

# **Studying sentiment in social media conversations using manual vs. automated approaches**

**Conference theme:** Big data, social media analysis, text mining

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**Abstract submitted for oral paper presentation**

There is now an abundance of commercial software tools that mine social media data and produce reports of expressed sentiment. These tools scan textual data and produce a score that reflects the underlying sentiment – positive or negative – expressed in the segment of text under analysis. Given the increasing reliance on such automated tools, it is critical to investigate how accurate they are in studying consumer behaviour. This paper reports on the findings from a research project exploring the question: *To what extent do automated and manual analysis of sentiment in social media data match; and why?*

200 Twitter posts were analysed manually and using two popular sentiment analysis tools. The results revealed significant differences between the outcomes of the three approaches, not only in terms of sentiment polarity but also in terms of the specific emotion identified. The systems struggled to detect nuance and the target of the emotion. Differences also arose when the sentiment was implied rather than explicit, and when abbreviations or slang were used.

The results are very concerning given the popularity of automated sentiment analysis. They are concerning for academics, particularly the novice user, who may be too reliant on these tools to analyse large volumes of consumer data; and for practitioners in search of speedy and inexpensive customer insight and who are unlikely to use two systems plus manual analysis, as we did, to assess the robustness of the tools.