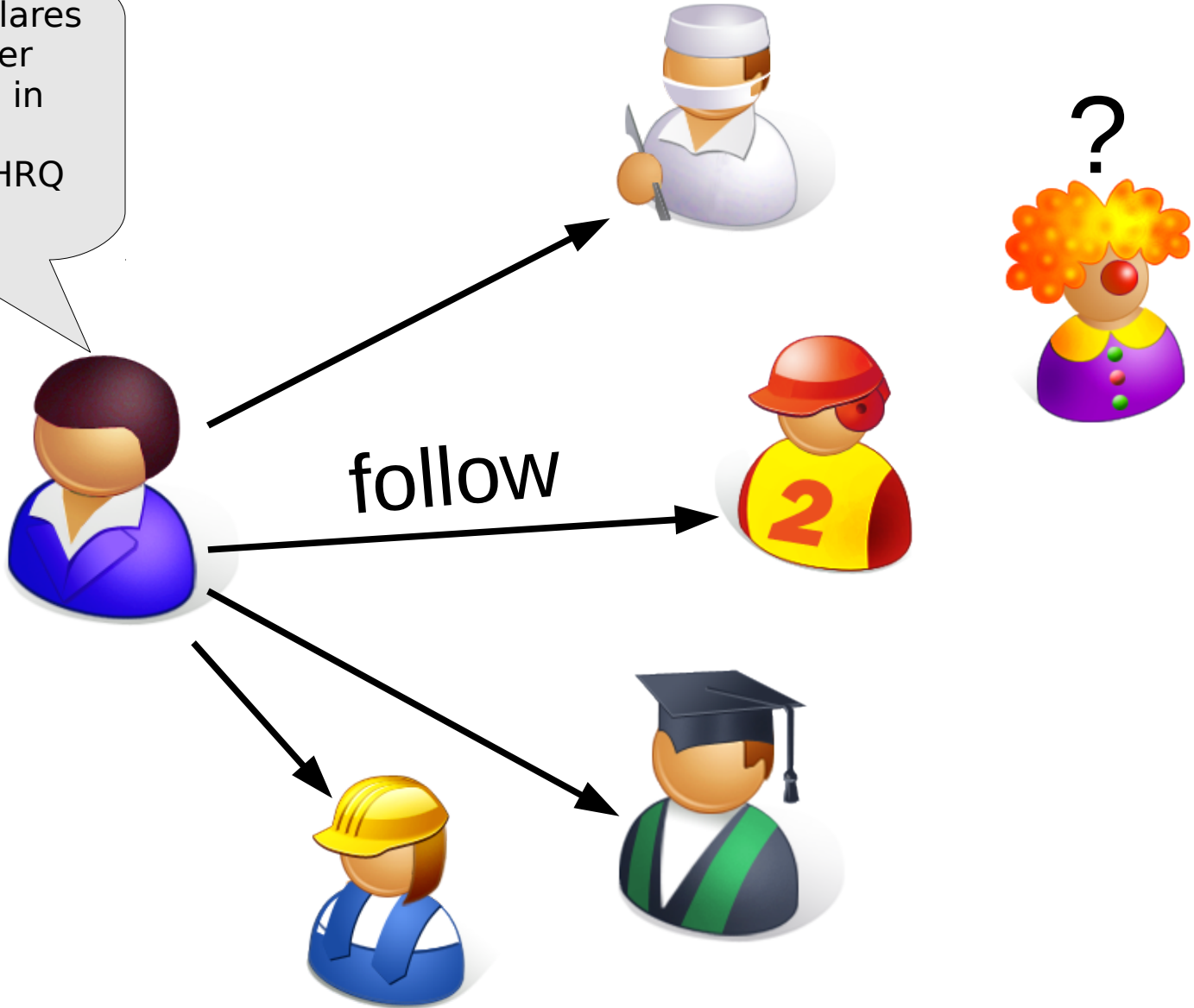# Bad News Travel Fast:

A Content-based Analysis of

Interestingness on Twitter
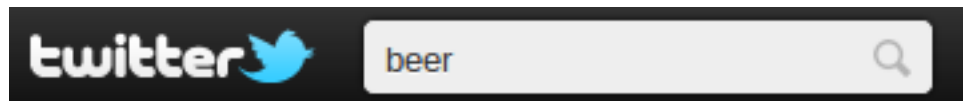
Nasir Naveed, Thomas Gottron, Jérôme Kunegis & Arifah Che Alhadi
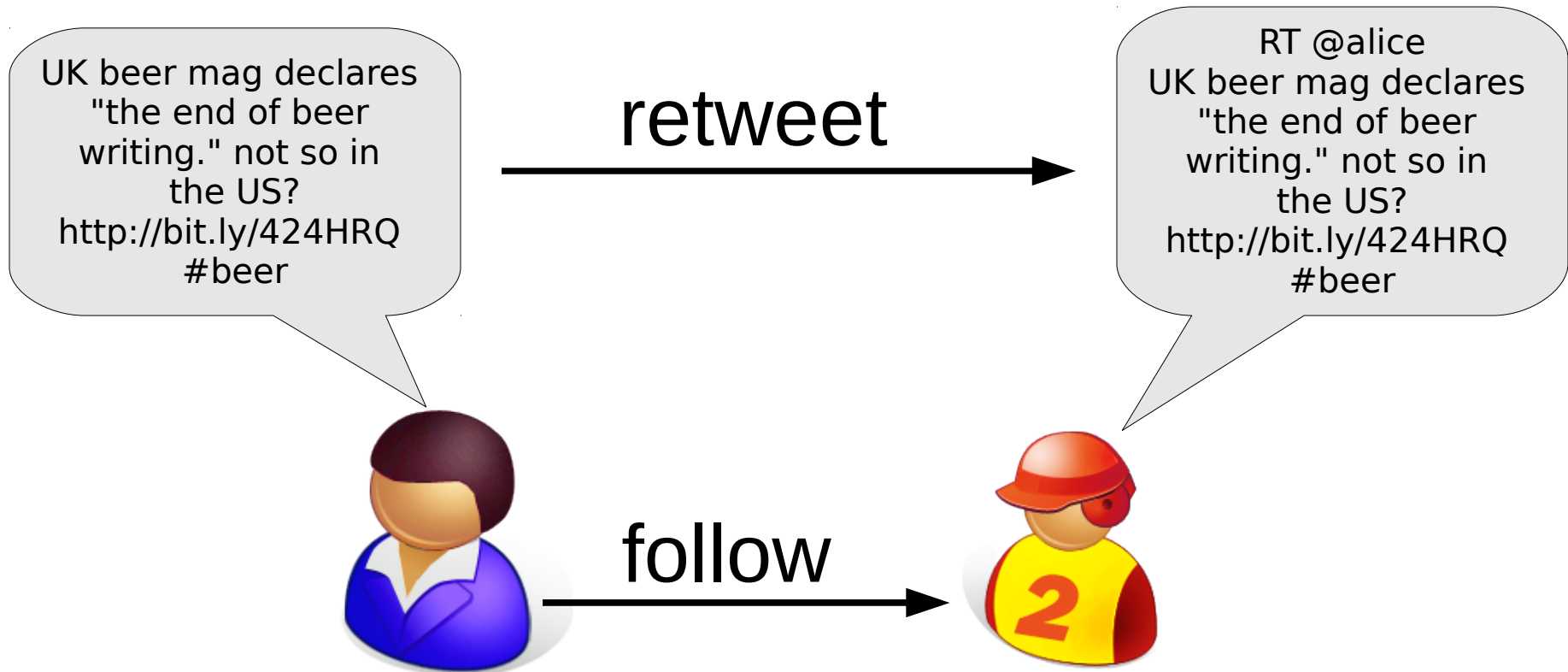
University of Koblenz–Landau

WebSci 2011, Koblenz

Rank	Username	Tweet
1	LoriAG	beer
2	Crushdwinebar	beer!!
3	Skippertaylor	BEER
4	BigMacScola	Beer
5	VANiamore	beer.......
6	CindyMcManis	To beer or not to beer on Beer Summit ?
7	silverlakewine	beer beer beer beer beer beer beer. Simple 3pm
8	eldoradobar	http://ping.fm/p/Bnra7 - In!!! BEER, BEER, BEER, BEER, BEER, BEER, BEER, BEER, BEER, BEER,
9	tonx	Lompoc. beer beer beer beer beer beer beer beer beer beer. http://twitpic.com/l68ld
10	punkeyfunky	Beer beer beer beer beer beer beer beer beer beer beer beer beer. Er, guess what I'm looking forward to?

Facets/aspects of quality:

- Question: Which is the best Online RSS Reader? I need some recommendations, cheers everyone :)

    Purpose (interaction, news propagation, etc.)

- My kitten is pretending to be a laptop

    Presentation (humor, irony, etc.)

- im on the phone rite now

    Language (writing style)

- Interesting timeline of major events in the history of beer http://tinyurl.com/ya7rcqt

    Interestingness

Feature	Dimensions	Type
Message feature	Direct message	Boolean
	Username	Boolean
	Hashtag	Boolean
	URL	Boolean
Sentiment	Valence	Real
	Arousal	Real
	Dominance	Real
Emoticons	:-) :-D	Boolean
	:-(	Boolean
Terms	Positive	Boolean
	Negative	Boolean
Punctuation	!	Boolean
	?	Boolean
Terms	Odds	Real (pos)
LDA	100 Topics	Real (pos)

Dataset	Users	Tweets	Retweets
Choudhury	118,506	9,998,756	7.89%
Choudhury (extended)	277,666	29,000,000	8.64%
Petrović	4,050,944	21,477,484	8.46%

M. D. Choudhury, Y.-R. Lin, H. Sundaram, K. S. Candan, L. Xie, and A. Kelliher.
How does the data sampling strategy impact the discovery of information diffusion in social media?
In Proc. Conf. on Weblogs and Social Media, pages 34–41, 2010.

S. Petrović , M. Osborne, and V. Lavrenko.
The Edinburgh Twitter corpus.
In Proc. Workshop on Computational Linguistics in a World of Social Media, pages 25–26, 2010.

WeST

Sign of quality

Interesting for wider audience

Depends on content

Social network

- Number of followers

- Activity of followers

Content based retweet prediction

Odds of retweet as sign of quality

Feature Weights – Logistic Regression

| Feature	Dimensions	Weight
Constant	(intercept)	−5.45
Message feature	Direct message	−147.89
	Username	146.82
	Hashtag	42.27
	URL	249.09
Sentiment	Valence	−26.88
	Arousal	33.97
	Dominance	19.56
Emoticons	:-) :-D	−21.8
	:-(	9.94
Exclamation	Positive	13.66
	Negative	8.72
Punctuation	!	−16.85
	?	23.67
Terms	Odds	19.79

Likely to be retweeted:

UK beer mag declares "the end of beer writing." I hate this
UK beer mag declares "the end of beer writing." FAIL
UK beer mag declares "the end of beer writing." :-(
UK beer mag declares "the end of beer writing." Really?

Unlikely to be retweeted:

@bob UK beer mag declares "the end of beer writing."
I'm so happy that the UK beer mag declares "the end of beer writing."
UK beer mag declares "the end of beer writing." :-D
UK beer mag declares "the end of beer writing." !!!

Feature Weights – LDA Topics

Topic	Weight
social media market post site web tool traffic network	+27.54
follow thank twitter welcome hello check nice cool people	+16.08
credit money market business rate economy home	+15.25
christmas shop tree xmas present today wrap finish	+2.87
home work hour long wait airport week flight head	−14.43
twitter update facebook account page set squidoo check	−14.43
cold snow warm today degree weather winter morning	−26.56
night sleep work morning time bed feel tired home	−75.19

WeST
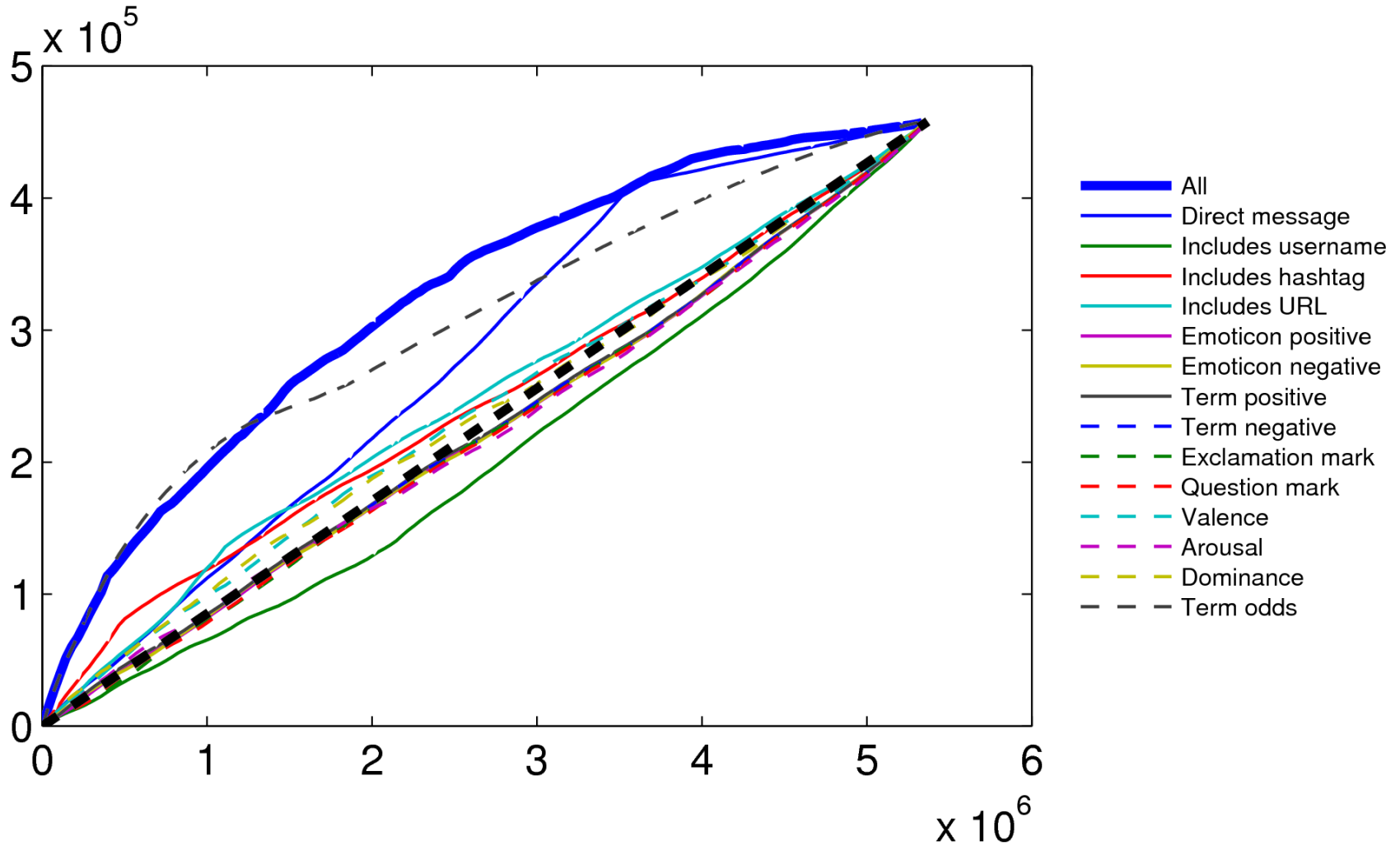
Rerank top-100 according to retweet-odds

Rank	Username	Tweet
1	BeeracrossTX	UK beer mag declares "the end of beer writing." @StanHieronymus says not so in the US. http://bit.ly/424HRQ #beer
2	narmmusic	beer summit @bspward @jhinderaker no one had billy beer? heehee #narm - beer summit @bspward @jhinde http://tinyurl.com/n29oxj
3	beeriety	Go green and turn those empty beer bottles into recycled beer glasses! | http://bit.ly/2src7F #beer #recycle (via: @td333)
4	hblackmon	Great Divide beer dinner @ Porter Beer Bar on 8/19 - $45 for 3 courses + beer pairings. http://trunc.it/172wt
5	nycraftbeer	Interesting Concept-Beer Petitions.com launches&hopes 2help craft beer drinkers enjoy beer they want @their fave pubs. http://bit.ly/11gJQN
6	carichardson	Beer Cheddar Soup: Dish number two in my famed beer dinner series is Beer Cheddar Soup. I hadn’t had too.. http://bit.ly/1diDdF
7	BeerBrewing	New York City Beer Events - Beer Tasting - New York Beer Festivals - New York Craft Beer http://is.gd/39kXj #beer
8	delphiforums	Love beer? Our member is trying to build up a new beer drinker's forum. Grab a #beer and join us: http://tr.im/pD1n
9	Jamie_Mason	#Baltimore Beer Week continues w/ a beer brkfst, beer pioneers luncheon, drink & donate event, beer tastings & more. http://ping.fm/VyTwg
10	carichardson	Seattle and Beer: I went to Seattle last weekend. It was my friend’s stag - he likes beer - we drank beer.. http://tinyurl.com/cpb4n9

- Interestingness as a sign of quality

- Beats tf-idf on retweet prediction

- Use hashtags, URLs, ask questions and be negative!

@nnaveed   @tgottron   @kunegis   @arifah77

#ThankYou