Analysing Implicit Emotion and Unity in Propaganda Videos Posted in Social Network

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Abstract. In today’s world of technology involving the sophisticated use of the Internet, the political scene of a country evolves alongside the prolific rise of social media where it becomes a battlefield for political parties to win the hearts and minds of the people through videos, e.g. political discourse and radical videos – involving many issues such as politics, religious, social and economics, which have been posted through social media. These propaganda videos would be powerful vehicles for prejudice and public opinions that could affect national unity specifically among the people. Kansei, has been established as being well-suited to be applied for the purpose of understanding human emotion and psychology. Henceforth, this study aims to comprehend the sensitivity of the people towards various propaganda videos and also to determine whether a relationship exists between Kansei and the videos. In this sense, a Kansei evaluation approach is employed on 10 videos, using 30 Kansei Words, which are adopted from the PANAS-X emotional descriptors. From the results obtained, it is evident that the people do have political awareness, sensitivity and are able to respond to the videos that represent various political issues that could affect people’s unity. Besides, Kansei is able to verify the results, thus proving the existence of the concept of Kansei in propaganda videos. Eventually, the results are significant in providing an overture to people’s response towards political issues, especially through the medium of videos.

1. Introduction
Racial problems do exist in many parts of the world; whether it was in a developed country in the West, in developing countries, or in countries that had been under colonial rule. Sometimes, in certain developed countries, like Britain and the U.S, racial and ethnic conflicts have been known to be more acute and violent than those that have happened in certain developing countries, such as Malaysia [1]. Malaysia is a unique multi-ethnic country that has the Malay, Chinese, Indian and indigenous people living together, although they have different histories, religions, cultures and languages. Therefore, whether it's overtly or covertly, issues related to racial unity seem to be imminent in many countries. According to [1], the ethnicity, as well as ethnic relations’ problems, are of much worry because they
are ever existing in daily lives and are often deemed as threats to national unity and the welfare of the people.

The media is often said to be a third party and a provocative agent who will complicate matters, thus, will cause conflicts to be severely affected by their involvement. For instance, the Malaysian government has control over the mass media, although most of the main media companies are privately owned. Henceforth, it would make alternative voices fight to gain a hearing [2]. The uses of the Internet, however, particularly through social media, certainly is a channel that could be used to challenge a regime that does not respect democratic practices because of the mainstream media forbid or limit criticism.

YouTube could be one of the social networks that can serve as a major international platform for media dissemination. According to [3], the rise of radical media campaigns from extremist groups, netizens, and political figures and parties in the online environment could be one of the additional main contributing factors to the information warfare, which emergence from the YouTube's rapid growth. In this case, online videos through media campaigns could signify an ever-improving propaganda effort to engage the ‘hearts and minds’ of their target viewers [3].

Therefore, this study thus aims to understand the sensitivity of the people towards various propaganda videos on YouTube, and also to determine whether a correlation exists between Kansei and the videos. Kansei has been recognised as being well-matched to be applied for investigating and understanding people’s emotion and psychology. Hereafter, this study will use emotional descriptors adopted from PANAS-X rated by 30 participants, upon watching 10 video specimens during the Kansei evaluation. Then, the result of such Kansei evaluation will be described at the end of the study, which is also the significance of the study and conclusion.

2. Literature Review

2.1. YouTube: A Sophisticated Propaganda Vehicle

Nowadays, the Internet becomes a vital force in providing information to the public and it has been free of government regulation, thus, most of the people believe that one of the reasons why the Internet has worked so well to help the people to disseminate their voices. The rules and regulations are believed to have been created to reduce the passion for Internet use, but ironically, the use of new media has flourished and contributed to the public’s deliberation process [4].

And today, YouTube is the most popular social network and integrates seamlessly with major online social networks (OSNs) such as Facebook, Twitter, and Google+ to enable off-site dissemination. YouTube uploaded its first video in April 2005, and by July 2006, the site had uploaded 65,000 videos a day. Also, YouTube added 24 hours of new video every minute by March 2010, and that figure had risen even farther, to 60 hours a minute by May 2012 [3]. YouTube audiences are growing rapidly due to the ease of watching, uploading, as well as downloading videos on mobile phones, tablets and other mobile devices. In this consequence, YouTube might be the best medium to spread the propaganda as it has easy access for the audiences. Some study proposed propaganda as a top-down transaction, but more recent inquiries present propaganda as a two-way transaction in which elite propagandising interacts with target audiences who play an active role in the production of meaning [5]. So, why analyse online visual propaganda? It is because – according to [6] it is “purely verbal analyses not only missing the information contained in the pictures and nonverbal sounds, they even fail to interpret the verbal content appropriately because that content is modified by its combination with picture messages”. Besides, humans can process images faster than text, and indirectly can generate emotion more implicit, as well as responses to images often more immediate and influential than responses to texts.
2.2. Kansei Engineering and Kansei Evaluation

Kansei is intended to express people’s feelings towards their surroundings or situations. As Kansei is derived purely from the Japanese culture, it is very challenging to define it into other languages. Kansei in general, easily refers to sensitivity, sensibility, feeling, and emotion [7-10]. Therefore, [11] defined Kansei Engineering (KE) as an approach initially applied in daily electronic appliances, computer systems, automobile manufacturing, cosmetics, apparel product, community design and so forth. Though relatively Japanese based organisations are leading the way in product developments based on KE, researchers, business practitioners and academic scholars from different parts of the world have shown interests towards the field. In addition, the cultural and indigenous traits that KE has potentially allow it to be applied within other applications [12].

There are nine types of KE methods in use. Decisions as to which method to be employed in a research depends on the research objectives and strategies in assessing Kansei of the product or artefact. According to [13], the flow of KE starts with deciding on domain, and then the Kansei dimension stage that involves identification, measurement and analysis of the Kansei. Finally, the product design dimension, which is in the Kansei dimension stage in that Kansei evaluation, takes place [14]. During evaluation, the Kansei engineer will prepare attributes used to express psychological feelings of the product to be evaluated. The attributes are in the form of adjective or noun, called the Kansei Word (KW) identified by a panel of domain experts and other sources such as users, magazines and manuals. KW is quantified using Semantic Differential scale of positive and negative words such as “happy – not happy” [14]. Normally the number of initial KW will be huge. In this consequence, [15] proposed that the reduction of KW could be performed by qualitative and quantitative methods. It is necessary considering the uniqueness of different products and the limitations of research.

2.3. Emotional Descriptors

In KE, emotional descriptors are similar to KW. In this situation, the term emotional descriptors were being used by most researchers for words which describe human emotion in various research purposes, such as affective video content analysis [16], emotional contagion for viral video [17], multimedia learning content [18], as well as image retrieval [19]. However, according to [16], there are no agreed-upon standard emotional descriptors for specific research as from the recent review on affective video content analysis because due to subjective emotion rating and uniqueness of each research.

Moreover, [20] used another method – Affect Infusion Model (AIM), to examine the use of negative affective language, or words that individuals have strong, pre-existing negative reactions towards, regardless of context, which could influence evaluations of policies and politicians. The AIM specifies the conditions under which individuals adopt particular cognitive strategies, and how it could affect operates in political contexts [20-21]. Therefore, he believed that by using the AIM, the processing style influence on how individuals use affect to guide the evaluations in those contexts. Also, the different types of political figures talk about different things – in the context matters in how politicians speak, which make the study emphasis particularly on the consequences of the language’s choice in political speech [20].

On the other hand, Positive Affective and Negative Affective Scale-Expanded (PANAS-X) – in affect and constructive processing, is used to measure negative affect, in which this scale features five questions to measure negative affect that has been shown to be highly reliable for a political domain [22]. Henceforth, the study scrutinised that negative affective language and emotion could generate a mood that is available for a quick judgement and more negative responses to the politician accusing wrongdoing rather than the one accused of wrongdoing. Besides, these negative emotions were more predominant when affective language was used.

For the purposes of this study, the researcher chose to further investigate emotional descriptors based on PANAS-X [23]. To assess specific emotional states, [23] created a 60-item. However, they suggested that researchers facing more severe time constraints could select and assess only those
scales that are most relevant to their research. Henceforth, this study only selects 30-items that are most relevant to political domain – 11-item from basic negative emotion scales, 10-item from positive emotion scales, while 9-item from other affective states. The emotional item selected is greater on negative emotions because basically the significance of political domain for research is more on the negative affective states, rather than the positive affective states [20].

3. Methodology
The Kansei evaluation for this research was conducted in two separate sessions. The groups of subjects involved are 20 participants in the first session and another 10 participants in the second session. Participants were those familiar with video-watching activity and who voluntarily participated in the evaluation. Controls and criterions used in selecting initial videos for preparation of the instruments are i) Video website – YouTube; ii) Focus content – various political issues; and iii) Length - < 3.00 minutes.

3.1. The Instruments
Kansei Word (KW) is used in defining the perceptions in a selected product or research domain. The KWs used in this research were selected and adopted from PANAS-X. The selected words should be related and able to describe the domain for the research. This research domain is ‘politics’, which thus reflects on the beliefs and emotions of the people towards YouTube videos, which in turn could affect people’s unity. Hence, adjectives such as “Ashamed”, “Enthusiastic”, “Proud”, “Scornful”, “Hostility” etc. are best to describe people’s political perception and emotions. The adjectives must also represent both positive and negative adjectives as to have a balance response of perception from respondents. The selected words must be checked again to identify words that are possibly similar in meaning and may cause redundancy. Table 1 shows the identified KWs used for the evaluations.

| Identified KWs from PANAS-X. |
|-----------------------------|
| Disgusted | Delighted | Nervous | Attentive | Fearless |
| Excited | Bashful | Sad | Hostile | Sluggish |
| Calm | Proud | Surprised | Afraid | Ashamed |
| Strong | Tired | Enthusiastic | Scornful | Amazed |
| Determined | Relaxed | Happy | Frightened | Alone |
| Shy | Astonished | Angry | Guilty | Confident |

3.2. Stimuli
The stimuli consisted of 10 short videos of different themes obtained from YouTube. The selections of video’s themes are based on various issues, including politics, economic, social, as well as religion, which could be related to political context. The themes were “clean elections” (politics), “phantom voters” (politics), “reject GST” (economy), “race A vs. race B” (social), “khalimahAllah issue” (religion), “salib issue (religion), “politician A vs. politician B” (politics), and “LGBT issue” (social). All selected videos are based on previous popularity (as shown in “view counts” on YouTube). This evaluation required viewing of the video content, such as radical operating and discussion or discourse by political figures and parties, as well as from civil society.
3.3. Evaluation Procedures

In total, 30 subjects participated in the evaluations. The evaluation commenced with a briefing to the subjects on consent statements and instructions. A checklist containing emotional descriptors adopted from PANAS-X were presented for each of the 10 videos. The arrangement of the descriptors was rearranged in random to avoid response bias [26]. Following the video presentation, subjects gave ratings in the form of Semantic Differential (SD) 5-degree bipolar scale concerning their feelings after watching each video.

4. Results and Discussion

4.1. The Similarities between Emotional Descriptors

KW can be called or defined as the expressions of the dimension of Kansei in the form of adjective or noun, which must be prepared by the researcher. In this study, for the purpose of finding emotional descriptors that best fit the video watching experience, this study conducted a Correlation Coefficient Analysis (CCA) on the data obtained. In KE, [27] emphasised that CCA is widely used to measure the strength of the connotation between variables. To measure the correlation between Kansei in a domain that enables the investigation, this study examined descriptors (variables), with similarities so that those highly correlated variables were summarised.

This study selects and assesses only 30 emotional descriptors – out of 60-item, which are most relevant, related and able to describe the domain for the research – politics. Nineteen variables with correlations \( r = .70 \) and above were summarised into new cluster descriptors. From the CCA result that shows that similarity of KWs in emotional descriptors can be understood. For instance, a set of first cluster, the word “Surprised” is highly correlated to “Sluggish”, “Strong”, “Tired”, “Nervous” and “Sad”. “Disgusted” is highly correlated with “Angry” and “Ashamed” – for the second cluster. “Excited” is highly correlated to “Delighted”, and “Fearless”, could be formed in a third cluster. “Shy” is highly correlated to “Scornful”, is in a forth cluster, “Calm”, highly correlated with Happy”, could be formed in a fifth cluster. “Afraid” is highly correlated with “Enthusiastic” and “Determined” – in is in a sixth cluster. Figure 1 shows the new clusters of similarity variables.

However, the correlation between KW from this CCA could be used to roughly describe the semantic structure of the subject’s Kansei. Detailed Kansei structure can be confirmed with Factor Analysis (FA).

![Figure 1. New cluster descriptors.](image)

4.2. The Significant Factor of Kansei in Propaganda Videos

This study calculated the average evaluation results and performed FA to investigate significant factors of Kansei that formed as a result of the assessment procedure. This study needs to be more precise about the retention of information before the researcher of this study can examining the significant factors and in order to translate the objective of the study into a practical method. The aim of the result is to retain as small as a set as possible when choosing the number of components, however at the same time to have sufficient number to provide a good representation of the original
data. Therefore, the variance of component is called the eigenvalue. Also, there are a number of criteria that may be used to decide how many components should be retained.

Furthermore, this study has to plot the eigenvector to help the researcher to identify how many components are retained. To illustrate the result a segment of eigenvalue and eigenvector are is shown in Table 2 and Figure 2 respectively.

| Number | Eigenvalue | Per cent | Cum Per cent |
|--------|------------|----------|--------------|
| 1      | 10.1501    | 33.834   | 33.834       |
| 2      | 5.8301     | 19.434   | 53.267       |
| 3      | 4.475      | 14.917   | 68.184       |
| 4      | 2.9794     | 9.931    | 78.115       |
| 5      | 2.2432     | 7.477    | 85.593       |
| 6      | 2.1185     | 7.062    | 92.654       |
| 7      | 1.0721     | 3.574    | 96.228       |
| 8      | 0.852      | 2.84     | 99.068       |
| 9      | 0.2797     | 0.932    | 100          |

Figure 2. Eigenvector plot.

From the eigenvalues, this study scrutinised that six components would provide an adequate representation of the KWs. The eigenvector shows that the first eigenvalue is greater than the others. Therefore, this study would take the components with eigenvalues greater than one. The logic behind this rule is that components with an eigenvalue of one explain the greater amount of variation as one of the original variables. The second until forth components have a substantial eigenvalue although it has greater differences of the eigenvalues. The fifth and sixth components have relatively similar eigenvalues. Whilst, the other subsequent components also have relatively similar eigenvalues, which means it has a similar eigenvalue, but small proportion of the total variance.
This study performed FA in order to find significant factors of Kansei for the watching experience of propaganda videos that represent various political issues, which could affect people’s unity. In order to find that factors, this study used the average evaluation value between subjects. FA is a statistical data reduction technique used to explain variability among observed random variables in terms of fewer unobserved random variables called factors. FA, using the Varimax rotation was performed to reduce the number of complex variables and improves interpretation.

| Factor | Contribution (%) | Cumulative Contribution (%) |
|--------|------------------|-----------------------------|
| 1      | 18.25            | 18.25                       |
| 2      | 16.56            | 34.82                       |
| 3      | 15.37            | 50.19                       |
| 4      | 15.09            | 65.29                       |
| 5      | 10.62            | 75.91                       |
| 6      | 10.38            | 86.29                       |
| 7      | 9.93             | 96.22                       |

Table 3 shows the generated factor contribution table for seven factors. As evident from the table, the first factor represents the majority of factor contribution with 18.25% of the data. The second factor signifies a factor contribution with 16.56%, whilst the third and fourth factors have a slight percentage of factor contributions, with 15.37% and 15.09% respectively. The fifth (10.62%) and sixth (10.38%) factors also have a slight percentage of factor contribution although the percentage is slightly decreased. Therefore, from this table it can be seen that Factor 1 has a dominant effect on KWs. The first factor represents 18.25% of the variability while Factor 2 elucidates 34.82% of the variability. While, for Factor 3, Factor 4, Factor 5, Factor 6 and Factor 7 describes 50.19%, 65.29%, 75.91%, 86.29% and 96.22% of the variability respectively. Small inclusions of the third factor until the seventh factor are deemed considerable as it adds to the contribution rate in representing most of the data. On the other hand, the proportion of variability explained by the fifth factor and above can be considered as minimal, and thus they could be eliminated as being insignificant.

From the Table 4 below, it is evident that the significant factors for the propaganda video specimens have been structured by 7 factors. The structure of KW is observable from the table. The first factor consists of “Excited”, “Delighted”, “Confident”, “Attentive” and “Fearless”. The study labels these Kansei factors as the concept of “POSITIVE”. The second factor consists of “Disgusted”, “Angry”, “Proud”, “Ashamed” and “Strong”. The study labels these Kansei factors as the concept of “HOSTILITY”. The third factor consists of “Afraid”, “Alone”, “Enthusiastic”, “Determined”, “Astonished” and “Tired”. The study labels these Kansei factors as the concept of “CONFUSING”. The forth factor consists of “Happy”, “Bashful”, “Calm”, “Sluggish”, and “Surprised”. The study labels these Kansei factors as the concept of “DOUBTFUL”. The fifth factor consists of “Frightened”, “Nervous”, “Sad” and “Relaxed”. The study labels these Kansei factors as the concept of “COMPLICATED”.

| Variables    | F1    | F2    | F3    | F4    | F5    | F6    | F7    |
|--------------|-------|-------|-------|-------|-------|-------|-------|
| Excited      | 0.891 |       |       |       |       |       |       |
| Delighted    | 0.873 |       |       |       |       |       |       |
| Confident    | 0.847 |       |       |       |       |       |       |
| Attentive | 0.810 |
|----------|-------|
| Fearless | 0.808 |
| Disgusted| -0.928|
| Angry    | -0.843|
| Proud    | -0.767|
| Ashamed  | -0.718|
| Strong   | -0.580|
| Afraid   | 0.847 |
| Alone    | -0.841|
| Enthusiastic | 0.812 |
| Determined| 0.752 |
| Astonished| -0.677|
| Tired    | 0.614 |
| Happy    | 0.912 |
| Bashful  | -0.815|
| Calm     | 0.751 |
| Sluggish | -0.683|
| Surprise | -0.634|
| Frighten | -0.751|
| Nervous  | -0.710|
| Sad      | -0.658|
| Relaxed  | 0.629 |
| Shy      | -0.923|
| Scornful | -0.829|
| Amazed   | 0.832 |
| Guilty   | -0.817|
| Hostile  | -0.774|

Afterwards, the sixth factor consists of “Shy” and “Scornful”. This study labels these Kansei factors as the concept of “SHYNESS”, and seventh factor consists of “Amazed”, “Guilty” and “Hostile”, thus the study labels these Kansei factors as the concept of “GUILTY”. In labelling each factor group, this study follows the common practice performed in KE to select representative words, which one would feel could effectively describe the factor group. No right or wrong judgment of the selected keywords as the criteria that fit the keywords are illustrated by the groups [27].

Evident from the result, the concept of Kansei for propaganda videos are structured by seven factors; “POSITIVE”, “HOSTILITY”, “CONFUSING”, “DOUBTFUL”, “COMPLICATED”, “SHYNESS”, and “GUILTY”. Therefore, the result also shows that Factor 1 is the most significant concept Kansei for propaganda video because it consists of all positive correlations toward the factor. Meanwhile, all significant concepts of Kansei in Factor 2 contain negative correlations. At this point, it is also showing that the second factor could be described as latent variables toward the factor.

The inclusion of the seventh factor seems to be considerable although it falls on the lower contribution of the factor, which is 9.93%. However, this study decided to maintain the seventh factor because of the significant of the KWs toward the video specimens. They are considerably important concepts of propaganda video, thus could be used as supporting factors in addition to the dominant factors above which are represented by factor one until four. The first and second factors could be
concluded as very important Kansei concepts. Therefore, these factors are suggested to be used supporting elements in understanding the emotion, sensitivity and awareness of various political issues that could affect people’s unity.

Table 5. Identified significant Kansei factors.

| POSITIVE | HOSTILITY | CONFUSION | DOUBTFUL | COMPLICATE | SHYNESS | GUILITY |
|----------|-----------|-----------|----------|------------|---------|---------|
| Excited  | Disgusted | Afraid    | Happy    | Frighten   | Shy     | Amazed  |
| Delighted| Angry     | Alone     | Bashful  | Nervous    | Scornful| Guilty  |
| Confident| Proud     | Enthusiastic| Calm     | Sad        | Hostile |
| Attentive| Ashamed   | Determined| Sluggish | Relaxed    |         |
| Fearless | Strong    | Astonished| Surprise | Tired      |         |

Table 5 shows identified significant Kansei factors that could represent the emotions of subjects after a video-watching experience. In comparison with CCA, FA shows more detailed result. CCA shows the similarities between the variables, where it has formed six new clusters of emotional descriptors. Whereas, FA detailed out the Kansei structure, where it has determined a clearer structure of significant Kansei factors. However, there are a few KWs from the CCA result, which are aligned with the FA result. For instance, in a cluster of “Excited”, “Delighted” and “Fearless”, the concept of Kansei is structured in a first factor (except for “Confident” and “Attentive”). The cluster of “Disgusted”, “Angry” and “Ashamed” are structured in a second factor (except for “Proud” and “Strong”). Henceforth, it could be concluded that the result of similarity of KWs are refined by the identification of significant factors in FA.

5. Conclusion

The purpose of this study is to investigate on the concept of Kansei for propaganda videos based on various political issues through watching experience. These propaganda videos would be powerful vehicles for prejudice and public opinions that could affect national unity specifically among the people. Hence, this study adopted emotional descriptor PANAS-X, to assess the sensitivity of the subjects (emotional responses), which are suitable for research domain – politics.

In this research process using Kansei evaluation, the outcome has shown seven significant factors that constitute as essential concepts of Kansei for propaganda videos that might affect people’s unity. Those factors are “POSITIVE”, “HOSTILITY”, “CONFUSING”, “DOUBTFUL”, “COMPLICATED”, “SHYNESS” and “GUILTY”. Consequently, these seven factors are likely to have strong political awareness, sensitivity, and influences in an individual’s state of mind that need be considered in designing powerful yet strong enough videos to win the hearts and minds of the people, in relation to various political issues. This study basically selected YouTube videos on various issues, including “clean elections” (politics), “phantom voters” (politics), “reject GST” (economy), “race A vs. race B” (social), “khalimahAllah” (religion), “salib issue (religion), “politician A vs. politician B” (politics), as well as “LGBT issue” (social). From the video-watching experience, the subjects have responded with positive and negative perceptions toward these issues.

Ultimately, this study managed to provide an idea on the emotions, sensitivity and awareness of people towards various political issues. Hence, the results from this study is proposed to be utilised as a basis of understanding for future investigation of emotion and political awareness from visual images i.e. posters, films, memes etc. which the vast majority of human-beings process that which they see and the way they experience the world visually, which in turn, is a function of the way the eye and the brain work together. Nevertheless, a thorough investigation involving comprehensive evaluation and measurement of emotion are needed to expand the research findings and to extend more promising results.
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**Acknowledgments**
The authors gratefully acknowledge the financial grant 600-IRMI/PERDANA 5/3 BESTARI (094/2018) given by IRMI, Universiti Teknologi MARA, Malaysia and Faculty of Computer and Mathematical Sciences for all supports and resources.