

Annotation-Scheme Reconstruction for “Fake News” and Japanese Fake News Dataset

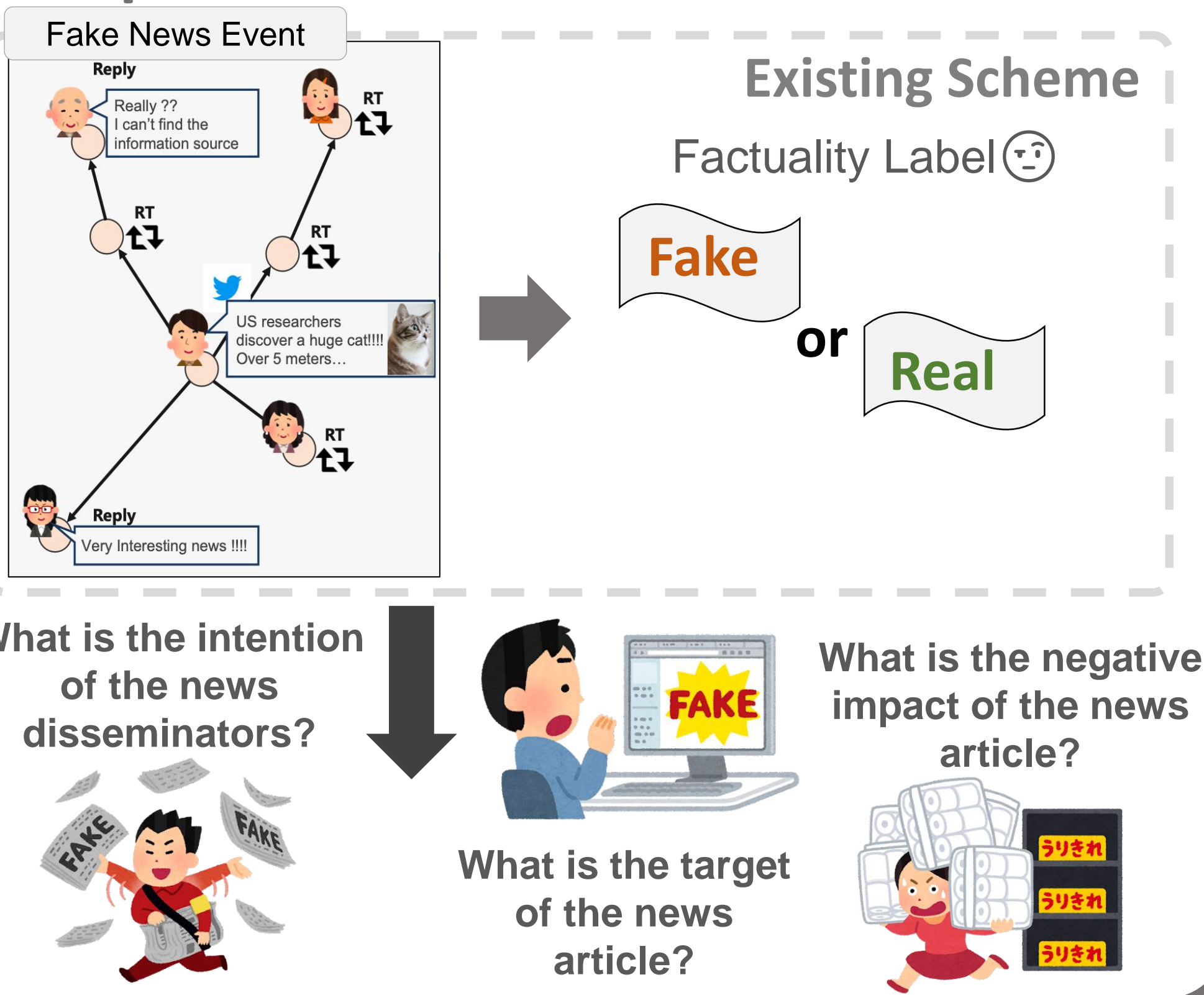
Taichi Murayama¹, Shohei Hisada², Makoto Uehara², Shoko Wakamiya², Eiji Aramaki²

¹ SANKEN Osaka University

² NARA Institute of Science and Technology

What we do

Propose Annotation Scheme



Japanese Fake News Dataset

<https://hkefka385.github.io/dataset/fakenews-japanese/>



A labelled dataset containing 307 news items, 471,446 tweets, and 277,106 users

- Identifies issues with existing fake news detection datasets
- Proposes a new annotation scheme to understand fake news from various perspectives.
- The first Japanese-language fake news dataset based on the proposed annotation scheme
- Analysis of Fake News in Japan news and its spread compared to the U.S.

Questions in our Annotation Scheme

- Propose an annotation scheme to understand fake news and the phenomena it causes based on the issues of existing fake news detection datasets
- Question 2 covers the intention of the disseminator
- Question 3,4 covers the target of the news article.
- Questions 6, and 7 cover the harmfulness to society of the fake news,

Q1: What rating does the fact-checking site assign to the news?	True/ Harf-True/ Inaccurate/ False / Pants on Fire / Unknown Evidence/ Suspended Judgement
Q2-1: Does the news disseminator know that the news is false?	Yes, definitely/ Yes, probably / No, probably / No, definitely
Q2-2A: If yes (disinformation), how was the news created?	Fabricated content / Manipulated image / Manipulated text / False context
Q2-2B: If no, how does the disseminator misunderstand the news?	Trusting other sources / Inadequate understanding / Misleading
Q3: Who or what is the target of the false news?	Free writing
Q4: Does the news flatter or denigrate the target?	Flattery / Denigration / Neither, No such intention
Q5: What is the purpose of the false news?	Satire or Parody / Partisan / Propaganda / No purpose or Unknown
Q6: To what extent is the news harmful to society?	Rating from 0 to 5
Q7: What types of harm can the news cause?	Harmless / Confusion and anxiety about society / Threaten honour and trust in people, companies, or goods / Threaten correct understanding of politics and social events / Health / Prejudice against nation or race / Conspiracy theory

The issues of Fake News Datasets

Intention

- Definition of fake news: “a news article that is intentionally and verifiably false.”
- The existing datasets only focus on the factuality of the news.
- To understand and counter fake news, the intention of the disseminator is equally essential.

Harmfulness to society

- Fact-checking priorities depend on the content and genre of the news.
- Fake news dataset construction annotated on social impact can be utilised to determine which news stories to fact-check.

Label

- 33 of 51 existing fake news detection datasets are binary labels of “true” or “false.” Other datasets incorporate labels from fact-checking organisations.
- It is essential to unify the labelling for each dataset with a fine-grained and detailed annotation scheme

Language

- Many datasets built on data covering U.S. society (40 / 51)
- 8 of 11 fake news detection datasets in languages other than English target COVID-19 events.

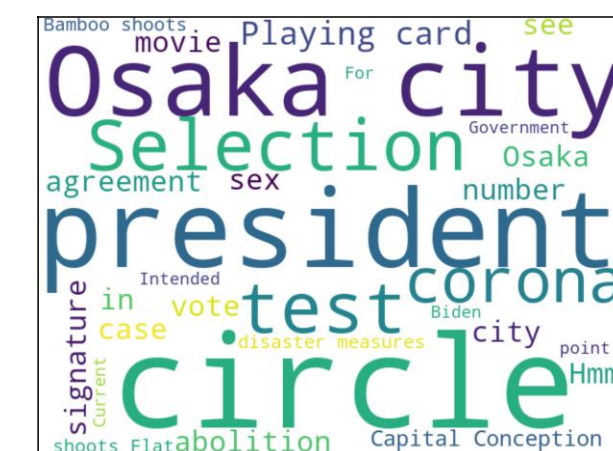
Annotation Examples

Original Tweet	Annotation
<p>菅義偉「立憲民主のゼロコロナ戦略は重症も含めた徹底検査だが、私権制限強化に賛成だった立憲はどうか国民に強制検査させるつもりなのか? また強い私権制限可能な台湾・NZ・オーストラリアと日本を比較する知得なものかと」 枝野幸男「党首討論に相応しくない話1」</p> <p>哀れすぎる枝野 @edano</p>	<p>Q1: What rating does the fact-checking site assign to the news? False</p> <p>Q2-1: Does the news disseminator know that the news is false? Yes, definitely</p> <p>Q2-2A: If yes (disinformation), how was the news created? Manipulated image</p> <p>Q3: Who or what is the target of the false news? 枝野幸男(Yukio Edano), 立憲民主党(Constitutional Democratic Party)</p> <p>Q4: Does the news flatter or denigrate the target? Denigration</p> <p>Q5: What is the purpose of the false news? Partisan</p> <p>Q6: To what extent is the news harmful to society? 4.00</p> <p>Q7: What types of harm can the news cause? 3. Threat honor and trust in people, company and good</p>
<p>「牡蠣を食べるときは殻に口をつけてズルツとやらす、お箸などで貝柱を外してからパクッと食べた方があたりくいらしい」という話、あまり知られていないので共有しまくりたい。 「細菌の多くは牡蠣の殻」にいる」と昔三重の漁師さんから教えてもらい、私は一回もあつたことありません。</p>	<p>Q1: What rating does the fact-checking site assign to the news? Misleading</p> <p>Q2-1: Does the news disseminator know that the news is false? No, definitely</p> <p>Q2-2B: If no, how does the disseminator misunderstand the news? Misleading</p> <p>Q3: Who or what is the target of the false news? 牡蠣 (Oyster)</p> <p>Q4: Does the news flatter or denigrate the target? Neither/No such intention</p> <p>Q5: What is the purpose of the false news? No purpose</p> <p>Q6: To what extent is the news harmful to society? 2.67</p> <p>Q7: What types of harm can the news cause? 5. Health</p>

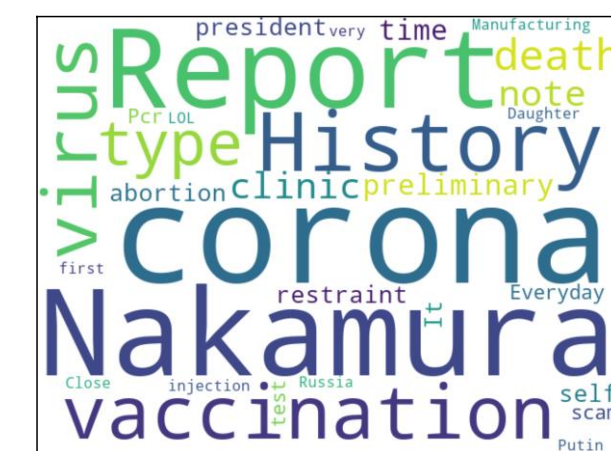
Analysis of Japanese Fake News Dataset

Analysis of 307 news items, 471,446 tweets, and 277,106 users in the constructed dataset

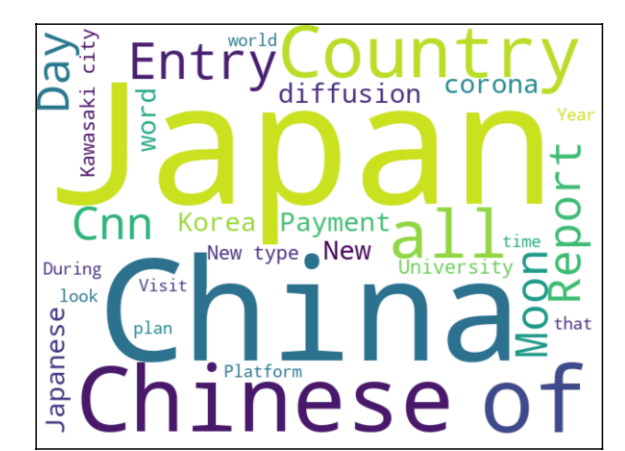
- WordCloud for each label in Question 7



3. Threat to honour and trust in people and companies

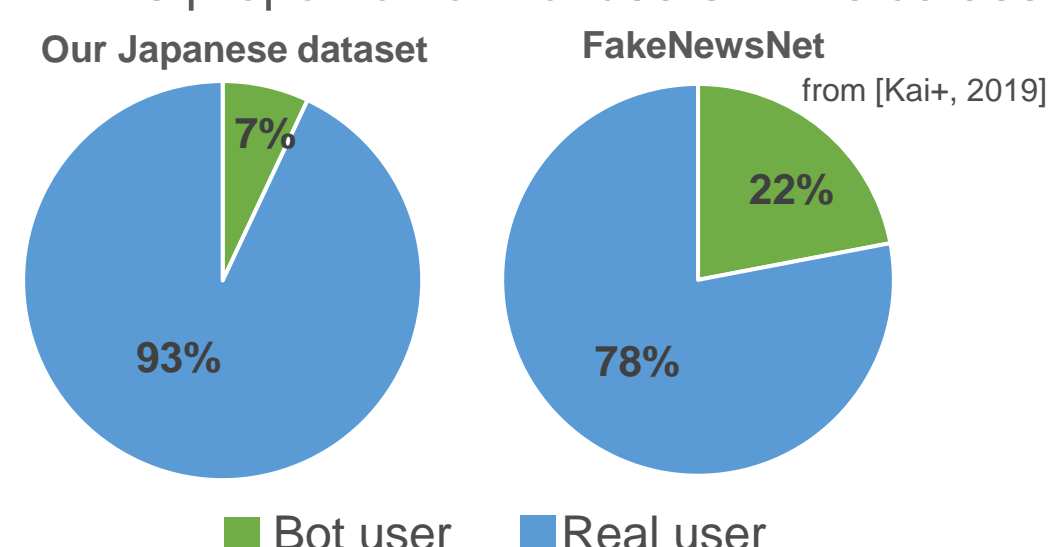


5. Health



6. Prejudice against country or race

- The proportion of Bot users in the dataset.



- Ages of user accounts in the dataset

