

Shaping the Information Nutrition Label

1 Introduction

The World Wide Web is a great source for news. However, relying on online news does not come without **downsides**:

HYPERPARTISAN NEWS CLICKBAIT
FAKE NEWS
FILTER BUBBLES ECHO CHAMBERS

To improve this situation, an **“information nutrition label”** for online news **has been proposed** (see Figure 1a). Like its food counterpart, the label is supposed to **help people making more informed decisions** upon which news items to consume.

In this work, we shape the idea towards **fewer categories** (see 2) as well as an **intuitively understandable representation** (see 3).

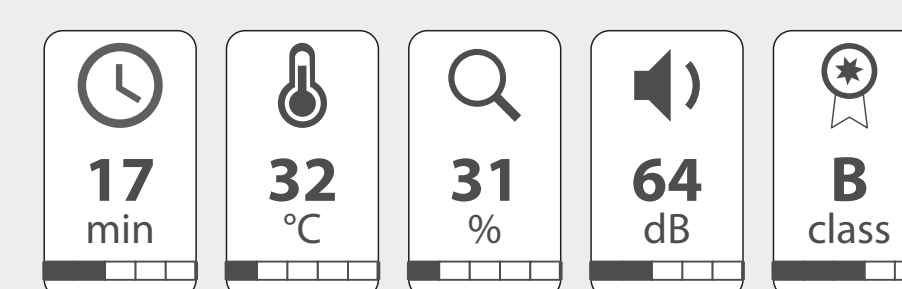
As a first **proof-of-concept** (see 4), we crowd-sourced annotations for a news article to allow for a comparison with the originally proposed tabular label (see Figure 1a-c).

For **future work**, we consider to present a **computational model** for the information nutrition label and to further investigate the **correlation** of its constituent parts **with human intuition**.

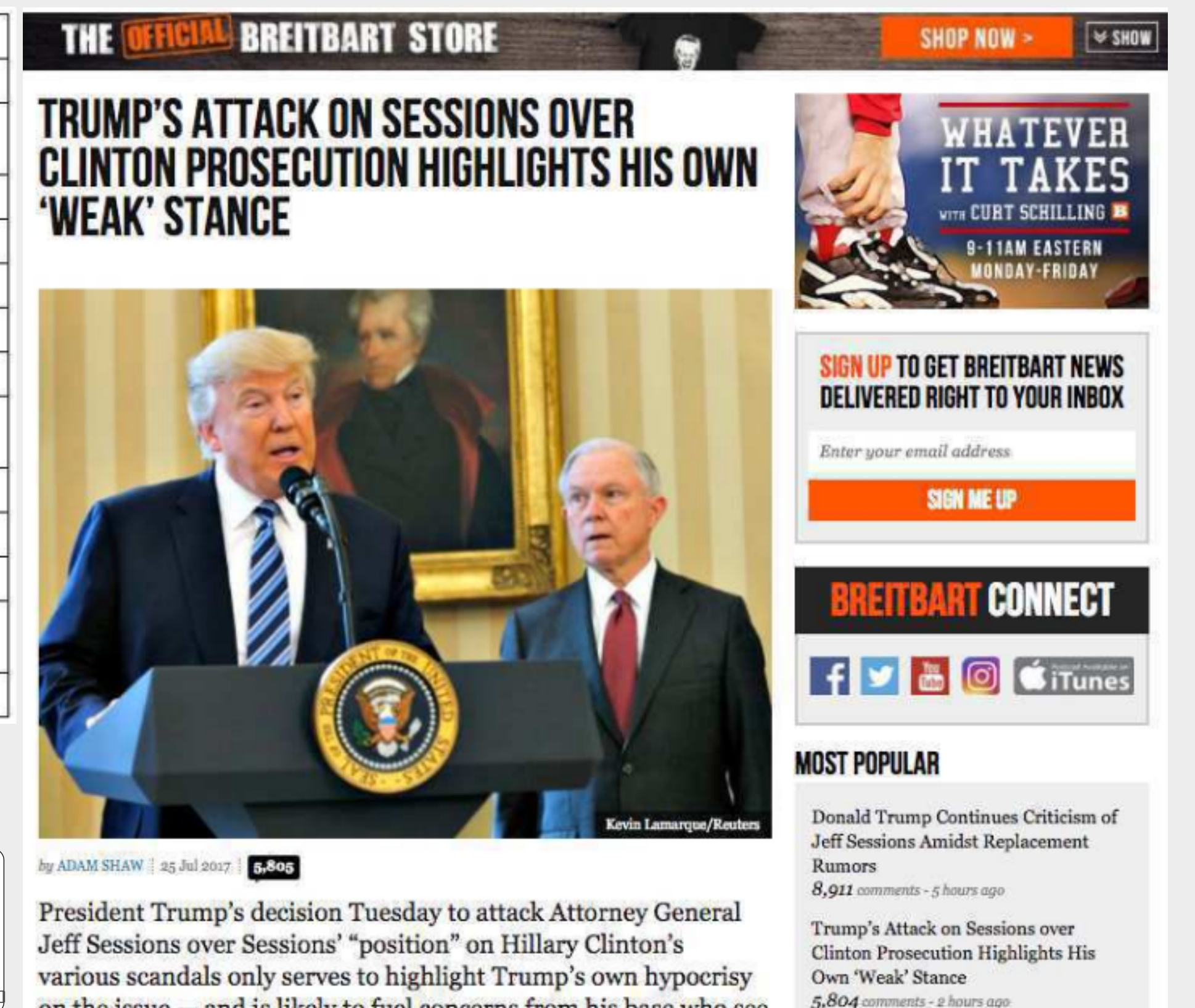
INFORMATION NUTRITION LABEL		
Best Before: Jan 1, 2018		
Per 1000 words	Recommended Daily Allowance	
Fact	30%	60 %
Opinion	40%	20 %
Controversy	9.0	--
Emotion	6.7	1.3
Topicality	8.7	5.0
Reading Level	4.0	8.0
Technicality	2.0	--
Authority	4.3	9.0
Virality	--	1.0

Additional substances: advertising, subscription, invective, images (2), tweets, video clips
Traces: product placement

a) Original Proposal.



b) Our “Shaped” Proposal.



c) Exemplified Article.

Figure 1 a) Label as proposed by Fuhr et al. in ACM SIGIR Forum Vol. 51 No. 3., December 2017. **b)** “Shaped” label as proposed in our paper. **c)** Article exemplified in the ACM SIGIR Forum paper and used in our crowdsourcing study.

2 Categorizing the Information Nutrition Dimensions

Given Dimensions
Eleven original plus two new proposals (*).

Readability, Technicality, Verbosity*,

Topicality, Virality,

Factuality, Verifiability*,

Emotion, Opinion, Controversy,

Authority, Credibility, Trust.

Derived Categorization

Clustering of dimensions that are similar from a pragmatic viewpoint.

I Effort

Groups dimensions that affect comprehension time.

Helps to check whether there is enough time and to identify articles of a specific depth.

II Kairos

Groups dimensions that pertain to the momentum of an article or a topic.

Helps to bring articles to readers' attentions which are “out of their bubble”.

III Logos

Groups dimensions that capture how well an author supports claims with evidence.

Helps to assess the journalistic quality of an article up front.

IV Pathos

Groups dimensions related to subjectivity and discrepancies.

Helps to create awareness that communities sharing alternative arguments or opinions exist.

V Ethos

Groups dimensions related to the credibility of a source.

Helps to assess the risk of becoming misinformed / the potential of learning new viewpoints.

3 Assigning Intuitive Quantities to the Categories

Quantity Range

Time
0–120 min

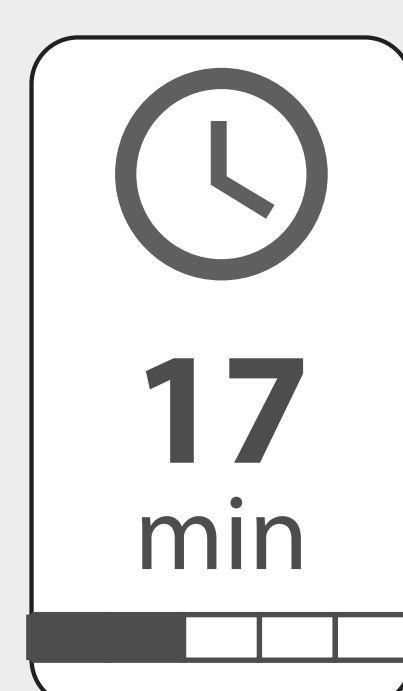
Temperature
0–100 °C

Transparency
0 – 100 %

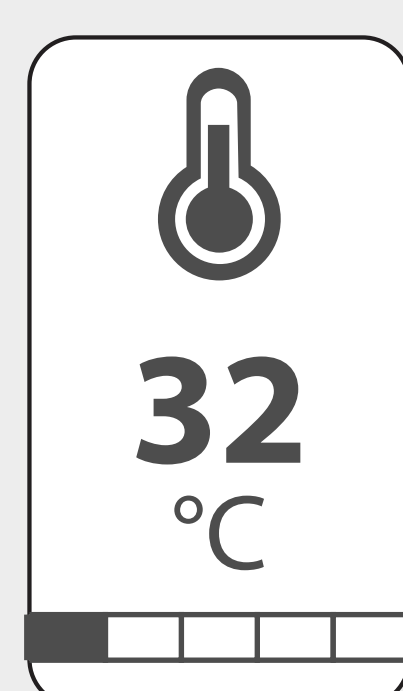
Sound pressure
0–120 dB

Credit rating
class D... A+

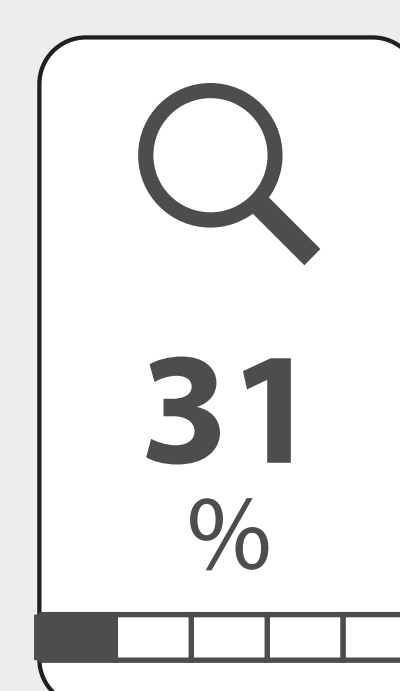
Representation
Rounded rectangles featuring the category symbol and value. Both the absolute value and its relative position are depicted.



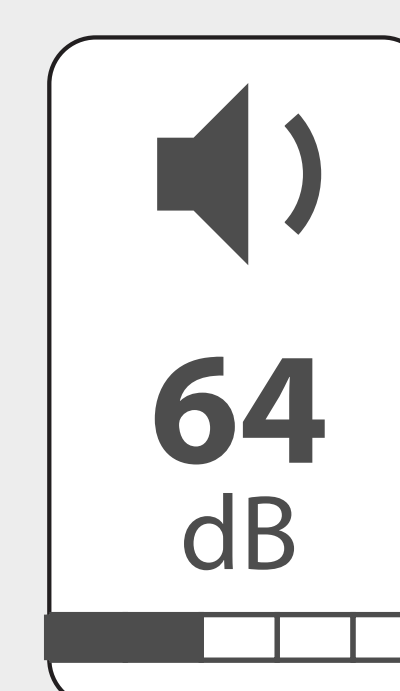
Does time allow the reading?



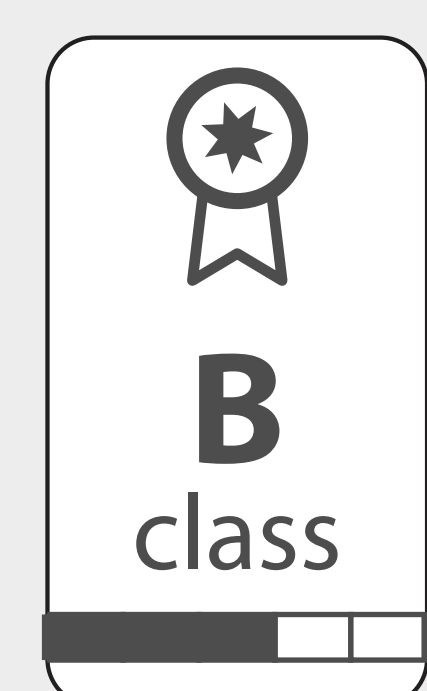
Do others care?



How professional is the writing?



Is the article subjective?

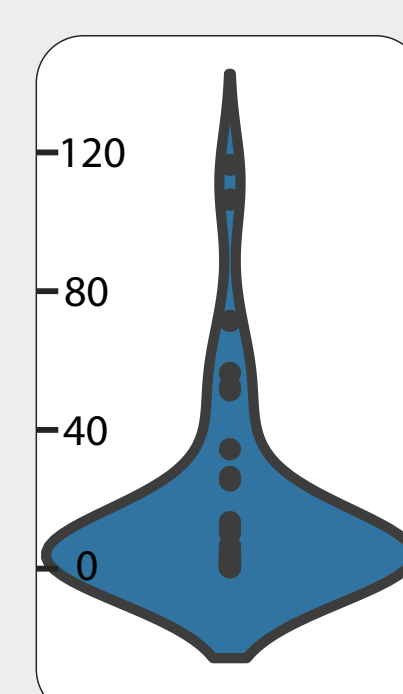


How reliable is the source?

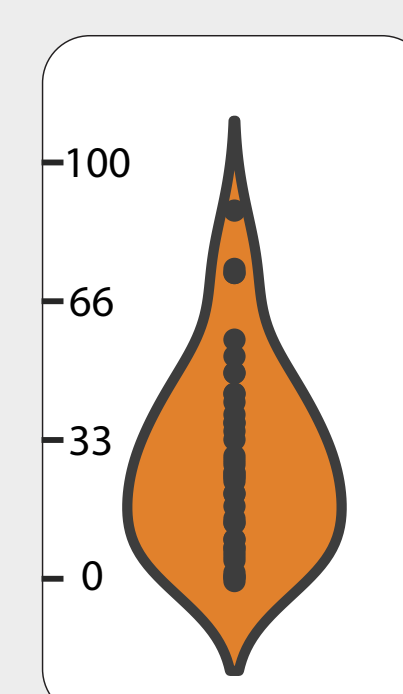
4 Crowdsourcing Category Values

Agreement

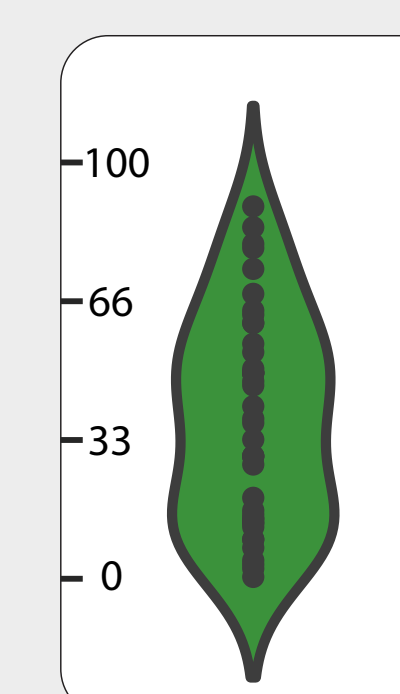
We used crowd-sourcing to make a label for the article exemplified in the SIGIR Forum paper (see Figure 1c).



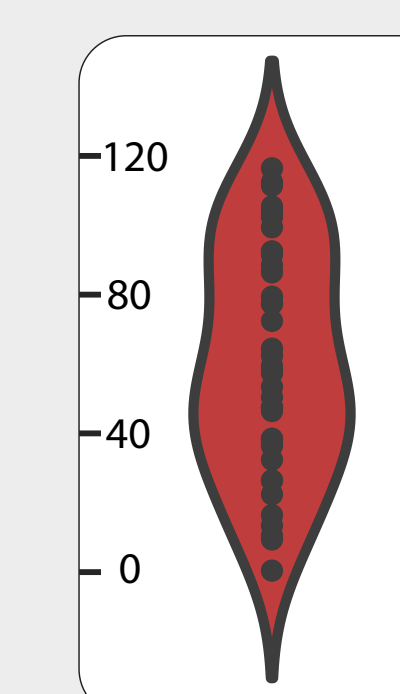
Little effort to comprehend.



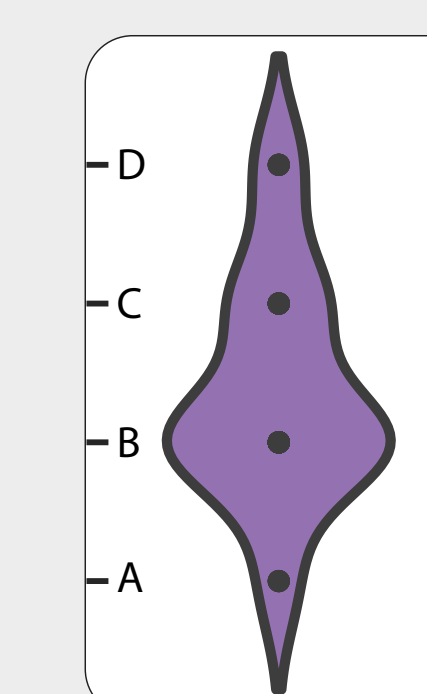
Not very hot anymore.



Logos is rather low. No clear consensus.



Medium pathos. No clear consensus.



Clearly not a top rated publisher.