Cambria, Erik, et al. "SenticNet 5: Discovering conceptual primitives for sentiment analysis by means of context embeddings." *Proceedings of the AAAI conference on artificial intelligence*. Vol. 32. No. 1. 2018.

This text discusses a research proposal for a hybrid deep learning model to perform fine-grained sentiment analysis on real-time multimodal data, specifically text and images. The proposed model combines deep learning and machine learning to address the challenges of sentiment analysis in various content types, including written text, still images, and their combinations.

The model consists of four modules: discretization, text analytics, image analytics, and a decision module. It takes multimodal input, including text, images, and info-graphics, and uses Google Lens to separate text from images. The text analytics module utilizes a convolutional neural network (ConvNet) enriched with the contextual semantics of SentiCircle to determine sentiment. The image analytics module employs a support vector machine (SVM) classifier trained with bag-of-visual-words (BoVW) for predicting visual content sentiment. The decision module categorizes the output into five fine-grained sentiment categories: 'highly positive,' 'positive,' 'neutral,' 'negative,' and 'highly negative.' The proposed model achieves an accuracy of approximately 91%, surpassing the accuracy of individual text and image modules.

The text emphasizes the significance of sentiment analysis in social media, where the language used is informal and diverse. It also highlights the challenges posed by context and multimodal content, including memes, GIFs, and info-graphics. The research aims to address these challenges by creating a unified model for sentiment analysis that considers different content modalities and leverages both deep learning and machine learning techniques.

The paper is organized into sections covering related work, a detailed explanation of the proposed model, results, and conclusions. The model's dataset contains 8000 comments and posts from social media, distributed among text, images, and info-graphics.

In conclusion, this research proposal outlines a hybrid deep learning model for sentiment analysis in multimodal data, aiming to enhance accuracy and address the complexities of sentiment analysis in the context of social media.

-Kumar, Akshi, et al. "Hybrid context enriched deep learning model for fine-grained sentiment analysis in textual and visual semiotic modality social data." *Information Processing & Management* 57.1 (2020): 102141.