**A MULTIMODAL SENTIMENT ANALYSIS OF INTERNET MEMES**

**IN THE COURSE OF PHILIPPINE ELECTIONS**

**Purpose of the Study**

This research study will utilize Natural Language Processing to delve into the realm of multimodal sentiment analysis, focusing on political memes related to the 2016 and 2022 Philippine elections. This primary objective is to unravel the underlying emotions embedded within these multimodal expressions.

**Research Questions**

1. What are the predominant multimodal sentiments expressed in Philippine internet memes related to elections?

2. How are these memes linguistically and visually organized in contributing to the overall expression of these sentiments?

3. How do sentiments in memes vary across different political affiliations?

4. What types of ideological appeals are depicted in these memes?

**Theoretical Lens**

This study is anchored to the lenses of Appraisal Theory by Scherer (2001). Scherer’s (2001) Appraisal Theory offers a thorough structure for grasping how emotions stem from the evaluation of events or circumstances. According to Arnold (1996), Ellsworth (2013), Frijda (1986), Lazarus (1991), Ortony et al. (1988), Roseman (2013), and Scherer (2009), the core principle of appraisal theory posits that emotions are instigated and distinguished through the process of appraisal. This process entails assigning values to various appraisal factors, including goal relevance, goal congruence, unexpectedness, control, and agency. This theory posits that emotions are generated by assessing three main aspects of an event. First, is relevance, determining if the event holds personal significance. Second, is certainty, gauging the predictability or uncertainty of the event. and third, is control, assessing the ability to influence or manage the event’s outcome.

These appraisals give rise to emotional reactions that can be divided into two broad categories: Firstly, positive emotions, which are linked to appraisals of relevance, certainty, and control; and secondly, negative emotions, which are associated with appraisals of irrelevance, uncertainty, and lack of control (Smith & Lazarus, 2000).

The research study aims to delve into the emotions evoked by the Philippine elections through an analysis of the language used in the internet discourse. Appraisal Theory provides a lens through which I can understand how Filipinos felt during the 2016 and 2022 elections, as it examines how specific words evoke emotions. For instance, exposure to words like ‘threat, danger, and uncertainty’ may induce feelings of fear and anxiety, while words like ‘hope, resilience, and support’ may evoke feelings of hopefulness and strength. By applying this theory, I seek to figure out a comprehensive understanding of the emotional landscape surrounding the Philippine elections.

Furthermore, this study is also anchored to Heywood’s (1992) political concepts and ideologies in his book “Political Ideologies: An Introduction 7th Edition” offering an unparalleled, sweeping survey of the political ideologies that have shaped our world. He mentioned nine (9) political ideologies that situate the individual within a social context and generate a sense of collective belonging an officially sanctioned set of ideas used to legitimize a political system or regime: (1) *Liberalism*, viewed ideology as an officially sanctioned belief system that claims a monopoly of truth, often through a spurious claim to be scientific. Ideology is therefore inherently repressive, even totalitarian; its prime examples are communism and fascism; (2) *Conservatism*, has traditionally regarded ideology as a manifestation of the arrogance of rationalism. Ideologies are elaborate systems of thought that are dangerous or unreliable because, being abstracted from reality, they establish principles and goals that lead to repression, or are simply unachievable. In this light, socialism and liberalism are clearly ideological; (3) *Socialism*, following Marx, has seen ideology as a body of ideas that conceal the contradictions of class society, thereby promoting false consciousness and political passivity among subordinate classes. Liberalism is the classic ruling-class ideology. Later Marxists adopted a neutral concept of ideology, regarding it as the distinctive ideas of any social class, including the working class; (4) *Anarchism*, defined by the central belief that political authority in all its forms, and especially in the form of the state, is both evil and unnecessary. Anarchists therefore look to the creation of a stateless society through the abolition of law and government; (5) *Nationalism*, can be defined broadly as the belief that the nation is the central principle of political organization. As such, it is based on two core assumptions. First, humankind is naturally divided into distinct nations and, second, the nation is the most appropriate, and perhaps only legitimate, unit of political rule; (6) *Fascism*, are often dismissive of ideology as an over-systematic, dry and intellectualized form of political understanding based on mere reason rather than passion and the will. The Nazis preferred to portray their own ideas as a Weltanschauung or ‘world-view’, and not as a systematic philosophy; (7) *Feminism*, is defined by two basic beliefs: that women are disadvantaged because of their sex; and that this disadvantage can and should be overthrown. In this way, feminists have highlighted what they see as a political relationship between the sexes, the supremacy of men and the subjection of women in most, if not all, societies; (8) *Green ideology*, is based on the belief that nature is an interconnected whole, embracing humans and non-humans, as well as the inanimate world; and (9) *Islamism*, is characterized by, among other things, a revolt against the West and all it supposedly stands for. Some commentators, indeed, have gone as far as to suggest that Islamism is a manifestation of a ‘civilizational’ struggle between Islam and the West. The most controversial feature of Islamism is nevertheless its association with militancy and violence.

Applying Heywood’s classifications of political ideologies to the fourth research question can reveal the types of ideological appeals that are depicted in the memes. It will also help link the ideological appeal to the broader spectrum of political thought, providing deeper insight into how memes may reinforce or challenge prevailing political narratives.

**Data Analysis**

To aid in addressing the research questions in the study, several steps will be taken utilizing Orange Free Software. The following steps will be followed based on Pimpalkar et al. (2022): Data Collection, Text Extraction, Image Captioning, Data Preprocessing, Data Visualization, Modelling and Analysis, and Evaluation and Interpretation.

The first step will be data collection. This will involve obtaining a dataset of political memes and fetching them using Orange Software. After that, text extraction will take place. The text from the meme will be extracted using Optical Character Recognition in the parlance of Tesseract-OCR – a free and open-source software that pulls out text from images.

Then, image captioning will follow. This is a way to describe what is happening in a picture using words. It is difficult for computers to understand pictures as humans do, I will use a combination of deep learning techniques in this matter – CNN (Convolutional Neural Network) to understand the features of the meme and LST (Long Short-Term Memory) to turn those images features into a sentence that describes what is the meme.

Next will be data preprocessing. In this step, the text obtained from the OCR will be scanned for unwanted elements such as the name of the meme page or inaccuracies. Contracted terms will be expanded to their full forms to enhance clarity. The text will undergo tokenization, breaking into separate words, and removing punctuations. Additional clean-up steps will involve modifying words with repeating letters, removing “#” symbols from hashtags, and filtering out stop words that do not contribute to contextual understanding.

After that will be data visualization. In this step, the Orange Software will visualize the analyzed political meme data using tools like word clouds, bar charts, or network graphs to gain insights and identify patterns or trends. The last step will be modeling and analysis. Here, the Orange Software will apply machine learning or data mining algorithms to analyze the data, including tasks like clustering, classification, or topic modeling.

The aforementioned steps will be grounded in the framework proposed by Lou (2019), which underscores the importance of analyzing written discourse by taking into account both the inherent characteristics of the material being examined and the broader contextual understanding. In this research, the content of political memes of Filipinos during the Philippine elections of 2016 and 2022 will be examined. This will cover a wide range of political memes all over the country, NLP and SE will be essential in this situation. Moreover, as this paper seeks the text content of the political memes, the security and privacy of those who posted them will not be compromised. As a result, only the memes will be collected and analyzed. The names of the posters will never be included. Finally, linguistic experts or debriefers will review and examine the results of the collected data. They will provide recommendations and feedback that will be incorporated into the research activity to enhance its quality.