

Quo vadis i od kuda vadiš informacije?

Vrkić, Dina

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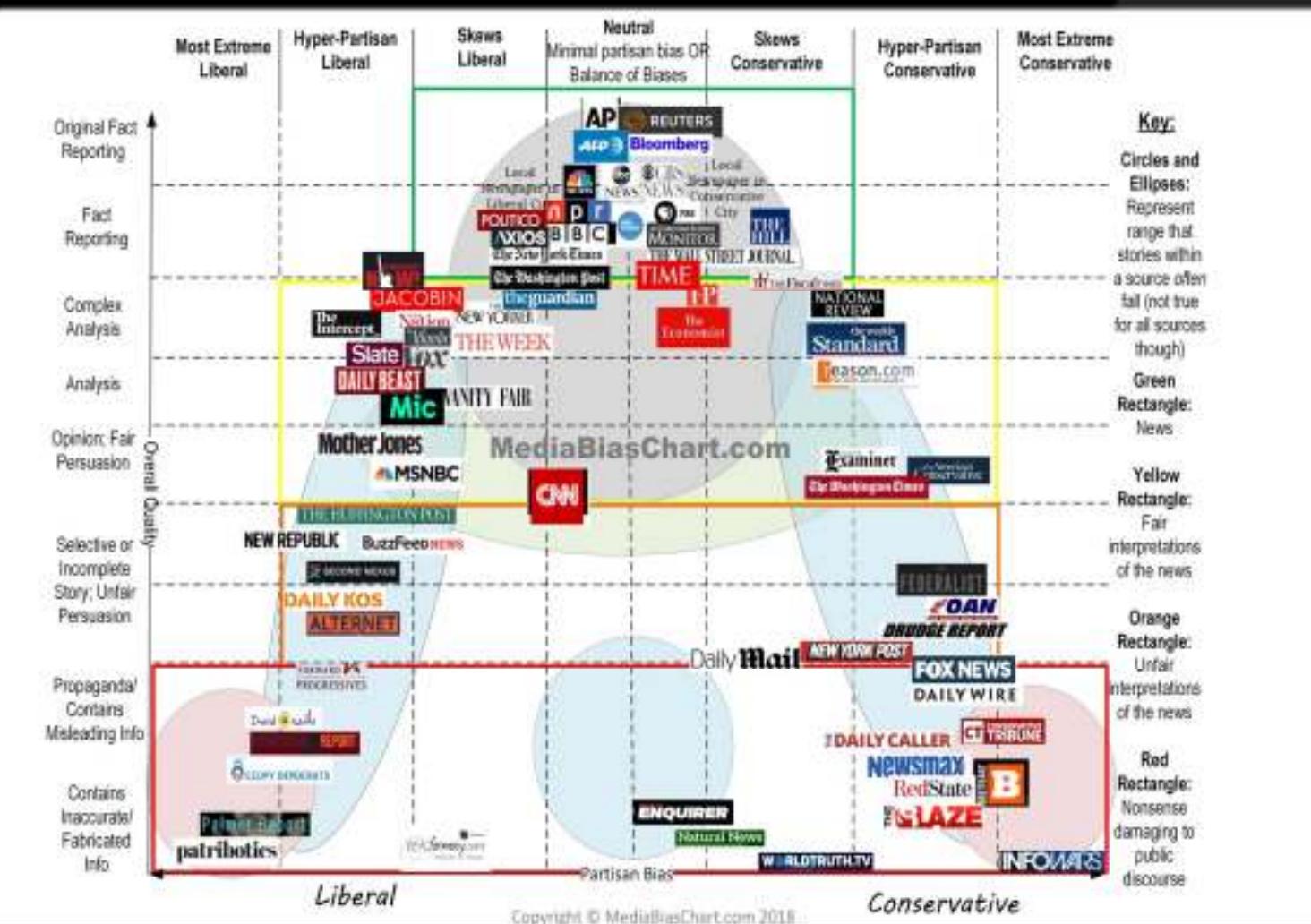
Quo vadis i od [kuda vadiš] informacije?

Dina Vrkić

Medicinski fakultet Sveučilišta u Zagrebu, Središnja medicinska knjižnica



1917–2017
100 godina Medicinskog
fakulteta Sveučilišta
u Zagrebu



ACCURACY OF DRUG INFORMATION ON WIKIPEDIA

Wikipedia - #1 source
of medical info for
patients & healthcare
professionals

SOURCE: IMSHEALTH

1 IN 5 - # of times
Wikipedia provided
dosage info

78%
of the time
dosage info was
incorrect

5% of the time
ISI was included

Wasn't accurate
when it was included

Results are based on
a proprietary study of
19 pharmaceutical
brands and their
appearances across the
major health-related
content sites.



INCLUDED SIDE EFFECTS

info 74% of the time

It was accurate 89%
of the time

7 IN 10 - # of times
drug interaction
information
was included

Inaccurate 70% of the time
when included

3 IN 4 - # of times Wikipedia listing included

accurate drug indication info

51% of the time, Wikipedia linked to
brand site from drug page

 underscore





Društvene mreže i mediji

Novi oblici teksta u društvenom (Web 2.0) okruženju omogućuju:



Stvaranje → Povezivanje → Komuniciranje → Dijeljenje → Suradnju → Uključivanje

- Tuđa mišljenja nam uvelike mogu koristiti u raznim poljima
- Mreža (engl. Web) mjesto pamćenja, odnosno arhiviranja te je on, podložno i pretraživanju
- Pojam informacije se promijenio iz **činjeničnog stanja** u **kontekst osobnog**

Altmetrija

Alternativna metrika : Odgovor-kritika *tradicionalnoj metriči*



TEMELJI SE

- Društvenim mrežama
- Otvoreni pristup - Otvorena znanost
- Kvantitativni pokazatelj javnog doseganja i pažnje ↔ Izvan znanstvenog okruženja
- Mjeri interes – ne kvalitetu
- Praćenje u realnom vremenu ↔ Cilj: dokaz utjecaja

OKRENUTA

Člancima, knjigama,
skupovima podataka
(dataset), programskom
kodu, softveru, sivoj literaturi
(diplomski radovi),...

PRISTUP

Radovi → (odnosno)
objekti pomoći: DOI,
URL (skraćeni URL), URI

Mjeri interes – ne kvalitetu

Kvantitativni pokazatelj javnog dosega i pažnje

POGLEDAN

mrežne stranice izdavača, Dryad

UČITAN

mrežne stranice izdavača, Dryad

CITIRAN

PubMed, CrossRef, Scopus,
Wikipedia, DOI, WoSCC

PONOVNO KORIŠTEN

GitHub



DIJELJEN

Facebook, Twitter, LinkedIn

OZNAČEN/POHRANJEN

Mendeley, Zotero, CiteULike

KOMENTIRAN

Twitter, Mendeley, blog, mrežne stranice
izdavača, Wikipedia, Faculty of 1000

PRIMJENJEN

[< Previous Article](#)

Volume 351, No. 9103, p637-641, 28 February 1998

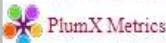
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Early Report

RETRACTED: Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children

Dr AJ Wakefield, FRCS[✉], SH Murch, MB, A Anthony, MB, J Linnell, PhD, DM Casson, MRCP, M Malik, MRCP, M Berelowitz, FRCPsych, AP Dhillon, MRCPath, MA Thomson, FRCP, P Harvey, FRCP, A Valentine, FRCR, SE Davies, MRCPath, JA Walker-Smith, FRCP

Published: 28 February 1998



DOI: [https://doi.org/10.1016/S0140-6736\(97\)11096-0](https://doi.org/10.1016/S0140-6736(97)11096-0)

Article Info

Summary

Full Text

Tables and Figures

References



RETRACTED

Previous

Articles

Primary symptomless colonisation by *Clostridium difficile* and decreased risk of subsequent diarrhoea

Summary

Background

We investigated a consecutive series of children with chronic enterocolitis and regressive developmental disorder.

Methods

12 children (mean age 6 years [range 3–10], 11 boys) were referred to a paediatric gastroenterology unit with a history of normal development followed by loss of acquired skills, including language, together with diarrhoea and abdominal pain. Children underwent gastroenterological, neurological, and developmental assessment and review of developmental records. Ileocolonoscopy and biopsy sampling, magnetic-resonance imaging (MRI), electroencephalography (EEG), and lumbar puncture were done under sedation. Barium follow-through radiography was done where possible. Biochemical, haematological, and immunological profiles were examined.

Findings

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Case Report

Pubic pain after a marathon

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[Retraction—Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children](#)

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RETRACTED: Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children

Embed Widget

RETRACTED: Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children

Citation data: The Lancet, ISSN: 0140-6736, Vol: 351, Issue: 9103, Page: 637-641

Publication Year: 1998

Explore PlumX Metrics

What are PlumX Metrics? How can they help tell the story about this research? How can I use them?

[Learn more](#)

CAPTURES	4210	MENTIONS	142	SOCIAL MEDIA	8889	CITATIONS	968	RATINGS
Exports-Saves	2922	News Mentions	53	Shares, Likes & Comments	7959	Citation Indexes	968	Reddit
Readers	1288	Blog Mentions	51	Tweets	929			
		References	24	+1s	1			
		Comments	8					
		Q&A Site Mentions	5					
		Economics Blog Mentions	1					

ARTICLE SUMMARY

DOI:

[10.1016/s0140-6736\(97\)11096-0](https://doi.org/10.1016/s0140-6736(97)11096-0)

NEWS

BLOGS

WIKIPEDIA

Q&A SITES

AUTHOR(S):

AJ Wakefield; SH Murch; A Anthony; J Linnell; DM Casson; M Malik; M Berelowitz; AP Dhillon; MA Thomson; P Harvey; [+ Show More](#)

PUBLISHER(S):

Elsevier BV

MOST RECENT BLOG MENTION

20 years ago, research fraud catalyzed the anti-vaccination movement

Feb. 28, 2018 | [3quarksdaily](#) by S. Abbas Raza

Julia Belluz in Vox: Exactly 20 years ago this month, an esteemed medical journal published a small study that has become one of the most...

[Read full Blog Mention](#)

Twitter has a new Terms of Service and Pr

Home About

NO O

If you a



wide eyed
@realityisagoodt

Open your eyes and see what is happening around you. Don't be selfish. THINK AND DO! The next generation is counting on you.

United States

Joined July 2016

Rosewind @Rosewind2007 · 16 Nov 2017

#nazivax
#astroturfing

You're not really going yourself any favours here; are you?

You're going to post links to an a film by a discredited charlatan and fraud based on two contradictory and retracted papers?

Knock, as they say, yourself out...

Q 2 T 1 L 7

wide eyed
@realityisagoodt

Follow

Replies to @Rosewind2007 @erikwilson1975 and 48 others

You're obviously not aware of the entire story but that's okay.

I'm thinking that maybe over 100 Twitter notifications a day this week must be a sign that I should get more involved

Here is a prosecuting attorney who has vaccine injured children



VaxXed Stories: The Prosecutor

District Attorney Nico LaHood and wife Davida tell the story of their son and daughter's vaccine injury to Polly Tommey of the VaxXed Team. Camera by Joshua ...

[youtube.com](#)

Got it X

Have an account? Log in ▾

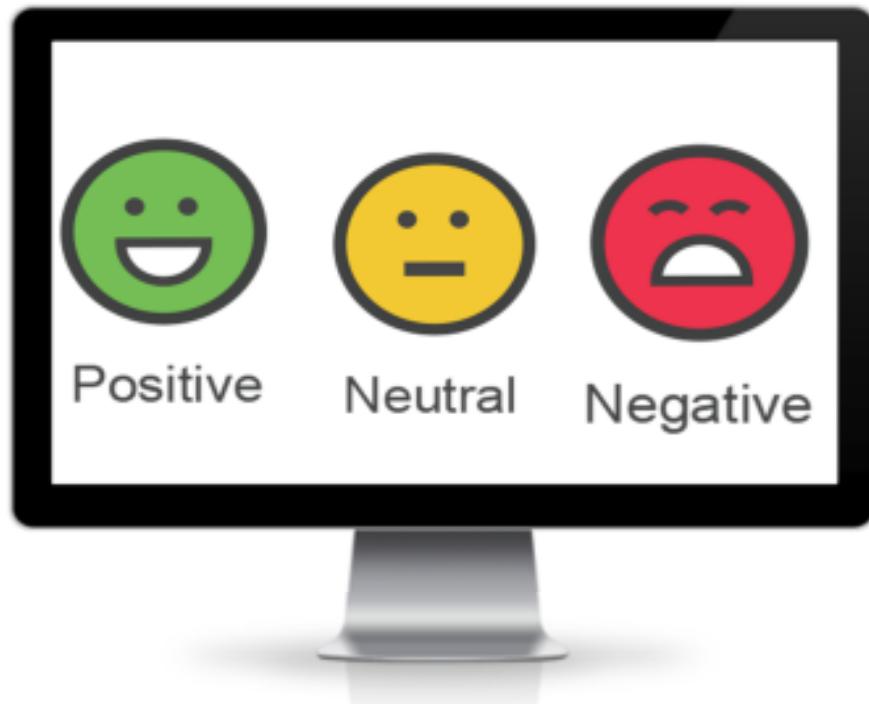
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to learn,

YOU!

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Analiza sentimenta



VAŽNO!!! Računalna analiza koja je podložna nedostacima i treba je iščitavati s odstojanjem

- Sentiment analiza je klasifikacija dokumenata temeljenih na ukupnom broju izraženih sentimenta od strane nositelja mnijenja (Pang i Lee)
- Metode za analizu temelje se na korištenju kombinacije:
 1. obrade prirodnog jezika,
 2. računalne i tekstove analitike s pomoći koje se mogu izvući subjektivne informacije iz riječi, odnosno skupa riječi.
- Nastala je zbog rasta velikog broja metoda strojnog učenja, načinima obrade teksta, povlačenju podataka i zbog velikih količina podataka i brzog širenja interneta (rezultata mišljenja)
- Omogućava olakšanu evaluaciju, ali i klasifikaciju mišljenja vezano uz neku temu
- Temelji se na **binarnoj** analizi: **zločin je loše, zaljubljenost je dobro**
- **PROBLEM:** Bogatstvo prirodnog jezika (i njegovi gramatički elementi) mogu stvoriti i „sivu“ zonu – sva ona prenesena značenja kao što su: sarkazam, sleng, ironija, narječja, itd. (Wright)

Što je bitno?

Blogs Microblogs Bookmarks Images Video All

vaccination

Search Advanced Search Preferences

socialmention*

59% strength 2:1 sentiment

6% passion 55% reach

1 minutes avg. per mention

last mention 3 minutes ago

109 unique authors

49 retweets

Sentiment

positive	16
neutral	101
negative	8

Top Keywords

vaccination	175
link	24
comments	23
submitted	22
health	18
vaccinated	18
service	17
cholera	16
years	14
baby	14

Top Users

Biogetica	2
mronick	2
onlineayth	2
salahabdullah1221	2

Mentions about vaccination

Sort By: Date Results: Anytime

Results 1 - 16 of 125 mentions.

- Excerpt from The Great Vaccination Debate
Excerpt from The Great Vaccination Debate - ExcerptfromTheGreatVaccinationDebateinfographic.pnghttp://www.medicalcodingcareerguide.com/vaccine debate/s1224.photobucket.com/albums/ee366/BrigidMS/?action=view&t=ExcerptfromTheGreatVaccinationDebateinfographic.p 3 minutes ago - by BrigidMS on photobucket
- Vaccination
Vaccination - Livevaccine.jpgCaptured from AFTAB Gp Farms Limited,Bangladesh During live vaccine s1129.photobucket.com/albums/m605/Filsteen_Khan/RW8X9SPWZQ/?action=view&t=Livevaccine.jpg 3 minutes ago - by Filsteen_Khan on photobucket
- vaccination
vaccination - vaccination.jpg smg.photobucket.com/albums/v131/flyek/MY personal/?action=view&t=vaccination.jpg 3 minutes ago - by flyek on photobucket
- Vaccination Geekery_1
Vaccination Geekery 1 - dragoncon2010092.jpgExtremely cute posters from a free vaccination / health clinic located in the mall food court adjacent to the con. s422.photobucket.com/albums/pp309/hellozukohere/Dragon Con 2010/?action=view&t=dragoncon2010092.jpg 3 minutes ago - by hellozukohere on photobucket
- Vaccination Geekery_2
Vaccination Geekery 2 - dragoncon2010093.jpgExtremely cute posters from a free vaccination / health clinic located in the mall food court adjacent to the con. s422.photobucket.com/albums/pp309/hellozukohere/Dragon Con 2010/?action=view&t=dragoncon2010093.jpg 3 minutes ago - by hellozukohere on photobucket
- Vaccination
Vaccination - VaccinationM.jpg smg.photobucket.com/albums/v103/Linkash/?action=view&t=VaccinationM.jpg 3 minutes ago - by Linkash on photobucket

✓ Anatomija sentiment analize nam omogućuje da uz vizualno pomagalo imamo i direktan pristup samom izvoru

✓ Uvijek treba uzeti u obzir kako se radi o obradi prirodnog jezika i kako postoji mogućnost netočno dodijeljenog polariteta samoj rečenici – značenju

✓ izlučivanja ključnih riječi koje su povezane s onom koju korisnik traži: omogućuje praćenje i drugih pojmljova ili trendova unutar samog interesnog polja.



Primjer sentiment analize



Negativan stav

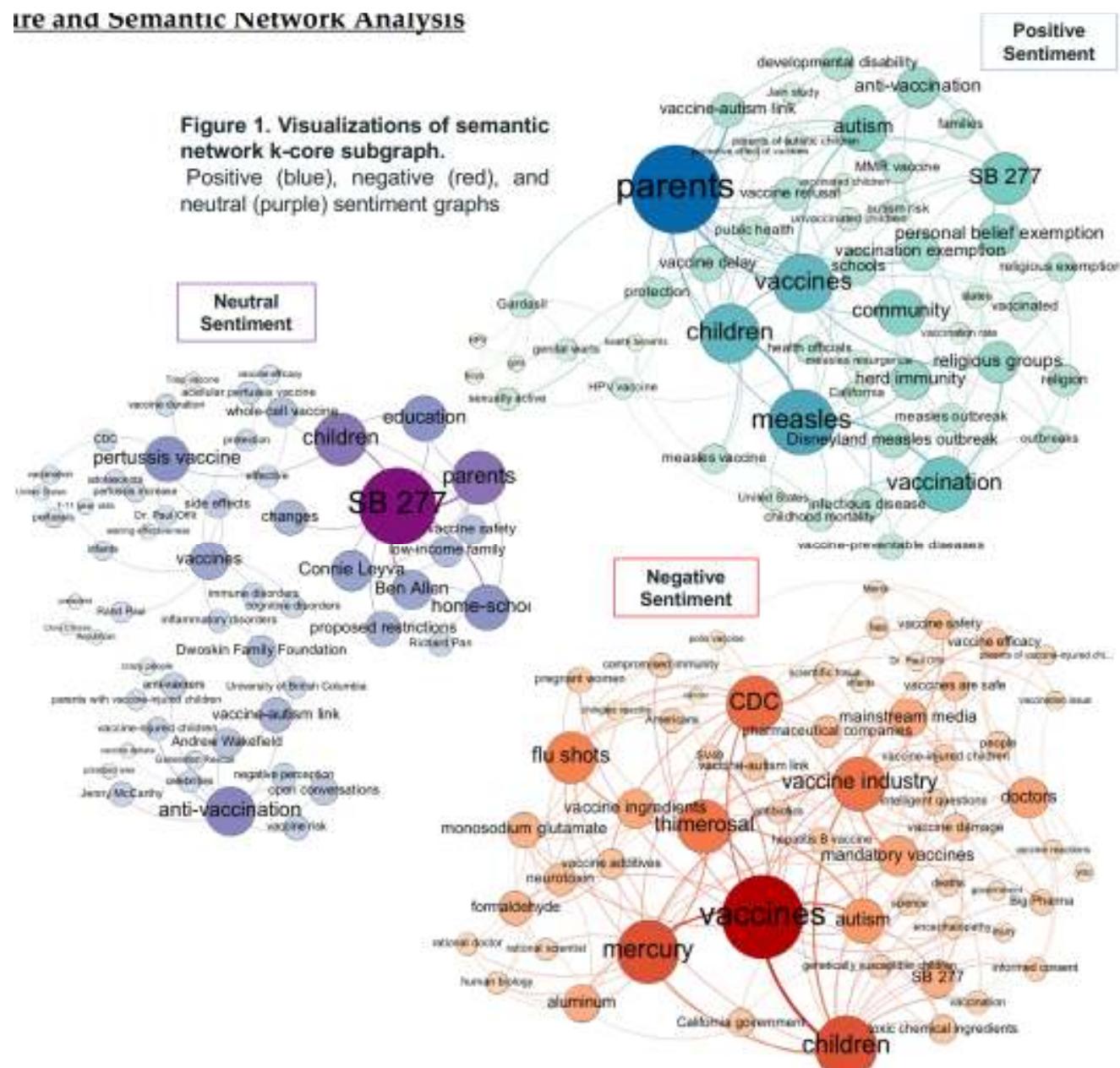
Neutralan stav

Pozitivan stav

Sentiment and Semantic Network Analysis

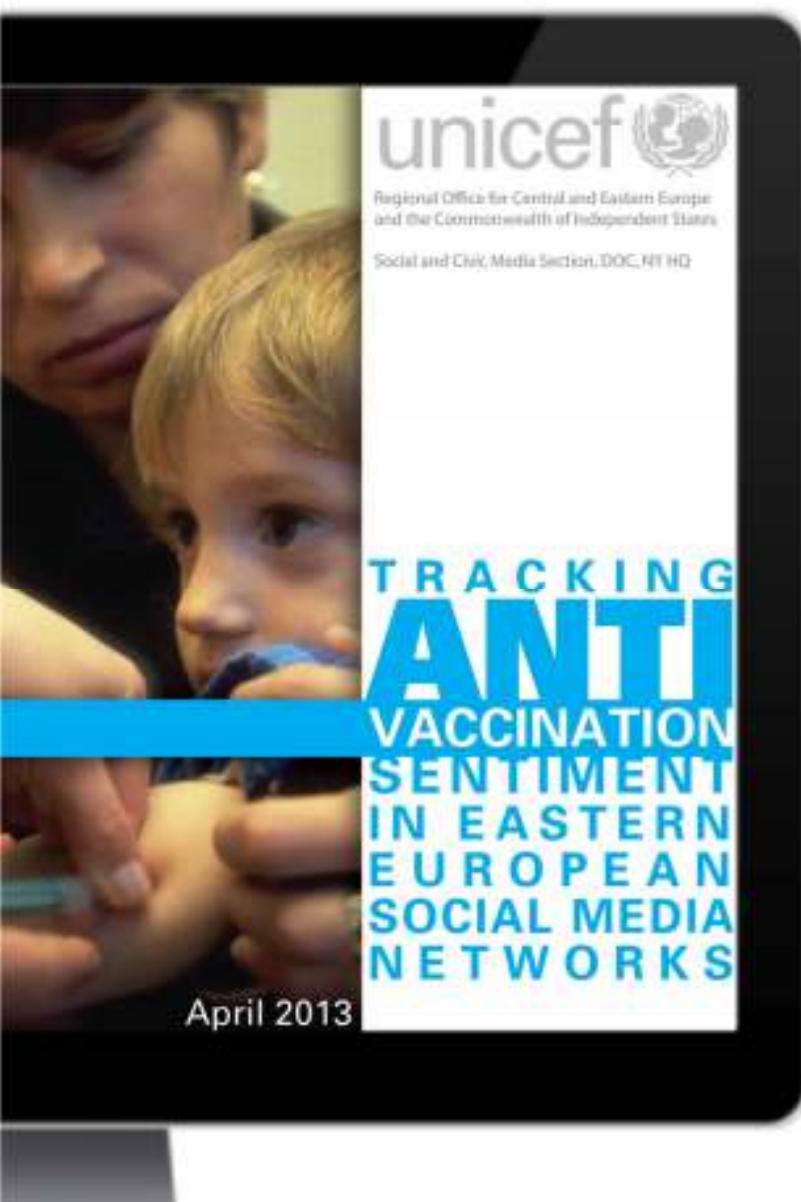
Figure 1. Visualizations of semantic network k-core subgraph.

Positive (blue), negative (red), and neutral (purple) sentiment graphs



Kang G, Ewing-Nelson S,
Mackey L, Schlitt J,
Marathe, A , Abbas K,
Swarup S. Semantic
Network Analysis of
Vaccine Sentiment in
Online Social Media. URL:
<https://f1000research.com/assets/download/1114>
137

Vaccine sentiment articles (total n = 50)	Positive (n = 23)			Negative (n = 21)			Neutral (n = 6)			Vaccine sentiment articles (total n = 50)	Positive (n = 23)			Negative (n = 21)			Neutral (n = 6)		
Document type	Blog =	8	Blog =	15	News =	4				Target vaccine population	Childhood =	16	Childhood =	15	Childhood =	3			
		(34.8%)		(71.4%)		(66.7%)						(69.6%)		(71.4%)		(50.0%)			
	News =	7	Alternative	2	Blog =	1				Adolescent =	3	Adolescent =	0	Adolescent =	2				
		(30.4%)	News =	(9.5%)		(16.7%)					(13.0%)				(33.3%)				
	Magazine =	5	Magazine =	2	Magazine =	1				Adult =	1	Adult =	0	Adult =	1				
Article source type		(21.7%)		(9.5%)		(16.7%)					(4.4%)				(16.7%)				
	Informational =	3	Commercial =	1						Multiple =	3	Multiple =	6	Multiple =	0				
		(4.8%)									(13.0%)		(28.6%)						
		(13.0%)	News =	1						Vaccine type focus	General =	8	General =	14	General =	3 (50%)			
		(4.8%)									(34.8%)		(66.7%)						
Article source type	Media =	9	Media =	15	Government =	2				Specific =	15	Specific =	7	Specific =	3 (50%)				
		(39.1%)		(71.4%)		(33.3%)					(65.2%)		(33.3%)						
	Government =	8	Industry =	3	Media =	2				Specific vaccines	Measles/MMR =	9	Shingles =	1	Whooping cough =	2			
		(34.8%)		(14.3%)		(33.3%)													
	News =	4	Personal =	2	News =	2				HPV =	3	Polio =	1	Influenza =	1				
Article source type		(17.4%)		(9.5%)		(33.3%)													
	Industry =	1	Forum =	1						Influenza =	1	Gardasil =	1						
		(4.4%)		(4.8%)															
	Resource =	1								Meningococcal =	1	Measles =	1						
		(4.4%)								Rubella =	1	Swine flu =	1						
Article source type												Tdap =	1						
												Hepatitis B =	1						



Common arguments by influencers: Russian speaking

Common arguments by influencers: Polish speaking



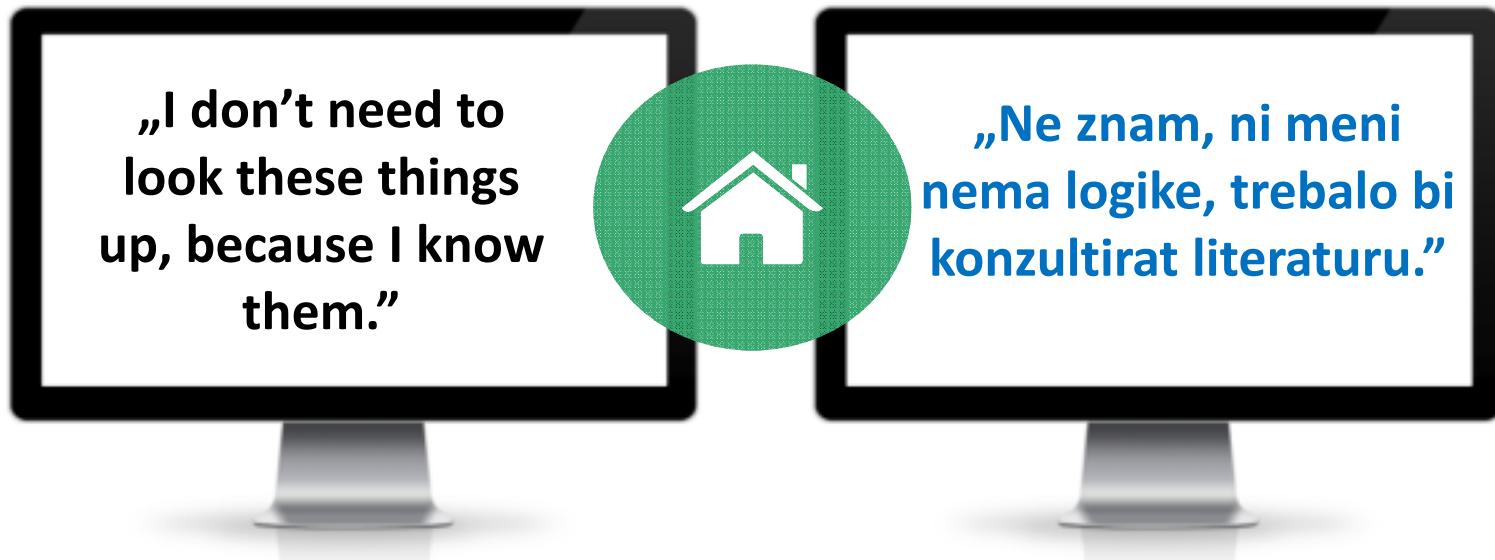
	Argument #1	Argument #2	Argument #3
Description	Vaccines challenge the immune system to produce antibodies and it may cause autoimmune diseases	Some vaccines are of questionable quality and may be harmful (toxic additives).	Excessive vaccinations are promoted by pharmaceutical companies for profits
Social Networks	Blogs / Forums	Blogs / Facebook / YouTube	Blogs
Tone/Language/Attitude	Negative	Negative	Negative
Influencers	"free press" / moms	M. D. Majewska, Ph.D., EC, Institute of Psychiatry and Neurology / doctors / moms	Moms / Doctors / "free press"
Notable Mentions	Vaccine or your Health - the choice is yours / Vaccines are not able to fight off the mutant viruses.	Scandinavian countries banned Thimerosal a long time ago and they have a much lower percentage of children with autism	in 2007 a dozen of homeless people in Poland who were vaccinated against bird flu died

Name	Position	Facebook Fans	Twitter Followers	Blog	Language
Dr. Tennpen-ny	The Voice of Reason about Vaccines	36,282	1,475	Yes	English
The Truth About Vac- cines	Answering questions from concerned parents	21,246	N/A	Yes	English
International Medical Council on Vaccination	Purpose is to counter the messages asserted by pharmaceutical companies, the government and medical agencies that vaccines are safe, effective and harmless	7,983	N/A	Yes	English
The Refusers	"Vaccination choice is a fundamental human right."	9,069	12,457	Yes	English
Mothering Magazine	Mothering is the premier community for naturally minded parents.	66,504	102,173	Yes	English
Ogólnopolskie Sto- warzyszenie Wiedzy o Szczepleniach STOP NOP	Protest against new laws for mandatory vaccinations in Poland and against disinformation campaigns about the effectiveness and safety of vaccines.	3,203	N/A	Yes	Polish
STOP Przemyso wi Szczeplenie	Petition campaign against new laws for mandatory vaccinations in Poland.	2,866	58	Yes	Polish

Table 1: Examples of influencers in the anti-vaccination sentiment in social media.

Influencer	Network	Description
Dr. Joseph Mercola	Facebook, Twitter, Blog	Naturopathic doctor against vaccines.
vactruth.com	Blog	"Your child. Your choice." Concern with vaccines having aborted fetal tissue, chemicals used in pesticides, and heavy metals.
Zen Gardner – Just Wondering	Blog	Conspiracies aimed at media, government, science, etc.
Dr. Tenpenny on Vac- cines	Facebook	"The Voice of Reason about Vaccines," Osteopathic doctor argues that vaccines cause brain injury.
Left Brain/Right Brain	Blog	Autism news science & opinion
Thinking Moms' Revolution	Blog, Facebook	Anti-vax, parent-focused
Proud Parents of Un- vaccinated Children	Facebook	Argues that vaccinated children get unvaccinated children sick, medical doctors have inadequate vaccine education, Big Pharma controls what doctors learn in medical school.
The Refusers	Facebook, Twitter, Tumblr	Anti-Vax, anti-governmental social mandates, argues that vaccines have neurotoxins that cause brain damage
Natural News	Blog	Alternative Medicine blog
Greenmedinfo.com	Blog	Alternative Medicine blog
Worldtruth.tv	Facebook, Twitter, Reddit, Digg, LinkedIn, Tumblr, Google+, Delicious, StumbleUpon, YouTube	Belief that the Pharmaceutical-Industrial Complex pushes harmful vaccines, and vaccinated kids get more sick than unvaccinated kids
Current Events & Hot Topics Forum (cafemom.com)	Forum	Vaccination studies and effects explored
VaccineInjury.info	Blog	Argues for natural immunity to regain health
EverydayHealth.com	Blog	Alternative Medicine blog

Na razmišljanje...



Korisnici „lijepo“ ključne riječi u svoje objave i poput predmetnice ili odrednica (ovisno o kontekstu same „ključne riječi“)

Altmetrija je više od alternativne metode mjerjenja utjecaja

Analiza sentimenta nam omogućuje uvid u izvore i mišljenja drugih

Literatura

- Alex Wright, 'Mining the Web for Feelings, Not Facts', *The New York Times*, 2009,
<http://www.nytimes.com/2009/08/24/technology/internet/24emotion.html>\nhttp://www.nytimes.com/2009/08/24/technology/internet/24emotion.html?_r=2&pagewanted=all. (28.5.2014.).
- Bo Pang and Lillian Lee, 'Opinion Mining and Sentiment Analysis', *Foundations and Trends in Information Retrieval* 2, no. 1–2 (2008): 1–135, doi:10.1561/1500000001. (20.5.2014.).
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<https://www.unicef.org/eca/sites/unicef.org.eca/files/2017-11/Tracking-anti-vaccination-sentiment-in-Eastern-European-social-media-networks.pdf>

Hvala na pažnji i dobar tek!



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