Abstract

Youtube video health information about overweight and obesity, was analyzed in two different countries – Sweden and Malaysia. The videos were analyzed by using Activity based Communication Analysis, Critical Discourse Analysis and Rhetorical Analysis, pointing to possible cultural differences in rhetorical approach. The use of multimodality was in focus in the analysis. Considerable differences in the use of spoken and written words, pictures, animations, colour, music and other sounds were found between Swedish videos which tended to rely more on spoken words from experts and on logos, while Malaysian videos tended to rely heavily on animations, vivid colours, music and other sounds and appeal to pathos. In both countries, ethos is important, but conveyed in somewhat different ways. The length of the videos differ considerably, with Malaysian videos being very short and Swedish videos quite long.

1 Introduction

The paper presents a comparative study of multimodal communication in Youtube videos on obesity and health from Sweden and Malaysia. The main message in the videos is to inform people about health and obesity, in order to make them want to lose weight as well as to inform about and/or sell ways of doing this. The study, as part of a more comprehensive project on communication about overweight and obesity, compares the rhetoric of multimodal videos on overweight and obesity produced in the two countries. The purpose of the study is to address the question of whether health communication needs to be adapted to different cultures or not.

The ancient traditions of rhetoric in Western countries, as established by Aristotle and in Eastern countries as inspired by Confucius, were to some extent different, as they were developed in different contexts and these differences can still be noticed in different areas of rhetoric and argumentation. The main focus in the Western tradition is placed on rhetorical logos (reasoning), while in the Eastern tradition, relatively more emphasis is placed on pathos (i.e. appeal to the reader’s or listener’s emotions), due to the importance of establishing and maintaining good personal relations, and a combination of logos and pathos is often advocated (Zhu and Hildebrandt, 2003, Wang, 2006). The Western and Eastern division seems to be applicable to Sweden and Malaysia, although it must be stressed that there is considerable variation within both Western and Eastern geographical areas and cultures.

Other cultural differences, often ascribed to Eastern and Western cultures are greater individualism in more low-context Western cultures and greater collectivism in more high-context Eastern cultures (Hall, 1976; Hofstede, 1991).

Another cultural difference between Sweden and Malaysia is the potential target group, i.e., the population and their demographic features. One obvious difference is the religious and ethnic characteristics of the population. Sweden is largely and traditionally a protestant Christian country -
with a mainly European population and with a tradition of social welfare and relatively high mean level of education, although lately more varied, due to immigration. Malaysia has a multicultural and multireligious tradition, with a main Malay muslim population, but also very noticeable Chinese and Indian groups. The level of education has been lower than in Sweden, but has lately shown a considerable increase. Some comparable figures from the two countries, provided by UNESCO, are that the gross enrollment in primary education is 84% in Malaysia and 96% in Sweden, while the proportion of pupils starting grade 1 who reach grade 5 is 99.2% in Malaysia and 100% in Sweden. The literacy level in Malaysia is 98% for persons between 15 and 24 years of age. The secondary school enrollment in Malaysia is about 70%. When we turn to higher (post secondary) education, the figure for Malaysia was 21.6% in 2010 (noting an increase of about 5% per 10 years). In Sweden, 42% have entered tertiary education and about 40% hold a tertiary degree (sources: UNICEF, 2017). There is, thus, still a certain, although diminishing, difference in mean educational level.

The analysis used three different frameworks for analysis, Activity based Communication Analysis (ACA) (Allwood, 2013), Critical Discourse Analysis (CDA) (Fairclough, 1995) and Rhetorical Analysis (Kennedy, 2007)

2 Method
2.1 Material

Video films on Youtube, containing information and or propaganda about overweight and obesity were identified for Sweden and Malaysia. Five Malaysian and four Swedish videos were chosen as representative, after scanning available Youtube videos providing information and recommendations concerning overweight and obesity to the public. Observers rated the available videos for typicality among the available Youtube videos and the videos obtaining the highest total scores in each of the countries were selected for analysis. Tables 1 and 2 provide short descriptions, data on time, persons appearing and means of expression used in each video.

Table 1. Swedish Youtube videos

<table>
<thead>
<tr>
<th>Name of video</th>
<th>Short description</th>
<th>Time</th>
<th>Persons appearing</th>
<th>Means of expression used:</th>
</tr>
</thead>
</table>
| An increasing number of children are overweight" | A local TV news clip about over-weight and fat children working out in a new "fun" program, involving a game | 2 min, 03.02 sec | Children taking part in program activity 2 children interviewed 1 organizer/expert interviewed | Speech  
Text  
Filmed activity/context |
| Fighting against obesity | A commercial for clinic with a specific operation technique for obesity | 3 min, 13.28 sec | 1 expert presenting Pictures Patient seeing doctor | Speech  
Text  
Pictures  
Filmed activity/context |
| Overweight | An information video about health and obesity from a health website with a famous doctor | 4 min 30.14 sec | People walking in street and at beach Expert talking in street and at beach Doctor and patient Person cooking | Speech  
Text  
Pictures  
Film  
Music |
| Weight line | A video from a health website, with a famous doctor promoting a specific diet | 1 min, 46.15 sec | Expert in white coat at desk Patient and doctor Expert in nature People training | Speech  
Text  
Pictures  
Filmed activity/context  
Music |
### Table 2. Malaysian Youtube videos

#### Malaysian videos

<table>
<thead>
<tr>
<th>Name of video</th>
<th>Short description</th>
<th>Time</th>
<th>Persons appearing</th>
<th>Means of expression used:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The balloon</td>
<td>A short film of a boy blowing up a balloon, then of many persons blowing up balloons and balloons bursting/exploding</td>
<td>30.00 sec</td>
<td>1 boy, then 12 persons blowing up balloons</td>
<td>Sound, Text, Filmed event</td>
</tr>
<tr>
<td>Information film from the Ministry of Health/The fat man</td>
<td>A fat man having hearth pain - dramatic. A voice speaks for him and tells how much he has been eating. Then about changing lifestyle and the man looks happy.</td>
<td>32.02 sec</td>
<td>1 fat man</td>
<td>Speech (speaker voice representing person in film), Filmed events, Texted warning</td>
</tr>
<tr>
<td>Obesity in Malaysia</td>
<td>Texts about obesity and a healthy lifestyle are mixed with pictures of a happy family and contact data and commercial for slimming product.</td>
<td>2 min, 13.21 sec</td>
<td>Pictures of families of 4 persons</td>
<td>Speech (speaker voice), Text, Pictures, Film?</td>
</tr>
<tr>
<td>Malaysian obesity</td>
<td></td>
<td>1 min, 14.51 sec</td>
<td>No persons</td>
<td>Sound, Music, Pictures, Text</td>
</tr>
</tbody>
</table>

The data in the table are further discussed below.

#### 2.2 Overview analysis using Activity based Communication Analysis, Critical Discourse Analysis and Rhetorical Analysis

Three frameworks, Activity based Communication Analysis (ACA) (Allwood, 2013), Discourse Analysis (CDA) (Fairclough, 1995) and Rhetorical analysis (Kennedy, 2007) were used. The ACA and CDA analysis were selected to give an overview description of what activities were shown and what the purpose of the producer might be for each video. The rhetorical analysis is the main method and is used more in-depth for analyzing the approaches used in Sweden and Malaysia, respectively.

The analysis noted what type of expressive means occurred in each of the videos. Since both verbal and nonverbal modes of expression are used and several modes can be used at the same time, and, furthermore, different rhetorical modes can be used simultaneously, the study mainly uses qualitative content analysis, rather than quantitative comparison. However, the analysis contains observation of features that were very salient and/or dominating in the videos. Speech and text were analyzed as verbal communication, whereas all other means of expression used in the videos were, for the purposes of this paper, considered as non-verbal.
2.2.1 Activity based Communication Analysis

An overview of factors determining the social activity was made for each video. These factors were the purpose of the activity, the social roles of the activity, the instruments used and the environment (cf. Allwood, 2013).

ACA is a framework which relates analysis of behavior, in the form of production and perception of communicative expressions and interactive patterns in social activities to an analysis of influencing background factors of the particular activity at hand.

The influencing background factors first of all consist of the collective conditions linked to the social activity, such as its purpose, inherent roles, physical and biological context and psychological/social context. But they also consist of individual background factors carried into the activity by the participants and linked to their background and characteristics as well as the individual purpose, role, physical/biological conditions and psychological/social factors of the activity in the eyes of each of the participants, depending on their background.

The background factors are considered essential for understanding what happens in communicative behavior.

The part of ACA used in the analysis of this study is the analysis of influencing background factors for each film, according to the characteristics:

<table>
<thead>
<tr>
<th>Social Activity</th>
<th>Collective Background factors of the Video:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose</td>
<td>Purpose</td>
</tr>
<tr>
<td>Roles</td>
<td>Roles in communication</td>
</tr>
<tr>
<td>Physical/biological factors</td>
<td>Physical/biological factors</td>
</tr>
<tr>
<td>Psychological/social factors</td>
<td>Psychological/social factors</td>
</tr>
<tr>
<td>Background factors of the participants:</td>
<td>Background factors of the participants:</td>
</tr>
<tr>
<td>Purpose</td>
<td>Purpose</td>
</tr>
<tr>
<td>Roles</td>
<td>Roles</td>
</tr>
</tbody>
</table>

The social activities (as well as individuals involved) are complex and can be embedded in the analyzed videos, i.e. there can be a producer behind a film as well as main spokesperson in the film and there can be an audience or recipient of information in the film as well as an assumed audience of viewers of the Youtube videos.

2.2.2 Critical Discourse Analysis

For each video, the main question of “in whose interest” the video was made was addressed (cf. Fairclough, 2005). Each video film has a more ore less explicitly and unambiguously stated sender and a purpose, as noted above, and the CDA analysis strives to make explicit both overtly expressed and assumed interests of the sender. The senders, in this case, are the producers and/or sponsors of the video, sometimes appearing in the video as persons, sometimes in logos or texts, sometimes not at all. They can also include other agents expressing the message in the video. The audience is important for the message and it is therefore also of interest to find out what the target group is for the message of the video.

The main question asked in the present analysis was: In whose interest was this video made and who benefits from it?

2.4 Rhetorical analysis

The main analysis was a rhetorical analysis of multimodal logos, ethos and pathos. Logos, ethos and pathos were identified and described for each of the videos in each country/culture and then compared between Sweden and Malaysia.
Logos refers to the content of the argument presented, its premises and conclusions, the internal consistency, clarity and type of the claims that are made, the type and strength of the supporting evidence (Aristotle, in Kennedy, 2007). The impact of logos on an audience is sometimes called the argument's logical appeal (Ramage et al., 2015).

Ethos refers to the trustworthiness or credibility of the writer or speaker (Aristotle, in Kennedy, 2007). The impact of ethos is often called the argument's “appeal from credibility” (Ramage et al., 2015).

Pathos refers to persuading by appealing to the reader’s/ listener’s emotions, attitudes and/or imagination. This can be called the argument’s emotional influence or appeal (Aristotle, in Kennedy, 2007). Appeal to attitudes and emotions can be approached from two perspectives: expressive (the emotions and attitudes expressed by the speaker/writer) and evocative (the emotions and attitudes the speaker/writer is trying to evoke in the reader/co-communicator) (Allwood, 1978).

The rhetorical analysis was made according to the categories of the schema in figure 1.

<table>
<thead>
<tr>
<th>Logos</th>
<th>Verbal</th>
<th>Non-verbal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pathos</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethos</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 1. Coding categories for intended functions of expressive means in the Youtube videos.

The occurrence and form of each category were given short descriptions in the table for each of the videos.

3 Results

3.1 Analysis of an example of Swedish Youtube videos – The Weight Line (Health care video)

This video is from Sweden, with Swedish speaking senders and recipients and the topic is obesity information.

Activity based Communication Analysis:

The purpose is 1. to inform the public about health risks connected with obesity and 2. To give information to obese and overweight people about what they could do in order to lose weight. There are three roles in the video: 1. A male expert giving information – a well known professor, 2. A female doctor, 3. A female patient, 4. The intended viewers are the general public, especially obese and overweight people. The instruments are an internet website, text, pictures and films. The environment is a health care network giving obesity information.

Critical Discourse Analysis - In whose interest is this video made?:

The video is in the interest of obese and overweight persons, who can get more information about the possible risks and ways of their weight and how to lose weight. The expert professor can get more visibility and increase his credibility. All in the category of physicians and dieticians benefit by creating good will for themselves. The health website The Weight Line and the professor benefit from showing their brands during the video and two companies show their logos in the video, promoting these companies.

Rhetorical analysis:

Ethos - Verbal: The expert uses statistics and medical terms and the text and presents his job position and workplace. Overlay websites URLs appear during the video. An overweight woman talks about her way of losing weight.
Ethos - Nonverbal: The expert professor and the female doctor are wearing white doctor’s coats. The expert professor is a well-known and recognized person and the female doctor is sitting in a medical room. The person who needs help is clearly overweight.

Pathos – Verbal: The participants use vocal and written words describing diseases. These can evoke concern and fear. The words pronounced by the overweight woman “For this time I will succeed” try to evoke inspiration and hope for overweight viewers.

Pathos – Nonverbal: The woman talking about her way to fight obesity can be seen to be overweight, promoting inspiration and hope in overweight viewers.

Logos – Verbal: The expert professor explains the health risks of being overweight and obese. He explains the “4M” factors to fight against overweight and obesity. The overweight woman presents how she is following the suggestions of the professor. The female doctor suggests to the audience that they read more information on the “Weightline” website and invites overweight people to talk to their physician.

Logos – Nonverbal: Video images of food and of people doing physical exercise are shown.

3.2 Analysis of an example of Malaysian Youtube videos – The Bursting Balloon

This video is a short film – The bursting Balloon, warning about the risks of obesity. The film is from Malaysia, aimed at English speaking recipients and contains obesity information.

Activity based Communication Analysis:

The purpose is to inform the public about health risks connected with obesity. The roles are: 1. Writer, producer (signed or anonymous), 2. The characters in the film, 3. The intended viewers. The instruments are an internet website, mainly animated film and short text. The environment is an official website giving obesity information.

Critical Discourse Analysis – In whose interest is this video made?:

The video is made in the interest of obese and overweight persons, who can be alerted about the possible risks of over-weight and obesity. This is also in the interest of the Malaysian health care system and Malaysian tax payers.

Rhetorical analysis:

Logos – Verbal: Only one sentence, “You’ll end up like this balloon, if you don’t control your diet.”, containing an implication, but mostly appealing to pathos (se below).

Logos – Nonverbal: Balloons are being blown up and explode, the explosion of the balloon being a metaphor of the risks connected with obesity, increase of obesity ending in catastrophe

Ethos – Verbal: The video has text showing that it comes from a credible source, an official government website.

Pathos: Verbal – The video has only the one final written message (in red) “You’ll end up like this balloon, if you don’t control your diet.”, intended to capture attention, create fear of obesity and desire to lose weight.

Pathos – Nonverbal: The increasing noise of the sound from blowing up the balloons, the increasing size of the balloons and the bursting of the balloons create a feeling of increasing threat and danger, also creating fear of obesity.

3.3 Comparing the rhetoric of the Swedish and Malaysian Youtube videos

Swedish logos: is expressed by experts (using medical terms) and obese persons explaining the problems of overweight and consequences and recommending solutions, like talking to a doctor, exercising, eating less, eating a specific diet, consulting a website, contacting an organization and explaining benefits of loosing weight in speech and text. The logos arguments are nonverbally supported by the appearance of experts and obese people, graphic diagrams, images of food and working out and or fat
people interacting with doctors. This makes the Swedish videos dependent on long sequences of speech.

**Malaysian logos:** consists of very short verbal reports on increasing obesity in Malaysia, why people get fat, i.e. through fat food, fast food availability and use of cars, and the consequences of obesity. Logos is not so important – there is more stress on pathos.

**Swedish ethos:** In the Swedish videos, a famous physician expert on obesity, and nurses are talking or being interviewed, with their names, titles, workplaces in overlay text. Medical terms are used. Obese people describe their problem and/or their successful treatment. This is non-verbally supported by the physician and nurses wearing white coats or suit and tie, by the logos of authorities or clinics, by the environments of hospital, medical clinic, office, book shelves and a gym, and by the appearance of obese people telling about problems and treatments.

**Malaysian ethos** is also achieved by reference to health authorities in a text that is a video produced by an authority or by a well-known gym chain, that a product is linked to a Harvard professor, and by first hand experience of obese persons. It also contains a quote from a famous person, an appeal to patriotism and an imperative tone (from the health authority). In two of the videos, there is no identifiable appeal to ethos. In other videos, there is nonverbal support through the appearance of the logo of the gym and by obese persons telling their story. In general, there is much less focus on experts in the Malaysian videos.

**Swedish pathos:** Swedish Youtube videos show a happy, healthy family and gym activity as well as overweight persons talking about having fun while training, having found the right diet etc. This can evoke sympathy and inspiration. There is also talk about problems, risks, and diseases, which can evoke fear, and talk comparing treatment methods, where the one being promoted is described as new, and widely accepted in other countries, possibly evoking a feeling of safety. Nonverbally, pathos is achieved by showing obese people standing on scales, and people have serious faces, possibly evoking unpleasant feelings or fear. Overweight persons shown having fun while training and shown talking about having found right diet, on the other hand, evoke sympathy, giving inspiration. This is further supported by relaxing music at the end of the videos, to evoke positive feelings.

**Malaysian pathos:** The verbal part consists of the use of frightening words like: terrifying, threat, impending doom (videos 1 & 5), and severe (in bold) (video 4), as well as a warning slogan - warning (in red font). We can see that the text is presented using also nonverbal features (bold and red). In addition, there is music creating fear (like a rising pitch), image (a bursting balloon). This is combined with a text warning in red font in a video without speech, relying heavily on pathos. There is also music creating fear and then calm and upbeat music when possible solutions are introduced. Music is used in all Malaysian videos. In addition, in one video the setting is dark grey, the actor’s dress dull, the facial expressions showing suffering.

4 Discussion and conclusions

Even though there are some similarities, for example in the use of ethos, conveying ethos by relying on authoritative sources and making use of self-experienced obesity in both countries. However, major differences also seem to be at work in the two countries, some of the main points of interest concerning:
1) The length and type of videos and the choice of expressive media – words, film and music. In Malaysia, more films and music is used and the message is often conveyed through metaphor or metonymy, whereas in Sweden, more words and factual pictures are used.

2) The use of logos, pathos and ethos. Logos is used more in Swedish videos, in the form of facts and explanations. In the Malaysian videos, logos is represented by frightening descriptions. Pathos, on the other hand, is used more in the Malaysian videos. In the Swedish videos, suggestions are made to the viewers, but in the Malaysian videos, there are more commands and emotional action evocation. The use of status-based ethos (expertise, reputation) is more similar, although it occurs slightly more in the Swedish videos. In both countries ethos is also conveyed through self-experience of the persons needing help.

There could be many factors behind the differences found between Swedish and Malaysian videos about obesity and overweight. Why are short and very multimodal videos with an “advertising” approach, designed to capture attention common in Malaysia, but not found at all in Sweden? Why are long videos with elaborate verbal explanations of facts common in Sweden, but do not seem to occur in Malaysia? One possible explanation is (i) different cultural traditions of expression in general, for example more use of vivid colours in Malaysia. (ii) It could also be related to the intended audience, where the Malaysian audience comes from more varied ethnic-cultural backgrounds and have more varied levels of education than the Swedish one. (iii) A third explanation is that Malaysia is more traditionally authoritarian then present-day Sweden with more use of “stick” than “carrot”. A similarity between the countries is that ethos is important in both. In Malaysia, ethos is achieved by showing the name and logo of a ministry, while in Sweden, the focus is more on individual experts, presenting their titles and institutions, using statistics and other scientific findings and presenting them in a professional (hospital) environment. This could reflect a more absolute and accepted authority for government agencies in Malaysia and more reliance on experts and science results in Sweden. This could also account for the more direct use of imperatives in Malaysian videos and statements making up longer explanations and suggestions in the Swedish videos.

The take home message of our article, is that there seem to be both verbal and non-verbal cultural rhetorical differences in the way health information about obesity is provided and that global health information, in order to be effective should probably take such differences into account.

References

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