

Milk and plant based alternatives on Twitter

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Introduction

The **consumption** of plant-based milk alternatives is **increasing** worldwide. However, little is known about how their **sensory properties** are described by consumers or what **associations, emotions or consumption contexts** are linked to different product categories. To gain more insight, data from the social media platform **Twitter** was analyzed using methods from the field of **computational linguistics**.

Method

From the end of May to the end of July 2021, tweets were collected that contained the following **keywords**: 'oat milk', 'oat drink', 'almond milk', 'almond drink', 'milk -soy -almond -rice -coconut -hazelnut -oat', 'cow milk'. For each product category, **3000 tweets** were randomly selected for analysis. **Pre-processing** of the data consisted of removing line breaks, double spaces, numbers, punctuation, URLs, stop words, and conversion to lowercase. The data were then analyzed for **overuse** of words (Fig. 1) as well as **sentiments** (Fig. 2).

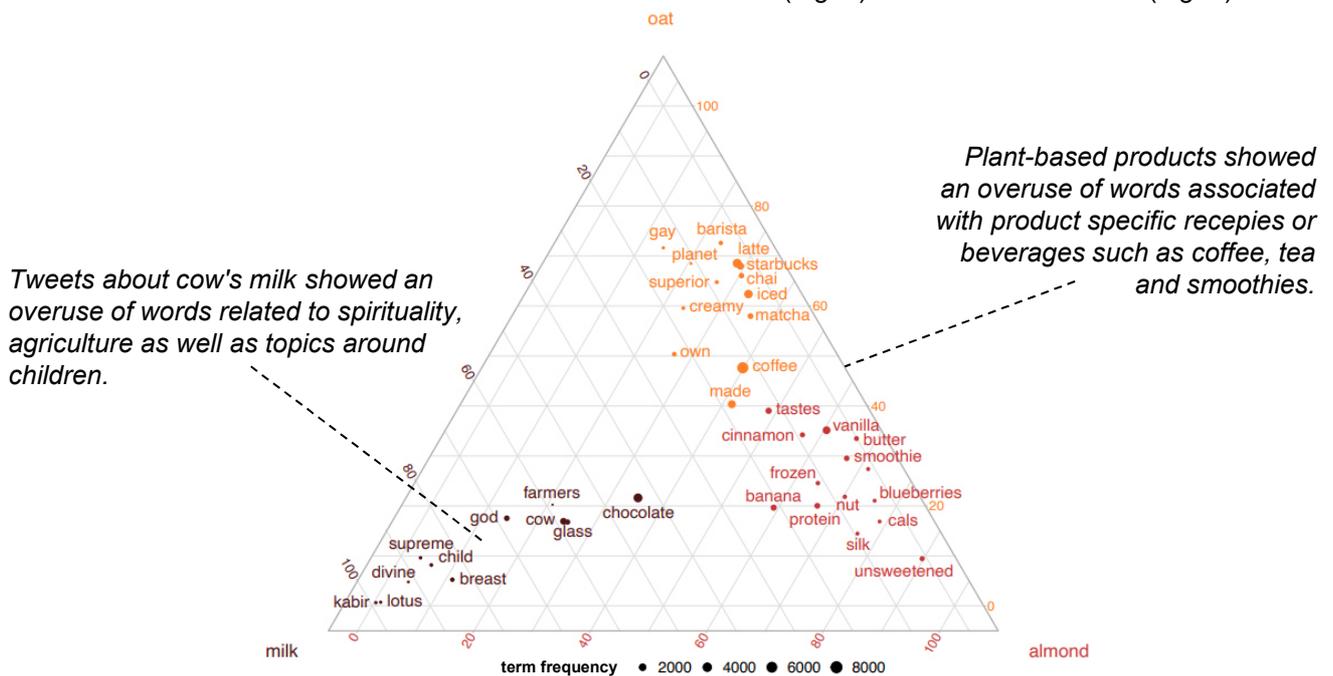


Fig. 1: Selected terms with significant ($\alpha = 0.05$) overuse calculated by Chi²-tests for oat-, almond- and cow's-milk.

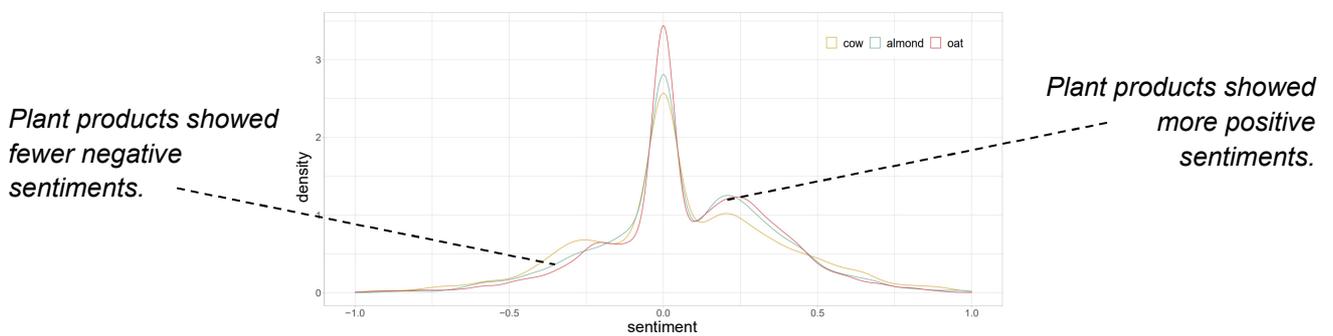


Fig. 2: Sentiment analysis using the R-package 'sentimentr' for oat-, almond- and cow's-milk.

Conclusion

The results suggest that **plant-based milk alternatives** have their own **specific uses** and **cannot be interchanged indiscriminately**. The associations found can be used to **improve consumer communication, marketing, brand design** or the development of **new product formulations**.

