```
#Flood #Barby I drown in groundwater, no postman can reach me - I expect
urgent mail. Where is it?
```

Another example is:

```
Does the #Bundeswehr actually rescue pacifists from the #flood or does it
let them drown consistently?
```

The emergency keyword density in these tweets is high although the information is possibly not serious. Humor, offhand speech, or culture-specific wordplay makes evaluation fuzzy and difficult. Irony is subtle, requiring well-trained and supervised machine-learning patterns. This is a major challenge to future extraction systems.

5.6 MARKEDNESS

The following example also shows the ambiguity of meaning:

```
#Flood #Ratzdorf @ #ODER ---> #waterlevel dropped by 1 cm from 511 cm to
510 cm within 3 hours. [As of: June 7, 2013 13:20]
```

Is the German River "Oder" or the conjunction "oder" (or) meant? Semantic misinterpretation may be the result. Computational mining algorithms extract syntax and entities and have to determine semantic meaning. Markedness occurs if "each of two or more words having the same spelling or pronunciation but different meanings and origins"[7]. Standard mining lacks markedness detection in terms of homonyms in German flood data 2013. It was major problem that the river "Oder" could not be identified as a river because the system classified it as the German conjunction "oder" (or). Hence, systems have to be improved to detect homonyms.

6 DISCUSSION

This paper aimed to answer the questions: (1) Do German emergency tweets contain additional and relevant information for disaster management? (2) Can existing computer-mediated-data mining systems be applied to German crisis tweets? (3) Which methods are valuable and practical in producing trustworthiness and secure information?

6.1 RELEVANT INFORMATION

Q1: Do German emergency tweets contain additional and relevant information for disaster management?

The following paragraph discusses different criteria for answering the question whether German emergency tweets contain additional and relevant information for disaster management (Table 5).

Criterion	Research subject	Method	Result
Traffic (section 5.1)	Adoption and content by Germans	Descriptive statistics	Sufficient traffic
Geo-location (section 5.2)	Geo-information	Supervised geo-location extraction and semantic analysis	Sufficient geo-locations
High yield users (section 5.3)	User base	Frequency analysis	Warnings, evaluations, conditions

[7] http://oxforddictionaries.com/definition/english/homonym