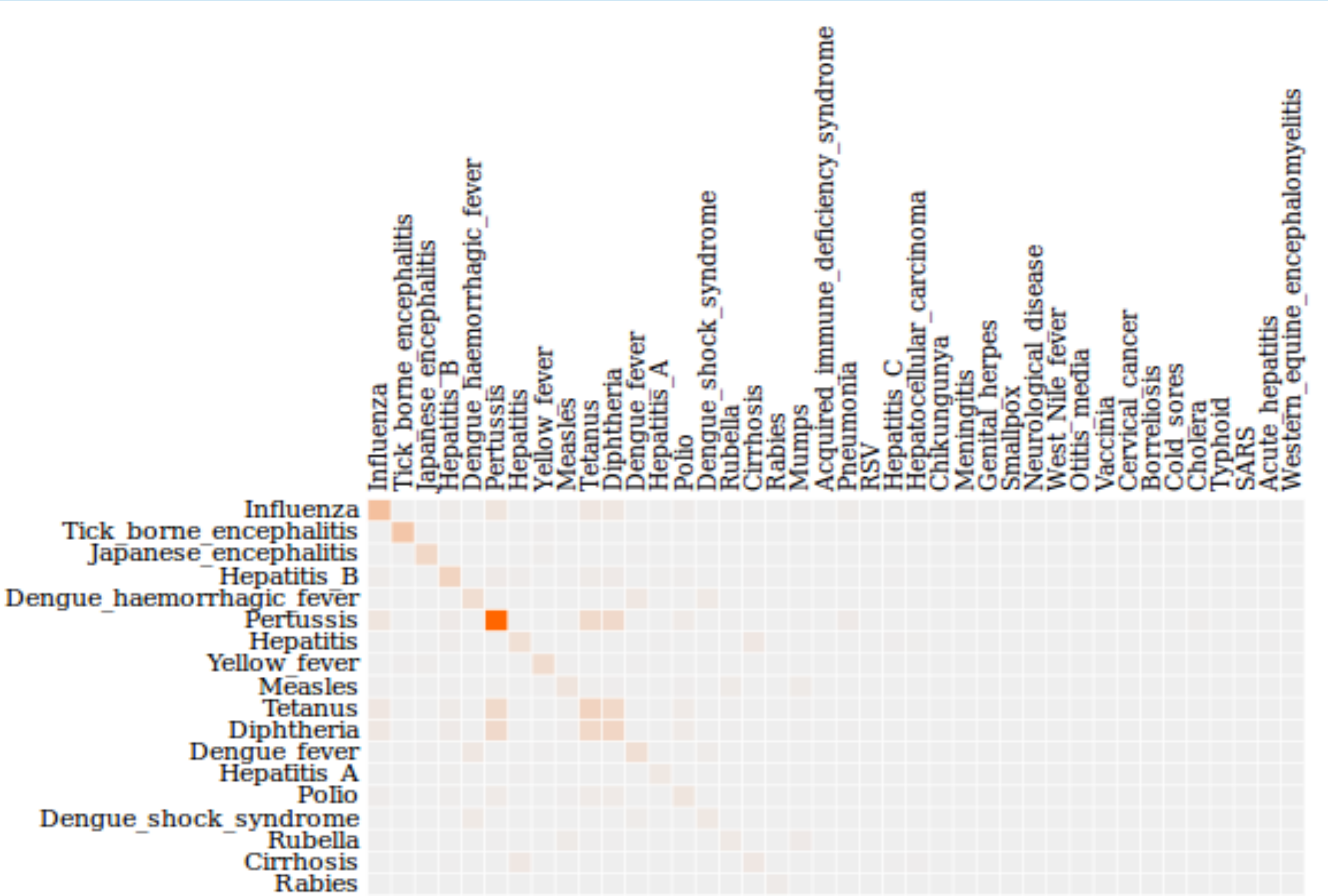
Term	Count
engue_virus	17,867
Vest_Nile_virus	11,726
ordetella_pertussis	9,909
apanese_encephalitis_vi	5,093
Iuman_immunodeficien	4,939
ick_borne_encephalitis_	3,899
Iaemophilus_influenzae	2,709
scherichia_coli	2,342
Iepatitis_B_virus	2,043
Iepatitis_C_virus	1,567

Save this as a term set named {Pathogen} (40)

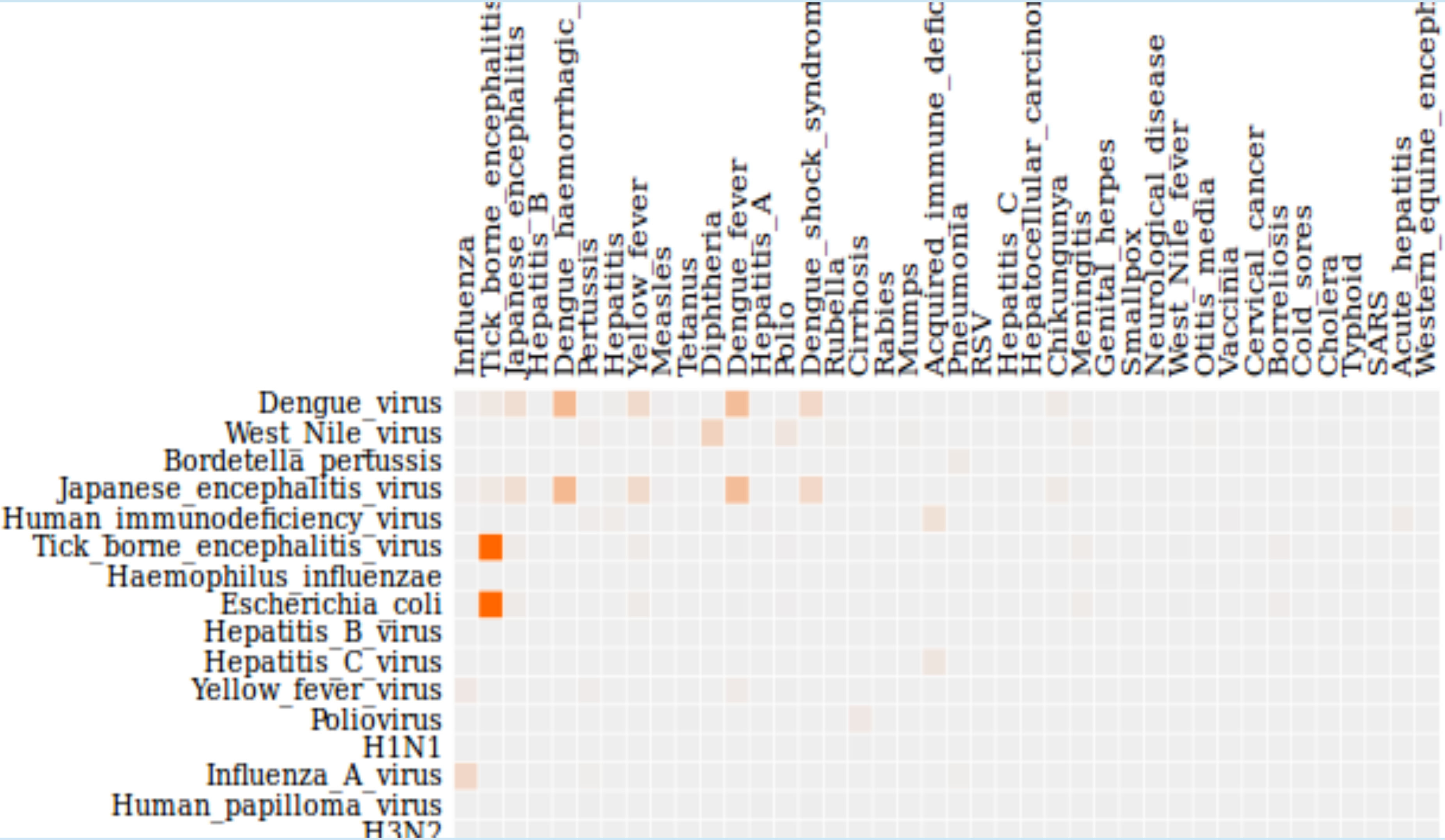
Saved term sets

{Disease} (40) ✕

Disease vs Disease Co-ocurrences

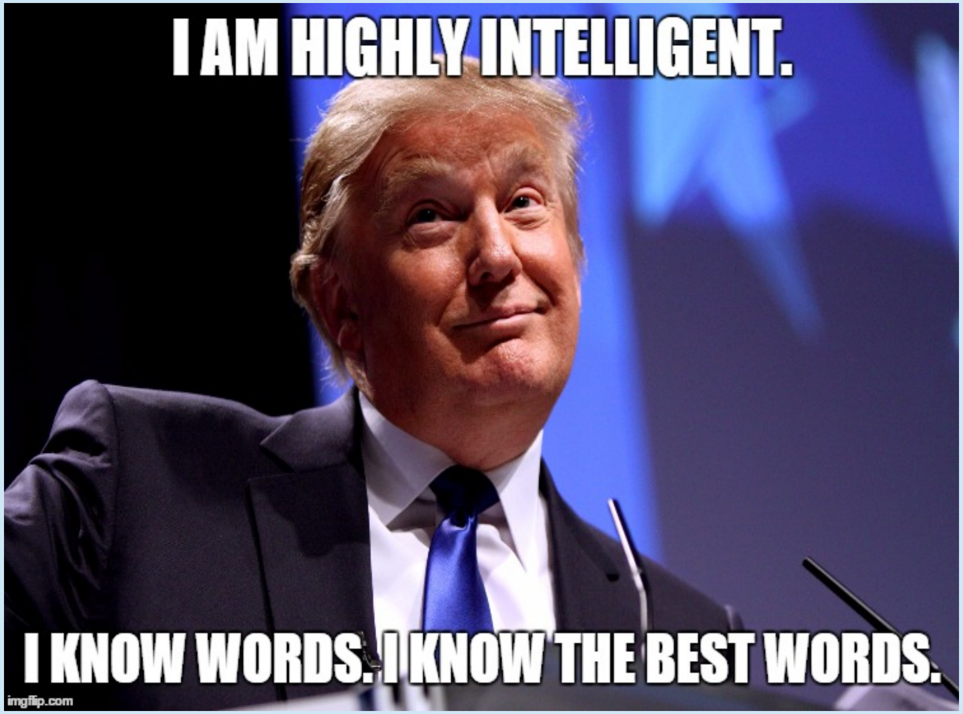


Diseases vs Pathogens

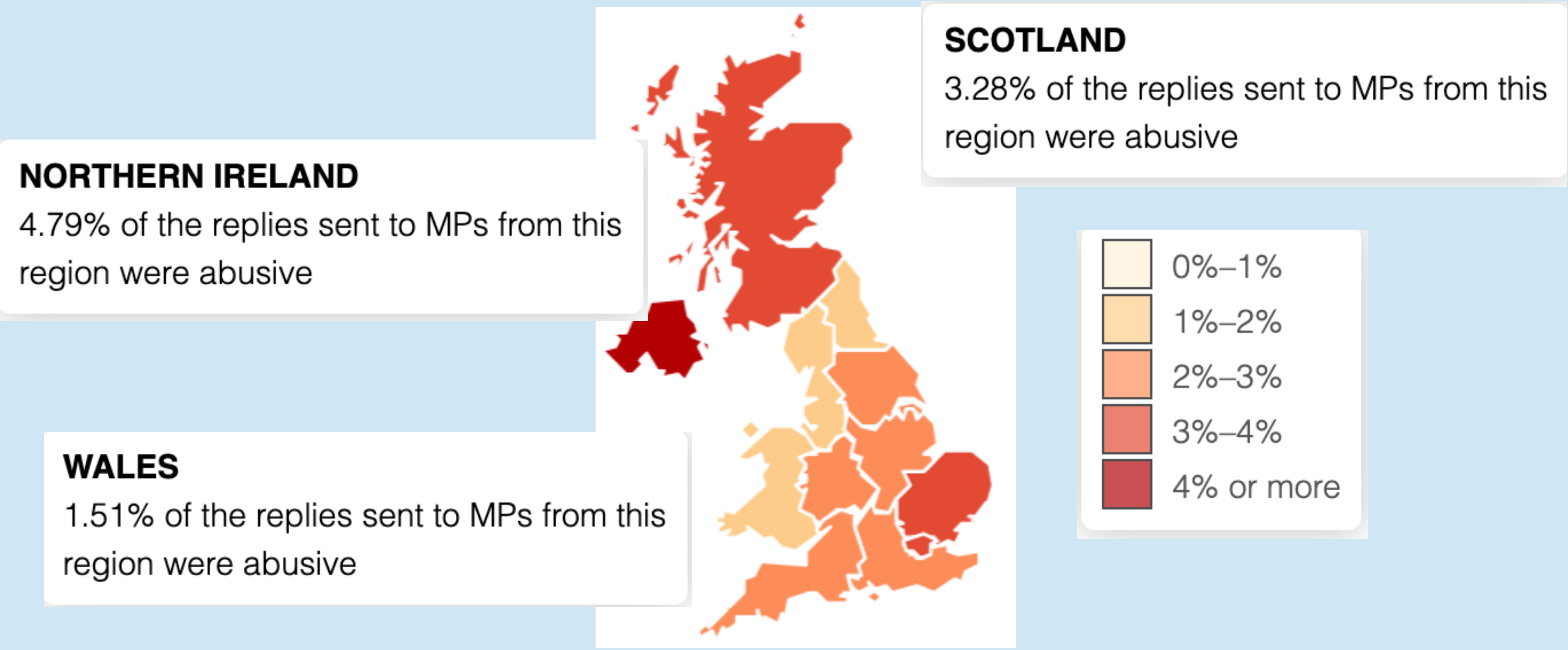


Social media and politics

- How do people in different parts of the country talk about elections and political events?
- How do the MPs talk about different topics?
- How does the public respond to them?
- What kind of people send hate speech, who to, and what about?



Hate speech against politicians Jan-Feb 2019



SCOTLAND

3.28% of the replies sent to MPs from this region were abusive

NORTHERN IRELAND

4.79% of the replies sent to MPs from this region were abusive

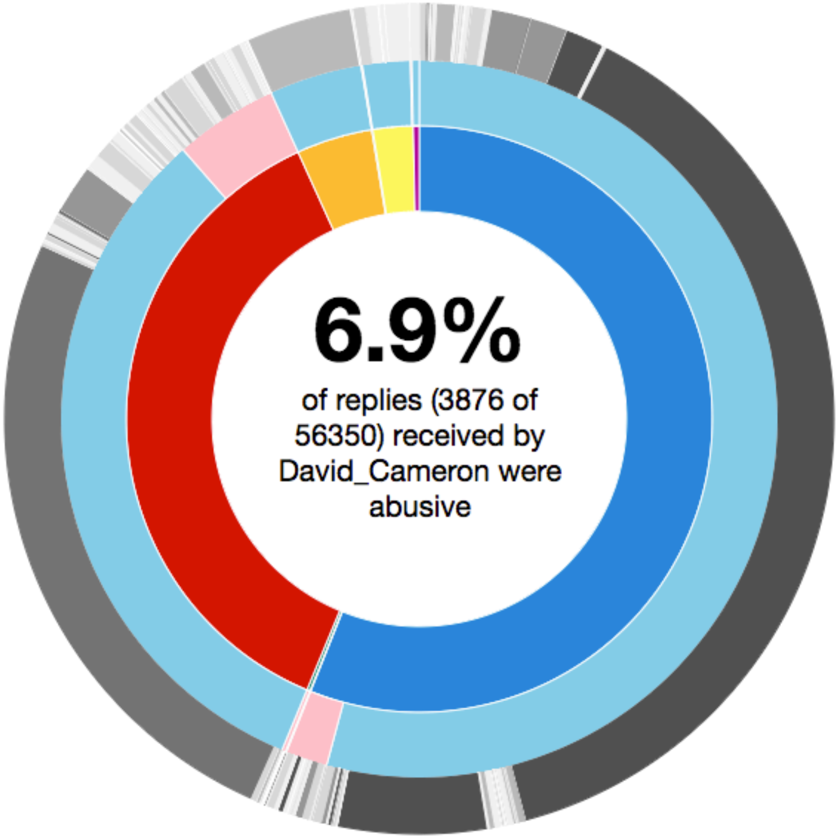
WALES

1.51% of the replies sent to MPs from this region were abusive

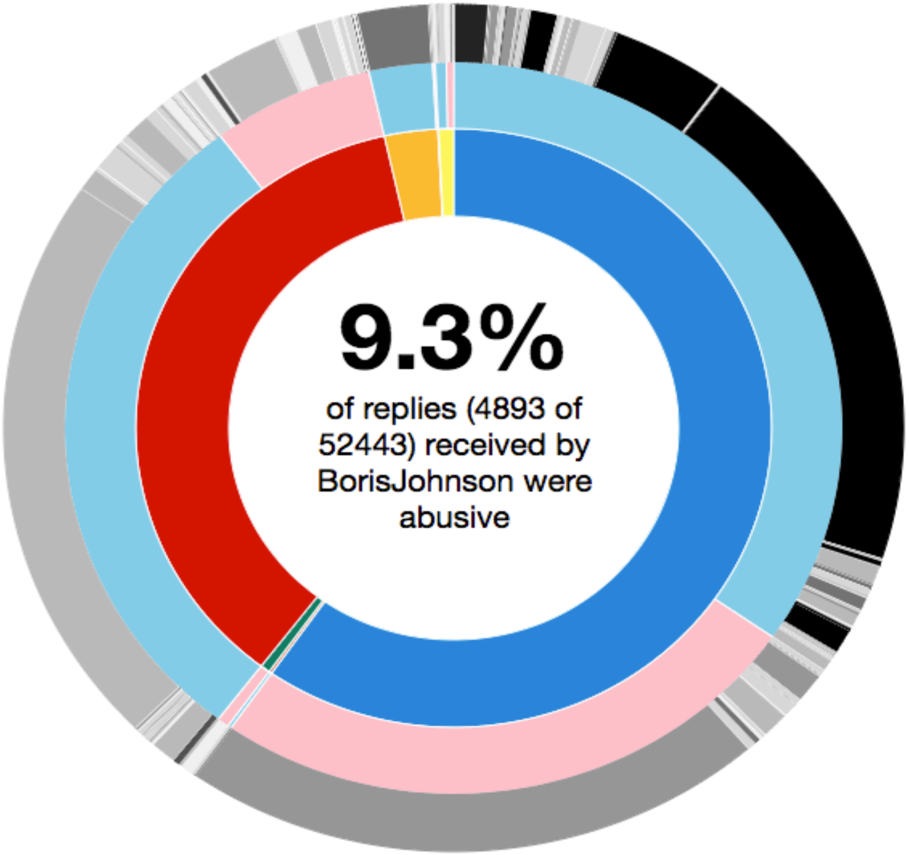
Annotation of tweets with simple DBpedia and NUTS linking lets us index and query our data in interesting ways

Who gets the abuse?

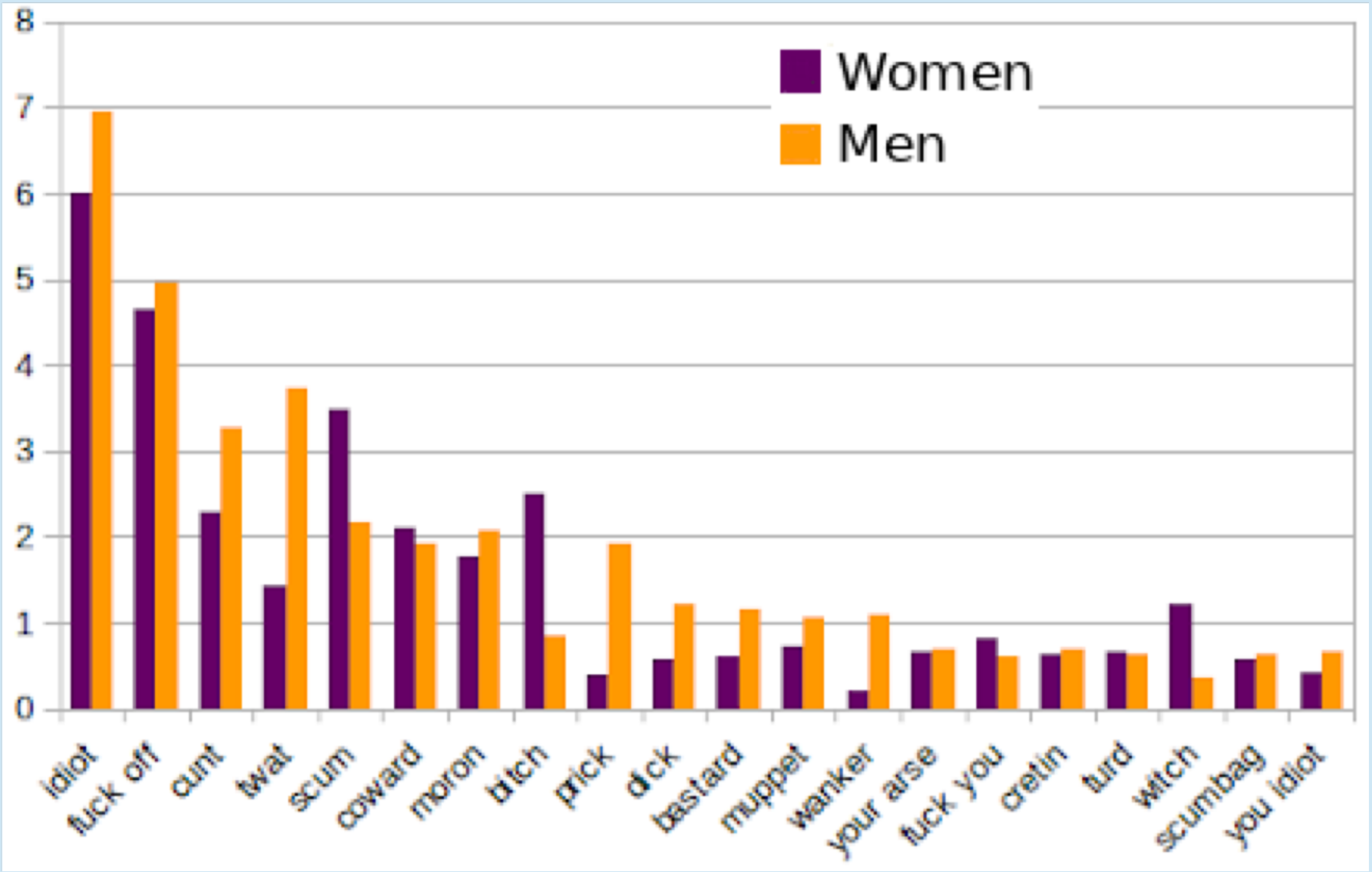
2015



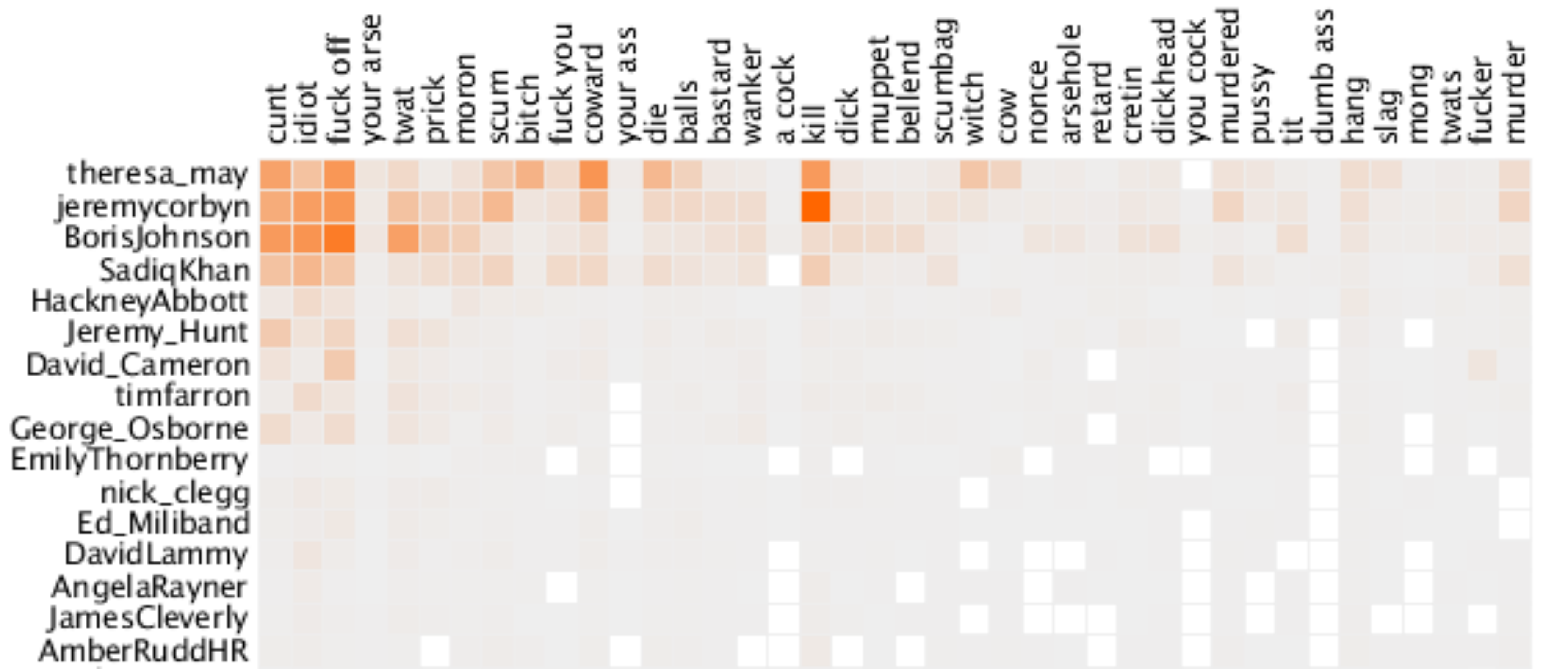
2017



Top abusive words

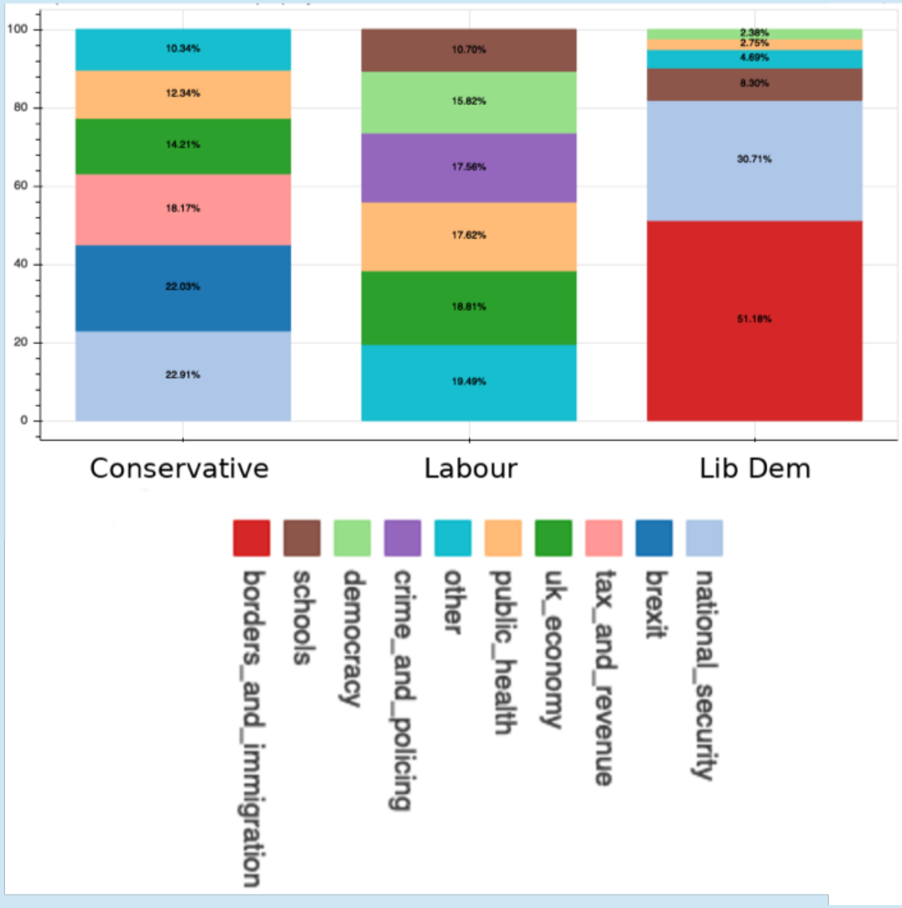


Words vs people

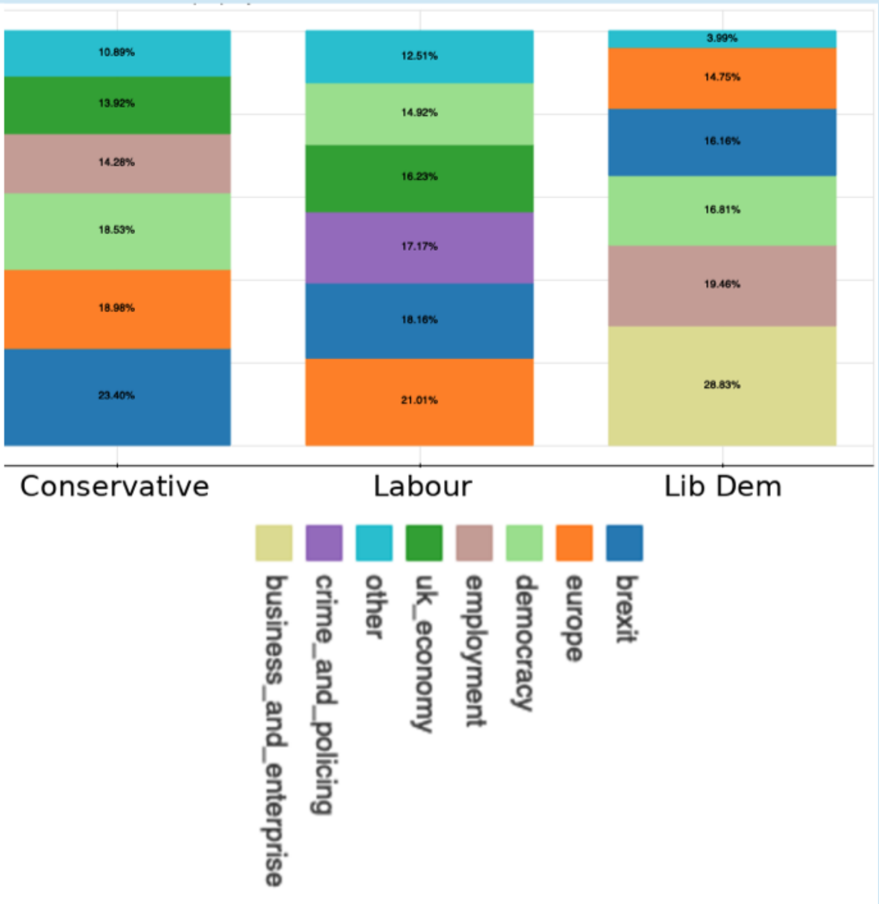


Topics of abuse per party

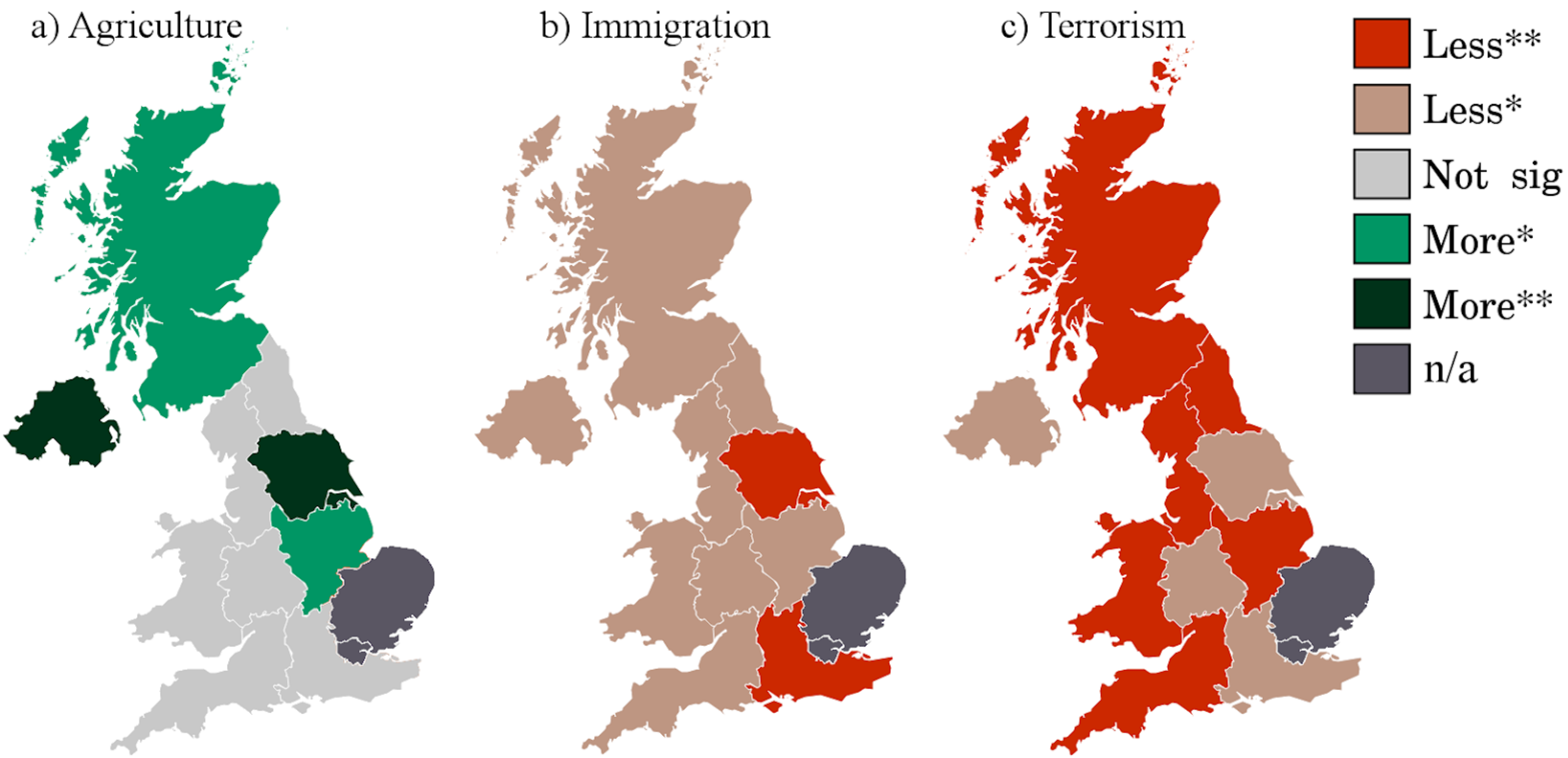
2017



2019



Local and national news coverage of Brexit



- Green/blue indicates areas where local coverage outweighed national coverage
- Across the regions, Twitter remainers showed closer congruence with local press than Twitter leavers

So where are we at?

- We have lots of cool technology and data
- There is massive demand for its use in the real world
- It doesn’t always need to be complex, it just needs to be applied
- Sometimes even simple techniques can have really useful outputs
- Don’t neglect interdisciplinary “borrowing”
- The usual disclaimers about accuracy – real-world evaluation

Acknowledgements

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- Nesta http://nesta.org.uk
- Free Press Unlimited pilot project: “Developing a database for the improved collection and systematisation of information on incidents of violations against journalists” https://www.freepressunlimited.org

And all the GATE team in Sheffield!